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THE ROLE OF COMPLIANCE IN AN ORGANIZATION. WAYS OF IMPLEMENTATION

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Abstract: *In this paper we analyzed the importance of ethical and conduct codes in implementing the compliance programs in an organization. We presented the assumptions that were the basis for the forming of ethic and compliance programs, as well as their evolution in the last decades.*
In the first part of this paper we highlighted the legislation that outlined principles required for organizations to implement their compliance programs and business ethics. This legislation came as a response to corporate scandals relating to bribery, fraud and corruption in the 70s, and governments of the affected countries were forced to react in order to prevent, detect inappropriate behaviour, as well as improve corporate behaviour. After coming into force of the Federal Law "The Foreign Corrupt Practices Act of 1977" (FCPA, 1977), there was an increase in the number of codes of conduct and corporate involvement in adopting a conduct supported by consumers and stakeholders and to redefine the standards and values, to create a new image corresponding to the new market requirements. In the Guidelines 2002 basic principles are set out in order to efficiently implement a compliance and ethics program in business.
The case study was materialized in the analysis of ethics and compliance codes, and the method used for implementing them in three Romanian companies. Analyzing the three ethics and conduct codes, we can conclude that the most important factor to successfully implement ethics and compliance within an organization is "tone from the top". CEO conduct is one that has a direct effect on members of the organization. Furthermore, we followed capturing developments in the rules governing the international business ethics and evaluated the legal framework regulating these issues. The primary aim was to assess how rules are implemented throughout business ethics compliance programs developed at company level and to identify ways to promote - at an organizational level – the culture of ethical business and compliance.

Keywords: business ethics; compliance; rules; codes of ethics; codes of conduct.

JEL classification: F23; K33.

1. Introduction

In recent years due to the media, which presented serious cases of corruption, the law was amended to meet the new demands of the market. What was acceptable 10-20 years ago in a company's conduct, is now severely condemned by public opinion and the laws on corruption have undergone many changes. These changes were implemented in organizations by developing and implementing corporate codes of ethics.

The companies are motivated to implement programs of business ethics and compliance, and through these programs they can control their behaviour and are able to predict and prevent behaviour drifts before they will occur. But the implementation of an ethical behaviour is not straightforward. In the case of multinational companies, behaviour must be adapted to each country in which it operates, because what is accepted in some parts of the world, in others it is forbidden; but a company must always respect international regulations. Both the companies and employees need guidance in business ethics.

2. The Ethics and Compliance **programs**

2.1. The premises **for ethics and compliance programs development**

Due to the corporate scandals relating to bribery, fraud and corruption in the 70s, the governments of the affected countries were challenged to react, prevent, detect inappropriate conduct and improve corporate conduct.

In response to these challenges, the Federal Law "The Foreign Corrupt Practices Act of 1977" (FCPA) appears in the United States, which marked the beginning of compliance programs in the U.S. (Wulf, Katharina 2011:11). The law has two important provisions relating to anti-bribery regulations. The first one prohibits bribery by a U.S. company of a foreign official in order to obtain benefits, and the second important provision refers to the regulation saying that companies which are registered U.S. must keeping books and records that accurately reflect all transactions made and maintain a transparent system of internal audit accounting.

(http://www.justice.gov/criminal/fraud/fcpa/)

The provision relating to the bribery of foreign officials is resumed in 1998 by the Organization for Economic Co-operation and Development (OECD) and enlarged to refer to foreign companies or individuals operating in the U.S. that also have business relations in other countries.

After the entry into force of the FCPA, there has been an increase in the number of codes of conduct and corporate involvement in adopting a stance supported by consumers and interest groups (Wulf, Katharina 2011:12) and to redefine their standards and values, to create a new image that would correspond to the new market requirements.

In 1991 the U.S. Sentencing Commission published the Federal Sentencing Guidelines of 1991.

Chapter eight includes all aspects that a company must follow to have an effective ethics and compliance program. By adopting the principles of the 1991 Guidelines, the Commission requires organizations to establish standards applicable to guide employees to take a proactive approach in preventing and detecting violations of the law.

The 1991 Guidelines are applied to all companies operating in the United States and reflect government regulations and industry standards. Adoption of the 1991 Guidelines aimed to encourage ethical behaviour and compliance in organizations and for them to behave as a "good corporate citizen" (Wulf, Katharina 2011:14) and allow companies to avoid fines by implementing ethical conduct.

After the Enron and WorldCom scandals that occurred in the U.S. and other lawsuits based on inappropriate conduct of companies, in 2002, the U.S. Sentencing Commission forms a group to review the 1991 Guidelines, a group made up by practitioners from the public and private sectors, to adopt a new set of guidelines to guide the conduct of companies.

2.2. The regulations contained in the 2002 Guidelines

In the Guidelines of 2002 are set out basic principles to implement an effective compliance and ethical program. (http://www.ucdmc.ucdavis.edu/compliance/pdf/ussg.pdf)

According to the principles established in the 2002 Guidelines, the company must exercise due diligence to prevent and detect misconduct and promote an organizational culture that encourages ethical conduct and compliance with the law.

For this program to be effective, it needs to be adapted and implemented for each company, to prevent and detect violations. The compliance program must meet some minimum requirements:

- The organization shall establish standards and procedures to prevent misconduct.

- The organization's management must ensure that the organization has an effective compliance program.
- The persons designated by the management to handle this program should report regularly to a higher level, and the company must provide them with adequate resources. Only people with high authority and also a recognition of their moral responsibility can hold management positions in the company's compliance program.
- The organization must take the appropriate steps to implement a compliance and ethics program through regular communication in a practical manner of the standards and procedures and other matters relating to the program, to all its members by conducting trainings to disseminate information. (http://www.ucdmc.ucdavis.edu/compliance/pdf/ussg.pdf).
- The next step in implementing the Ethics and Compliance program is to follow if the program is implemented by the members of the organization and the need to monitor it.
- The program should be reviewed periodically, and the company must have a system where employees can find guidance and report any misconduct through confidential reporting channels or by help-line, and this system should offer them confidentiality.
- Where misconduct is discovered, the company shall take necessary measures against those who are responsible and strive for this type of conduct not to be repeated, and, if necessary, to make changes in the ethics and compliance program. (http://www.ucdmc.ucdavis.edu/compliance/pdf/ussg.pdf).

These provisions were designed to prevent and detect misconduct of members of an organization. Because of these provisions, the company has a direct interest in preventing misconducts of its employees because it is accountable to the law for its members.

Many companies, after the adoption of these new provisions, have created guides in the form of codes of conduct and organized training for their employees in order to prevent misconduct.

Although the amendments from 2002 were originally applicable only to listed companies in the U.S.A and multinational companies that have equity or debt securities with the SEC, many foreign companies operating in the U.S. have aligned their business practices to the new regulations, adopting codes of conduct and the Ethics and Compliance programs.

3. Codes of ethics and the codes of conduct

The codes of conduct are tools, recommendations aimed at influencing the conduct of companies in society. (Kolk et al., 1999:151)

A code of conduct is a public commitment of the company; through this, an organization is committed to provide a framework of values, beliefs and ethical rules under which they operate. (Wulf, Katharina 2011:18). A code of ethics should promote an ethical culture and to open channels of communication for preventing and protecting the organization against misconduct.

The purpose of a conduct code is to clearly delineate the conduct of its employees; the code is a set of principles that, if implemented, members of the organization know what is allowed and what is considered misconduct.

We consider it necessary to make some remarks on the use of the two terms: code of ethics and code of conduct.

In the specialized literature, the two terms, code of ethics and code of conduct are used without any major difference. "Code of conduct" is a broader term. It mainly refers to the

conduct of the organization's members, the attitude that they have to have relating to the company and third parties. It is a set of principles which, if they are violated, attract disciplinary measures.

The Code of Ethics, in our opinion, has a more restricted meaning. Beginning with ethics, which is defined in the Explanatory Dictionary of the Romanian Language as "a philosophical discipline, the study of theoretical and practical aspects of morality; a philosophical theory of morale" and " an assembly of rules of good conduct and ideology of a certain class or society". (www.dex.ro), we believe that a code of ethics is based on company values.

3.1 Case Study: OMV Petrom

For this example, we have chosen the ethics and conduit codes of the OMV Petrom company, because of the fact that this company has implemented an efficient conformity and ethics program.

The Code of Business Ethics of OMV Petrom defines clear rules regarding:

- Conflicts of interest;
- Corruption and facilitating payments;
- Intermediaries and lobbyists;
- Gifts and hospitality;
- Gratuities;
- Competition and antitrust legislation;
- Trade controls and embargoes. (www.petrom.com).

Top management of the company declares zero tolerance for all forms of corruption. Company employees are trained to recognize, prevent and report any corruption problem. In order to make an efficient report and to benefit from confidentiality; through the conformity program, the employees have various methods of communicating and taking the correct decision at their disposal.

Through **The Code of Conduct**, OMV recognizes social and environmental responsibility. By signing the initiative of the United Nations Global Compact (UNGC), Petrom is committed to implementing ten principles on human rights, labour, environment and fight against corruption. OMV's Code of Conduct sets clear rules of conduct according to the UNGC.

The principles guide OMV's conduct in relation to its internal and external stakeholders and serves as the basis for many of the policies and guidelines of the company.

UNGC's principles are:

Principle 1: supporting and compliance with the protection of the international human rights in the company's influence area;

Principle 2: Ensuring that OMV is not engaged in activities that violate human rights;

Principle 3: The freedom of assembly and association and the effective recognition of the right to collective bargaining;

Principle 4: The abolition of forced labour;

Principle 5: The effective elimination of child labour;

Principle 6: Fighting discrimination in hiring and in employment policies;

Principle 7: Support a precautionary approach to environmental management;

Principle 8: Adopting measures to promote higher responsibilities in relation to the environment;

Principle 9: Encouraging the development and promotion of "environmentally friendly" technologies and products;

Principle 10: Acting against all forms of corruption, including extortion and bribery. (www.petrom.com).

3.2. Case Study: Raiffeisen Bank

The Code of Conduct of the RZB Group is supporting the employees of RZB in formulating answers to possible questions about the company's core values, policy compliance of their actions of RZB's Group.

According to the Code of Conduct of the RZB Group, it applies to all employees on a global level, those from foreign branches of subsidiaries controlled directly and indirectly, and any third party acting on behalf of the company. The code is completed by a Compliance Manual, in which the basic principles contained in the Code of Conduct are embodied.

Every employee has the obligation to respect the Code of Conduct and to immediately report any violation of it to the immediate supervisor, the Compliance Department or local Compliance Officer. (www.raiffeseinbank.ro).

The second chapter of the code contains provisions relating to employees on personal responsibility, mutual respect, conflict of interest and data protection.

The third chapter refers to bribery and corruption, the Code of Conduct having clear provisions on bribery, facilitating payments (money offered to public officials in order to obtain or expedite obtaining benefits in connection with the services provided by these individuals (www.raiffeseinbank.ro, cap.3/3.2), direct and indirect bribery through third parties, gifts and invitations.

In the chapter on relationships with customers and business partners, there are several stipulations included regarding client confidentiality, money laundering, and abuse of payment, direct competitive, accounting and finance.

The Code of Conduct includes provisions on human rights, declaring that the company will not be involved in relationships with other companies that violate human rights and damage the surrounding environment. (www.raiffeseinbank.ro)

3.3. Case Study: Orange

Through this code of ethics, Orange adopts a set of guiding principles designed to strengthen the trust of employees, customers, suppliers, shareholders and partners as well as to the whole society.(www.orange.ro)

The company's principles are declared to the:
- Customers;
- Employees;
- Shareholders;
- Suppliers;
- Competition;
- Stakeholders in the countries where the Group operates.

The code includes how the company's principles are put into practice by every employee in dealing with customers, for the protection of corporate assets, how to report an act of fraud or conflict of interest and stock market deontology.

In the company there is a Group Ethics Committee that is responsible for managing issues related to ethical standards of the Group.

In the duties of the Committee falls the periodical check of the extent of which the code is known and applied, and group practices in business ethics. The Committee also ensures homogeneity of these practices within the group.

The Ethics Committee follows all legal and regulatory changes in this field. On its own initiative or on referral, the Group provides recommendations regarding compliance with the Group values and the implementation of the principles established in the Code, (www.orange.ro), and on request, on training local ethics committee to subsidiaries.

The Committee reports annually on its activities to the Orange Group President and Chairman of the Governance Committee of the Board of the Group. To facilitate this process at Group level, ethics counsellors and ethics coordinators were established in

each country or subsidiary. They offer counselling to employees, show local requests and concerns to the Committee of Ethics and ensure that all appropriate local specific practical applications and lines of business are communicated. (www.orange.ro).

4. Conclusions

In our paper we analysed the cases of three companies in Romania that have implemented ethics and compliance programs.

We have chosen a company that has both a code of conduct and code of ethics, (OMV Petrom), a company that has code of conduct (Raiffeissen Bank) and a company that has code of ethics (Orange).

In the case of OMV Petrom, the two codes are different, each with clear provisions.

Analysing the three codes of ethics and conduct, we conclude that the most important factor to successfully implement ethics and compliance in an organization is the "tone from the top".

CEO behaviour has a direct impact on the members of the organization.

We believe it is useful for the effective implementation of ethics and compliance programs, for company managements to periodically organize training and information programs involving all employees, so that everybody properly understands the provisions of the Code, thereby promoting an appropriate culture at an organizational level. The globalization of aspects of business ethics determines a growing dependency on rules and regulations on the matter, and that is why we consider that it is a necessity to update these ethics codes, taking into consideration the evolutions recorded worldwide.

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TOWARDS NEW MEANINGS OF SOVEREIGN DEBT

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Abstract: *In recent years, due in part to the sovereign debt crisis, the public (and scientific) interest towards indebtedness increased significantly. Regardless of the level at which we analyze it – micro or macro – it is clear from the outset that this is often unavoidable, for various reasons, and that the indebtedness state is often one of normality (necessary to cover current needs or to ensure growth targets). Of course, when the debtor is the state itself, things seem, at least apparently, more simple. States have borrowed since their beginnings, and continue to do so today. Nothing more natural ...*
For a long time, being a creditor of a state, especially of a developed country, meant, above all, a very safe situation – not being exposed to any risk. Recent years have shown, however, that such an approach is flawed, and that sovereign risk is omnipresent in the contemporary globalized world. For about seven years, the word „crisis" seems to have become one that is commonly used in the economic analysis. Undoubtedly, in this period there was not only a „common" financial crisis that occured, but a series of crises: finance – economic crisis – sovereign debt issues. In mid-2008, the global financial system crisis (especially in Western countries) asked for a sustained intervention from the state. It came sooner or later, with more or less pro-cyclical effects. Among the taken measures, we can evoke a massive support to banks and economic activity in general, in the context of the drastic reduction in global demand. Recovery policies required their toll, however, and in this case we can talk about a significant increase in budget deficits. If the evolution of private borrowing has taken the path of stagnation, public debt, already growing, became more and more significant. In this context, we intend to highlight some new facets of sovereign risk, and to provide some remarks about how this risk should be viewed and approached.

1. Indebtedness – some new aspects

Regardless of the level at which we analyze indebtedness – micro or macro – it is clear from the outset that this is often unavoidable, for various reasons, and that the indebtedness state is often one of normality (necessary to cover current needs or to ensure growth targets). Of course, when the debtor is the state itself, things seem, at least apparently, more simple. States have borrowed since their beginnings, and continue to do so today. Nothing more natural ...

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The global financial and economic crisis has forced governments to take action, to adopt economic policies that would stimulate growth recovery. Also, states have even resorted to taking some risks from the private sphere (we can evoke, in this context, the transfer of risk from the banking sector towards national states). Public finances have suffered in this context, and question marks about the sustainability of public debt became more numerous.

How investors began to see the state as a debtor has changed dramatically in recent years. To this mutation contributed significantly the attitude – sometimes pro-cyclical – of rating agencies, which operated several degradation of sovereign ratings, with an important effect: the explosion of interest rates required by investors.

But we do not want to argue here that the current sovereign debt crisis originated in the financial and economic crisis from 2008. Increasing public debt has made its presence felt since 4-5 decades, so the issue is not new at all.

The increase in public debt for various countries before the 2008 episode, during the second half of the twentieth century, is linked to several specific developments. Among these, we mention here:
- the continuous development of the public sector;
- the increasing costs of social policies;
- the maintenance of a high state involvement in the economy – a trend which seems to be however partly well inspired, etc..

Several experts noted that such developments and trends had no effect for quite a while (Banque de France, 2012: 5), due to the still low share of the deficit / debt ratio (and not only). In other words, the indicators have deteriorated gradually, almost imperceptibly at first view.

On the other hand, it is possible to highlight another very important issue, in the context of the historical analysis of public debt. In the past, inflationary episodes could act as a counterweight to the increase in the size of the debt, and real interest rates close to 0 or even negative limited its development. But, the last two decades have brought a more rigorous control of inflation, and in the context of an increasingly fragile economic growth, imbalances emerged (*When it is well anticipated, inflation is reflected in nominal interest rates and lose its role of erosion of the the real value of public debt* - Banque de France, 2012: 5).

An important element in this picture is the fact that, in general, state budget revenues did not increased significantly; meanwhile, real interest rates were located mostly above the economic growth rates. A series of decisions and philosophies dating from the 1950s, as the elements of social protection, began to be difficult to follow in the last two decades, while the growth rates of gross domestic product dropped dramatically. In the years before

the global financial and economic crisis, countries such as Finland, Canada (*a special role was played by the reform of 1993, which resulted in the removal of a significant number of inefficient expenditures – The Fiscal Spending Control Act (1992)*) or Spain (*an important role was played by the strong economic growth, above the EU average, and the implemented reforms; the global financial and economic crisis, however, have deeply affected that indicator, which in 2012 approached 90% in Spain*), managed to reduce the public debt to GDP, but many other countries continued to register high values of this indicator, over 60%.

The clear conclusion that can be drawn is that the vast majority of states had, on the eve of the global financial crisis, already high debt levels. This situation was underestimated by authorities, governors using often the recourse to credit; in the same time, the commitments made (eg the Stability and Growth Pact EU) had only limited effects.

In 2007, when the crisis was triggered, developed countries were already facing high public debt; the Euro area average was somewhere around 70% of GDP, while Japan exceeded 170% and the USA, 60%. It is therefore an old issue of a structural nature, that the crisis has brought to the attention of the public and professionals.
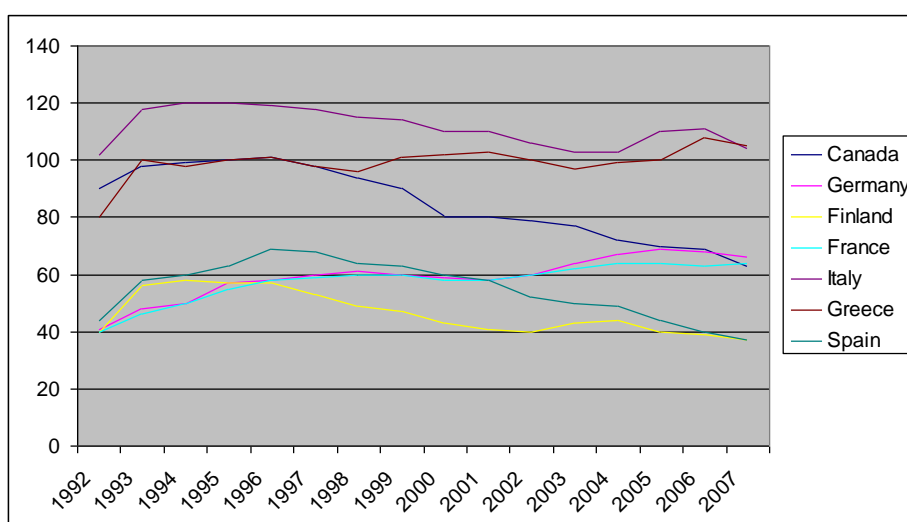
Figure 1: The evolution of public debt before the financial and economic crisis (percentage of GDP)
Source: own work, using IMF, *World Economic Outlook*, 2012.

Certainly, it is difficult to establish clearly whether the pre-2008 situation can be characterized by "high debt", or "over-indebtedness". It is clear that, in mid-2008, countries have been put in an extremely delicate situation. Limitation of private debt, the collapse of demand are just some elements that favored the continuous degradation of budget balances (*With an already high level of indebtedness, modest long-term growth prospects and social budgets affected by aging population, many countries are unable to maintain a significant budget deficit without seriously jeopardize the solvency* – Brender, Pisani, Gagna, 2013: 3).

The collapse of the appetite for indebtedness in the case of private agents was proportional to the propension towards it, before the crisis; in the EU, for example, it was significant in Ireland and least evident in Germany.

Lending was quasi-stopped, private savings exploded and the deflationary effects became imminent.

To give up indebtedness in such a context would have been a big problem, in the context of the of economic activity stimulation. So, the governments borrowed generally even more, starting from an already concerning level of indebtedness, especially in developed countries. In this context, it has become increasingly necessary to discuss about debt sustainability and the need to rebalance public finances.

However, not all states shared the same vision. European Union returned relatively quickly to a balanced budget target, while the United States have put into focus the need of economic growth. Japan also had a similar approach, and continues to have a huge public debt. However, as private savings partially absorb this excess debt, and the Japanese economy remains an extremely strong one, the asian state continues to benefit from loans with relatively low interest rates.

For Europeans, the situation is delicate, primarily due to the atypical architecture of the European Union – we are not dealing with a state or a federation, the Member States are sovereign and independent, but nevertheless important competences are transferred from national to the supranational level. So, the problem of one member state (in this case, Greece) seriously put in discussion the idea of solidarity (especially financial) between EU member states. In the same time, spillover effects have made their presence felt, and the sovereign debt crisis was a European one, above all. It is worth mentioning here the PIIGS episode. It has been rumored repeatedly the idea of a Euro currency crisis; however we believe that it is not a currency crisis, but one generated by the behavior of national governments. The European currency has proven – during its existence – its viability, being also well received by the markets, stable, etc..

After 2008, the support of global demand required extensive budgetary measures, in most countries of the world, as we outlined above. Even so, the recession could not be avoided, the level of activity of 2007 being achieved only in 2012.

These measures, however, significantly affected the budget deficits; we can talk here about side effects of the economic recovery plans, increased public spending (of social nature, for example), significant fiscal revenue decrease, gross domestic product decrease, etc..

Undoubtedly, the economic recovery measures taken had significant effects, and succeeded in part to eliminate at least some short-term negative effects of the crisis. In the medium and long term, however, the consequences are hard to predict. Some analysts talk about contradictory effects, for example in the households case (Banque de France, 2012: 12). If during a crisis households face a heaviness lending, and therefore are unable to modulate consumption over time, they will tend to consume the additional revenue brought by the budgetary recovery, thereby enhancing its efficiency; in the same time, if it is expected a future tax increase in order to finance deficits, households will save a substantial part of the additional revenue generated by budgetary recovery, reducing the magnitude of the expected effects.

Recent years have brought a multitude of state interventions, in addition to the recovery policies mentioned above. Of these, its is relevant, in the context of the deficits and sovereign debt, the banking assistance (state guarantees, direct capital infusions, etc..).

All these developments have marked significant indicators changes, that are summarized in the table below.

For OECD countries, the public debt problem turns out to be an extremely serious one; during the last three years, its corresponding indicator has evolved unfavorably.

For some countries, this phenomenon will be extremely difficult to manage, both politically and socially, as decisions about the reallocation of national income are required, a subject already delicate due to the crisis.

Table 1: Government debt evolution (percentage of GDP)

	2008	2010	2012	2013
Spain	40	66	83	86
Greece	105	129	170	156
Portugal	67	84	109	124
Italy	104	117	122	127
Ireland	26	64	104	118
UK	44	67	84	89
France	64	80	86	91
Germany	66	77	80	81
Belgium	85	96	98	100
Japan	166	194	211	219
US	64	87	99	101
Canada	66	71	85	84
Switzerland	41	37	35	36

Source: BNP Paribas, 2013.

2. Sovereign risk in the developed economies ?

Sovereign risk is not a new concept, but its systematic analysis started relatively late, in the late '70s of the last century.

Since the early '80s, John Calverley devotes a large part of its country risk research issues. The author proposes several definitions guided by the agent referred (Calverley, 1990); from this perspective, for a banking institution primarily concerned with repayment issues of its credits abroad, he retains a more restrictive definition of country risk, focused on sovereign risk and transfer risk. Sovereign risk is a particular risk targeting bank loans contracted or guaranteed by the State (sovereign loan). Risk implies that at some point, that government becomes unable to meet its obligations, or it no longer wants to do it. An important aspect is related to an additional risk in this context, the impossibility of obtaining repair by using the justice channel, because the borrower access to the invocation of legal immunity.

In 1986, shortly after the sovereign debt crisis in Latin America, Shelagh A. Heffernan aims to provide a clear image of sovereign risk, in the famous book Sovereign Risk Analysis (Heffernan, 1986). For the author, the analysis of sovereign risk means primarily to identify those cases where states can not fulfill their commitments on foreign debt (Heffernan, 1986: 4). From the beginning, she distinguishes between sovereign and private external debt, noting that sovereign risk concerns the first of these, and aims to estimate the probability of default.

John Calverley splits in country risk into two: sovereign risk and transfer risk, and he mentions a much broader concept, generalized country risk. Sovereign risk is considered *the risk that the government at some stage will be either unable or unwilling to meet its obligations* (Calverley, 1990: 3), while transfer risk represents *the possibility that even though the project is generating a cash flow in local currency which is sufficient to meet*

obligations, the government does not have the foreign exchange available to make the foreign currency remittance for servicing the debt. Calverley stresses that sovereign risk concerns loans granted by banks to a foreign government or a foreign trader, but in the second case, the loan is accompanied by a government guarantee.

Sovereign risk has been analyzed more extensively during the 1990s of the last century, but there was no mention of its existence for the developed economies.

At present, however, the public debt crisis, and especially the recent situation in the eurozone, have questioned the status of "assets with risk 0" of the sovereign debt of developed countries. This development significantly changes the global landscape of sovereign risk.

In this context, a number of observations can be made:
- the final resolution of the financial crisis delays to occur, as shown in the latest BIS studies (Bank for International Settlements);
- the global bond market continues to progress, from about 70 trillion USD seven years ago to more than 100 trillion USD in 2013.
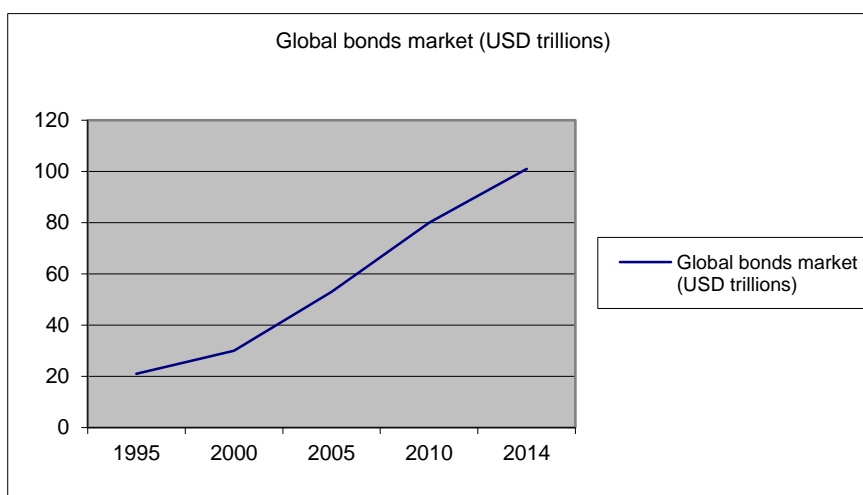
Figure 2: The evolution of global bonds market
Source: own work, using BIS data, 2014.

- as it is pointed out by more and more analysts (Rechea, 2014; Longueville et Faure, 2010), states are choosing the borrowing way in order to get rid of debt, and developed ones seem to do it first; overall debt ratio in the global GDP is approaching 150% today, and, although there is not a major change in the cost of funding, this situation is likely to change in the near future;
- not just the state of indebtedness of developed countries is worrying, but also the prospects of reaching a level of growth that can facilitate repayment;
- the decoupling consumption-production is increasing, especially in developed countries, although this fragility can be observed in the case of emerging markets that have not favored production, too.

As companies, states issue bonds when they need funds. They shall bear interest rates that reflect the risk perceived by investors. From this point of view, the main impact of the debt crisis on the states was the increased funding cost, translated by raising interest rates on government securities.

Basically, since the onset of the Greek crisis, at the end of 2009, euro area sovereign bonds have acquired different behaviors, investor perception ranging from state to state, as certified by the figure below:
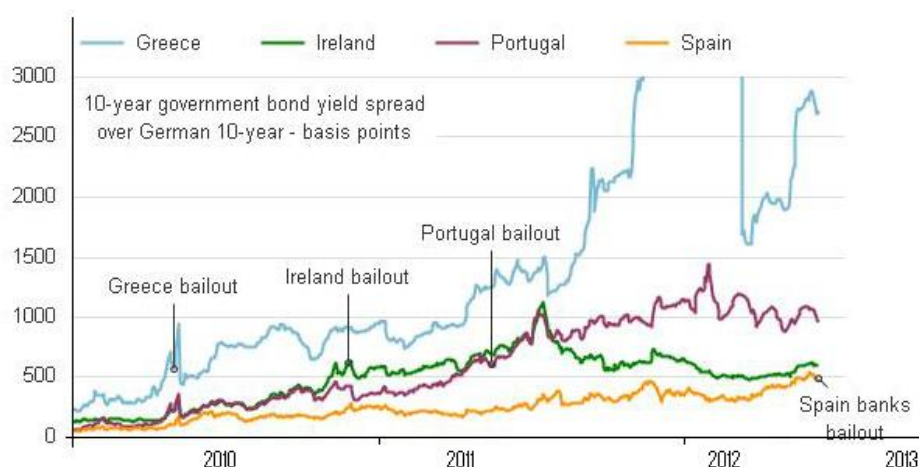
Figure 3: Euro zone government bonds (spreads)
Source: Thomson Reuters / Scott Barber, 2013 (http://www.acting-man.com/?p=17513).

An interesting development was recorded by CDS (Credit Default Swap) – contracts that are essentially an insurance mechanism against default, debt repudiation or forced debt restructuring. They have appeared over two decades ago, in the context of developing states sovereign debt, and subsequently were also used for private debtors.
In recent years, the CDS use in the case of developed countries, represents further evidence that sovereign risk is not at all foreign to them.
The CDS premia have evolved surprisingly in the case of developed countries after 2008, as follows:

- in a first phase, due to the rapid upward evolution of public debt, but also due to the massive support of the banking sector by governments, risk premia in the CDS market have increased significantly:

Selected Credit Default Swaps - Europe
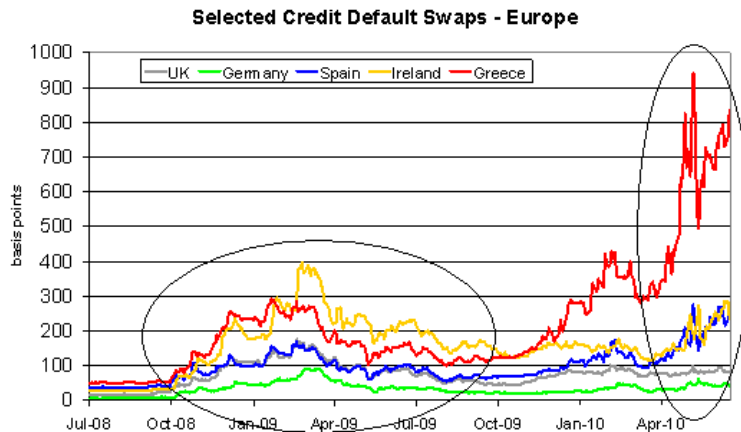
Figure 4: Sovereign CDS evolution (pre-2010)
Source: Bloomberg, 2011.

- the risk transfer from private entities towards national states generated a significant increase in premiums; a time of maximum value was reached in early 2009;
- after a slight decrease, the onset of the Greek crisis, by the end of 2009, resulted in a new burst of CDS risk premia, reaching 1,000 basis points if the case of the Greek state;
- after 2010, CDS risk premia continue to evolve separately, depending on the perceived probability of default:
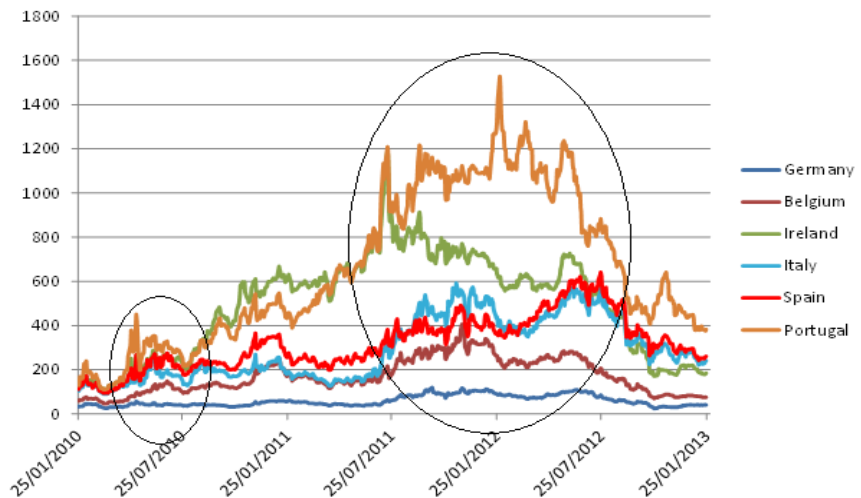
Figure 5: Sovereign CDS evolution (2010-2013)
Source: Bloomberg, 2014.

Five-Year Spreads on Credit Default Swaps
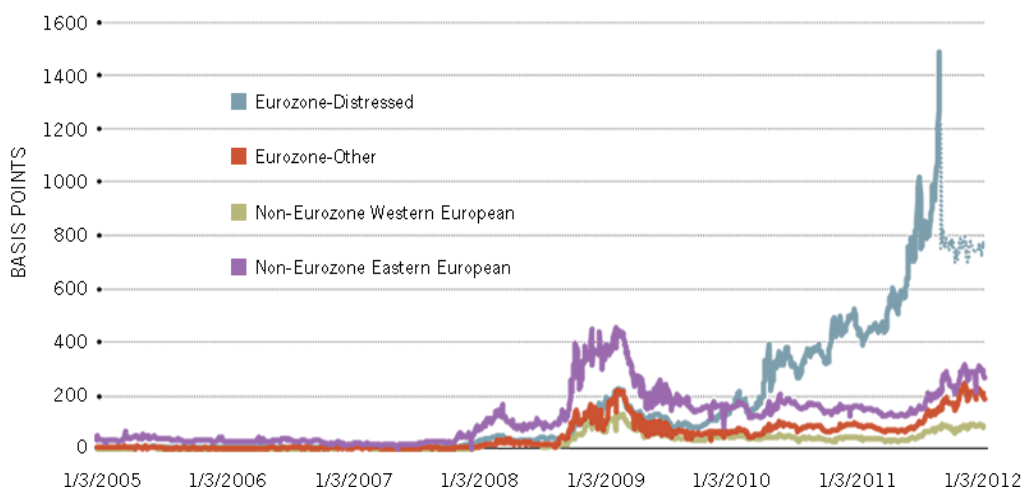
Figure 5: 5-year spreads on sovereign CDS
Source: Bloomberg / Noeth, Bryan, Sengupta, Rajdeep, *A Look at Credit Default Swaps and Their Impact on the European Debt Crisis*, The Regional Economist, april 2012 (https://www.stlouisfed.org/publications/re/articles/?id=2231).

Of course, relevant conclusions are still difficult to draw, because until 2008 sovereign CDS market was almost absent in the case of developed countries. We also believe that the levels achieved in recent years do not accurately reflect the default risk, exacerbating it in a context in which sovereign countries actually only rarely fall into such a state.
Sovereign risk measure is also given by rating agencies (three are well-known, *Standard & Poor's*, *Moody's* and *Fitch Ratings*); they are present in the market for quite a while, evaluating also sovereign debtors. Undoubtedly, rating has many advantages, one of which is in our opinion the *synthesis capacity*.
After 2010, the rating agencies have downgraded countries ratings constantly, developed states being no exception:
- November 10, 2011: Standard & Poor's changes France sovereign rating;
- January 13, 2012: downgrade for nine eurozone countries by S & P, etc..
So here is a new argument which entitles us to conclude that sovereign risk is present in developed countries. However, we must stress that rating agencies activity is at least controversial, and they present a whole series of shortcomings: lack of transparency concerning the methods and techniques used, subjectivity, a big share of political factor in ratings, frequent errors, procyclical effects of evaluations, lack of decision justification.

3. Perspectives and remarks
Public debt is, undoubtedly, „old as the world". To what extent indebtedness is beneficial or not, should be analyzed in-depth, which we intend to achieve in another paper.
One thing is however clear: sovereign debt has a completely different regime compared with private debt. An indebted state can not be compared to an indebted economic agent; we can do it only for the pleasure of a discussion. In this context, some remarks can be made:
- sovereign debt always existed throughout human history, but no state went "bankrupt" in the general sense of the term (a state is sovereign, so its assets can not be taken over by lenders);

- many times, states have repudiated their debt (even England did so, centuries ago, partially), or the debt has been restructured;
- a state "life" is not limited, so that it can continue to borrow in order to pay previous debts;
- if the economic growth rate exceeds the indebtedness growth rate, debt can even be increased without exacerbating the implications of this evolution;
- in contrast to firms and households, the state can more easily predict its future income (we refer here specifically to taxes, which may be even increased, by the policy makers); However, the predictions have some limits;
- in addition to other economic actors, the state can issue currency; for countries with sovereign debt expressed in their own currency (those not affected by the "original sin"), there is the privilege to pay with money printed by the state itself; Of course, the risk of (hyper)inflation is very strong in this context.

All this does not mean that indebtedness is not extremely dangerous; on the contrary, the problem of solvency must preoccupy governments more and more, so that debts can be at least controlled, if not reduced.

What interests us when addressing the issue of public debt sustainability is its current level, the relationship between the interest rate (and debt service in general) and growth prospects (growth rate of real GDP), and also the tax revenue level, compared to that of public spending. At the same time, we believe that the sustainability of sovereign debt is a concept that must be viewed dynamically; an element of great importance is the ability of governments to ensure their future debt service. Quantifying this capacity represents a real challenge because future revenues and expenditures of a state can not be predicted accurately. Of course, in comparison with a private agent, a sovereign debtor has some levers that allow more reliable predictions, as we outlined above.

When we intend to identify the "red zone", the level at which borrowing becomes toxic, harmful, we can be extremely creative, setting alert thresholds or introducing indicators, more or less complex (from the classic public debt/GDP ratio or public debt/exports, up to complex variants, targeting concepts such as institutional quality). As highlighted in some recent studies and papers (Reinhart and Rogoff, 2010), the level of debt from which the danger of default becomes imminent is difficult to identify and, on the other hand, impossible to generalize. Most viable is the setting of thresholds above which sovereign debt involves adverse consequences for the economic life; from this point of view, the majority of the papers identify an alert threshold around 95% of the GDP. Over this value, growth becomes almost impossible. An alternative approximation method for the over-indebtedness threshold is to focus on relevant events in economic history – the Mexican episode from the 1980s, for example. This time we must be reserved, too, as sovereign debt often had very different effects in the context of similar indicators for different countries (for instance, indebtedness followed by hyperinflation which ultimately lead to calming the situation). A simple analysis that allows us in turn to draw conclusions about the limits of indebtedness is related to economic common sense. The difference between the revenues of a country and its expenditures (less interest payments) are representing the *primary budget surplus*. If the latter is exceeded by interests, the state is forced to go further into debt, which can eventually lead to the reduction of the number of its creditors, especially in the context in which the interest rate on loans exceeds the rate of evolution of sovereign income. Some authors offer interesting approaches on sustainable debt limit, placing it at the *maximum level of resources that future taxpayers will accept to transfer, year after year, to the state creditors* (Brender, Pisani, Gagna, 2013: 15).

Of course, a rising public debt may be compensated through various elements of economic policy, such as increasing the fiscal pressure (increasing taxes represents an extreme practice, and is rarely used – for electoral reasons, for example), reducing costs (a decision dangerous because it can lead to an economic activity downturn) and better

budgetary discipline, etc.. In some cases, where possible, debt restructuring may be an appropriate solution.

Finally, it is necessary to have good quality financial information; situations such as that of Greece, which provided for a long period of inaccurate and unreliable economic information should be avoided in the future.

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WHY DO LOGISTICS AND TRANSPORT MATTER FOR DEVELOPMENT

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Abstract: *In face of the challenges of global competition, business firms are concentrating more on the needs of customers and seeking ways to reduce costs, improve quality and meet the ever-rising expectation of their customers. To these ends, many of them have identified logistics as an area to build cost and service advantages. Logistical activities have always been vital to organizations, and therefore business logistics and supply chain management represents a synthesis of many concepts, principles, and methods from the more traditional areas of production, purchasing, transportation, economics, as well as from the disciplines of applied mathematics, and organizational behaviour. It concentrates on important activities of management such as planning, organizing, and controlling, and also on a three-way relationship of related transportation, inventory, and location strategies, which are at the heart of good logistics planning and decision making. Selecting a good logistics strategy may yield a competitive advantage. Transportation provides the flow of materials, products and persons between production facilities, warehouses, distribution centers, terminals and customer locations. The progress in techniques and management principles improves the moving load, delivery speed, service quality, operation costs, the usage of facilities and energy saving. A strong system needs a clear frame of logistics and a proper transport implements and techniques to link the producing procedures. The transportation takes a crucial part in the management of logistic. Without well-developed transportation systems, logistics could not bring its advantages into full play. A good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality. The process determines the efficiency of moving products and energy saving. Improvements in transportation and logistics make valuable contribution to production and consumption activities.That's why the objective of this paper is to define and clarify the role of transportation in logistics and of logistics in development, for the reference of further improvement.The present study was undertaken to define and understand the elementary views of logistics and its various applications and the relationships between logistics and transportation.*

Keywords: logistics, transports, inter-relationships, costs reduction, development

Defining the Elementary Views of Logistics

For many years, logistics were always an issue in war matters. During the time, those who won the wars were the armies or generals with strategic planning on logistics. This was a good inspiration for today's business environment.

Starting from the early '60s, many factors such as competitive pressures, information technology, globalization, or profit leverage, contributed to the growth of logistics science in the form we know it today.

Logistics refers to all the move-store activities from the point of raw materials acquisition to the point of final consumption. Its core elements include customer service, order processing, inventory management and transportation (Ballou 2004):

- *transportation* is concerned with the ways in which physical items are transferred between different parties in a supply chain
- *inventory management* is about managing appropriate inventory levels to serve the demand in a supply chain
- *customer services* relates to the quality with which the flow of goods and services is managed
- *order processing* involves all the activities in the order cycle including collecting, checking, entering and transmitting order information.

The Scope of Logistics in Business

The expanding global competition, emerging new technologies and improved communications have increased customers' expectation of full satisfaction with the products and services that they purchase. These changes have, in recent years, brought to many manufacturing and service firms the challenges of improving the satisfaction of their customers and the quality of their products and services. Faced with these needlings, business firms worldwide are prompted to look for ways to reduce costs, improve quality and meet the ever-escalating demands of their customers.

In face of the challenges of global competition, business firms are concentrating more on the needs of customers and seeking ways to reduce costs, improve quality and meet the ever-rising expectation of their customers. To these ends, many of them have identified logistics as an area to build cost and service advantages. Therefore logistics in business aim to reach maximum customer service level, to achieve minimum possible costs, to ensure high quality, and o be flexible in the constant market changes.

Logistics is a diverse and dynamic function that has to be flexible and has to change according to the various constraints and demands imposed upon it and with respect to the environment in which it works.

One quite widely accepted view upon logistics shows the following relationship (Rushton, Oxley & Croucher 2000) :

Logistics = Supply + Materials Management + Distribution

Thus supply and materials management represents those flows into and through the production process, while distribution represents those flows from the final production point through to the customer or enduser, as per the Figure 1
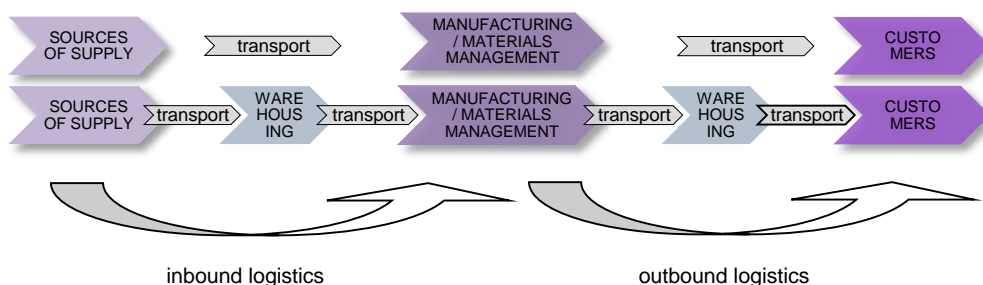
Figure 1

inbound logistics: the processes concentrating on purchasing and arranging the inbound movement of materials from suppliers to manufacturing or assembly plants or warehouses

outbound logistics: the process related to the storage and movement of the final product and the related information flows from the end of the production line to the end use

The logistics strategy should have as main objectives:

- services improvement by recognizing that revenues depend on the level of logistics services provided
- cost reduction by minimizing the variable costs associated with transports and storage
- capital reduction by minimizing the level of investment in the logistics system and maximizing the return on logistics assets

Logistics management must balance three basic targets: quality of service, right time, low cost. Thus, selecting a good logistics strategy may produce a competitive advantage.

The value chain concept of Porter (1985) provides further insights on how logistics can contribute to the cost and service advantage of firms and Figure 2 illustrates it:

Figure 2

Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers and returns. Only a good coordination between each component would bring the benefits to a maximum.

Transportation system is the key element in a logistics chain. In fact, the backbone of the entire supply chain is the transportation management that makes it possible to achieve the 7 Rs: the right product in the right quantity and the right condition, at the right place, at the right time, for the right customer, at the right cost.

Logistics and its various Applications

It is of vital importance for many companies to speed up the internal logistical process, due to the persistent cost pressures and the demand for continuous increases in productivity.

Optimisation of the handling process, transport and the storage of material flows are necessary, therefore the integration of various applications brings the convenience through promoting the system of information flow and business operations. They reffer to:

- receiving and profiling goods
- transport management by different softwares like vWorkApp, My Yard, etc.
- stocks control by softwares like 3PL Warehouse Manager, Sellsy Stocks, etc.
- orders aggregation from multiple sales channels

- sorting and tracking
- shipping and manifesting
- loading vehicles

Lately, the IT techniques and products bring more and more efficiency and fluency to the logistics systems.

Relationships between Logistics and Transportation

Transportation plays an important role in logistics system and its activities appear in various sections of logistics processes. Without the linking of transportation, a powerful logistics strategy cannot bring its capacity into full play.
Transportation and logistics systems have interdependent relationships because logistics management needs transportation to perform its activities and meanwhile, a successful logistics system could help to improve traffic environment and transportation development.
Without well-developed transportation systems, logistics cannot bring its advantages into full play. A good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality. A well-operated logistics system increases a lot the competitiveness of the enterprise.
Transportation plays a connective role among the several steps that result in the conversion of resources into useful goods in the name of the ultimate consumer. It is the planning of all these functions and sub-functions into a system of goods movement in order to minimize cost maximize service to the customers that constitutes the concept of business logistics.
Transport affects the results of logistics activities and, of course, it influences production and sale. Value of transportation varies with different industries. For those products with small volume, low weight and high value, transportation cost simply occupies a very small part of sale and is less regarded; for those big, heavy and low-valued products, transportation occupies a very big part of sale and affects profits more, and therefore it is more regarded.

Interface between Logistics and Development

A business is only as successful as its supply chain is.
For any company that is in the business of providing a variety of products and services to costumers, it is of crucial importance to the health of that business to implement a logistics strategy that will help keep service levels at their highest at all times, no matter what changes might be happening in other areas of the business organization. This is an even bigger imperative for companies that are more complex in structure, or that may have a very fluid or fluctuating supply chain, or that have specific product lines, specific countries or specific customers to cater to.
In the traditional context, many practitioners considered logistics as a source costs. They accepted these costs because the logistical activities were absolutely necessary for customer satisfaction and fulfillment of organizational objectives. The prospect focused on the costs generated implicit concern of reducing logistics costs. In essence practitioners have focused on increasing the efficiency of logistics activities by minimizing the resources involved. Priority given to efficiency resulted in better utilization of vehicles, reducing shelf life of products in stock, new procedures for handling materials, etc.. Cost

reduction to increase the efficiency is necessary to enhance the profitability of the organization.(Balan 2006)

But, for creating an effective logistics strategy first should be defined the goals which must be achieved. The logistics strategy supports the goals of the business, so its strategy must align with and help achieve the organization's goals. The second step is to articulate how the supply chain strategy works to achieve the higher level goals. So, the logistics plan is that it should be subordinate to corporate strategy:

- if the company's strategy is to always be the low price leader, then the prime goal of the logistics approach is to move stuff at the lowest possible cost.
- if the company's strategy is based on agility and the movement of goods faster than competitors, then logistics approach is based on speed rather than cost.
- if the company sets the standard for quality, then the logistics goal is to have perfect orders and to do whatever it takes to correct any error.
- if the company is growing by merger, one logistics strategy is to integrate the operations of the new acquisition into the existing logistics program.
- if the company is judged by its return on invested capital, then the logistics strategy is to remain as free of assets as possible by finding short term leases for warehouse real estate and transport equipment

Logistics is interposed somewhat extent between all functions of an enterprise, being particularly important in the normal productive development of a company.

Conclusions

The role that transportation plays in logistics system is more complex than carrying the goods. The integration and promotion of business activities have to involve transportation systems at different stages. The integration of various applications brings the convenience through promoting the system of information flow and business operations.

Transportation complexity can take effect only through highly quality management. By means of well-handled transport system, goods could be sent to the right place at right time in order to satisfy customers' demands.

Transportation brings efficacy, and also it builds a bridge between producers and consumers. Therefore, transportation is the base of efficiency and economy in business logistics and expands other functions of logistics system.

It is virtually inconceivable in today's economy for a firm to function without the aid of transportation. Transportation is the most important sub-function of logistics that creates time and place utility in goods. Reviewing the current condition, a strong system needs a clear frame of logistics and a proper transport implements and techniques to link the producing procedures.

Transportation systems and techniques are needed in almost every logistics activity. If even customers and firms could make business easier through e-commerce and Internet, physical delivery still relies on the transportation system to finish the operations.

That's why logistics systems have a more and more important position in the society activities.

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CHARACTERISTICS OF THE EMERGING MARKET ECONOMIES - BRICS, FROM THE PERSPECTIVE OF STOCK EXCHANGE MARKETS

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Abstract: *Many international investors have realized that they cannot obtain profits as large, investing in mature markets as well as investing in emerging and developing countries. They want to obtain higher yields, of course assuming the extra risk, as the risk of liquidity or volatility of exchange rates, which are significantly higher than in developed markets. Studies on the BRICS economies are countless, researchers pointing that the development of these economies and their transition towards developed economies category is virtually inevitable (Nistor, 2011). In this article we propose a smooth approach on the state of the economies of the BRICS emerging countries and the stock exchanges markets. It is interesting to observe how, according to a forecast of the International Monetary Fund, in the year 2025 world supremacy from the economic point of view will belong still to the United States, but the discrepancies between the United States economy and China's economy subside until then. The same source, however, predict that by the year 2050, China's economy will bring forward the United States of America. However, should not be lost of sight the fact that China is part of the BRICS countries, with enormous development potential. As proof of those exposed earlier, sits the performance obtained from China's economy especially in times of crisis, when the vast majority of the world's economies recorded negative economic growth. Somewhat improperly said so, we were witnessing a world economic depression. The performance of China's economy is so, noteworthy, it received even in the toughest years of global financial and economic crisis, a positive value of economic growth. This also happened, within other BRICS emerging countries economies, having many similar economic meanings. With such a potential for economic growth, the economies of BRICS countries have brought into the spot light the operational stock exchanges. The interest of investors for investments in BRICS countries financial markets has increased considerably, mostly because they offer higher yields than the mature financial markets, of course with a slightly higher risk assumed.*

Keywords: emerging markets, stock market, market capitalization, BRICS economies.

JEL classification: G15, G01, G10.

1. Introduction
Emerging countries are the countries whose economies are in a fast increase process, respective in transition phase to a market economy (Simon, 1997, p. 913). These countries have a higher capacity than the developed countries to provide investors with opportunities to achieve higher profits. According to Simon, the most important features of the emerging countries refer to:

- the small size of the economy,
- GNP/Capita much lower than in developed countries,

- a reduced opening for accepting foreign investors,
- a high volatility of the exchange rate which implies greater risk in trading.

It is considered that the biggest emerging economies are China and India.

When we refer to the phenomenon of transition economy, suppose that the transition is made from an emerging economy to a developed economy. There must, however, not lose sight of the reciprocal of this phenomenon, namely the transition can be made also vice versa, from developed economies to developing one. Of course, the transition to a developed economy is a wanted phenomenon, however it is the most widely-used usage of this notion, but it does not offer any guarantee that the converse is not true.

In Financial Markets Encyclopedia, Simon distinguishes between three distinct categories of emerging countries, considering a similar classification for stock exchange that operate within these countries. Thus, he talks about:
- the most advanced markets,
- narrow emerging markets,
- emerging markets (latent).

In the case of advanced emerging markets, Simon brings into question countries such as Malaysia, Mexico, South Korea, Taiwan, or Thailand whose inflation rates are quite low and in which there is some stability in the exchange rates. Financial and banking system are developed and have an opening to the international financial markets as shares and bonds, and trading system and financial securities settlement traded have a relatively sophisticated mechanism. These countries were not treated as developed countries category because it is considered that they are vulnerable to a possible volatility of the exchange rate and the stock market, a lot of local companies do not meet the conditions for listing, only companies that have exposure on the international market have passed listing of shares to the stock exchange.

Emerging markets generally narrow (as they called by Simon) does not provide an easy access of the investors on or of the international financial market, but this aspect belongs to the opening of each country belonging to this group. In the countries belonging to this group, the rate of inflation is high, the monetary and financial market is not developed enough to provide prospective investors optimal conditions for the conclusion of transactions. In these countries, the trading system of settlement of transactions requires major stabilization. It is not lost in sight of the fact that the spread between the poor and the rich is pretty emphasized. In this category we find emerging countries as: Argentina, India, Nigeria and the Philippines.

The third category proposed by Simon is that of emerging markets or latent markets. Their economic performances are quite poor and their access to international financial markets is very limited, and therefore the volumes of trading on these markets are greatly reduced. Of course, the performance of trading systems that dealt in securities settlement, is also reduced. Basically the economies of emerging countries are at the begining of the road, they need capital to both support the entry on increasing trajectory and the financial institutions of market surveillance covering the investment on the stock exchange.

2. Overview of the economies of emerging countries

Regarding investments in emerging markets from the perspective of stock markets, we consider that these requires higher risks than in the case of investments made on a mature market. Thus, the most important risk associated with the financial investment on such markets is their price volatility, which can be observed in a given period of time. Volatility as risk associated with investments in the stock market is a result of the manifestations of risks of the most diverse: political risk, change of the exchange rate,

inflation rate, respectively, of all measures adopted by the authorities of the local currency, but also the information in the market likely to disturb (both in negative and in positive sense) in the normal course of securities listed. However, according to the principle of high risk-high profit, investors who assume the risks of investing on such markets, have the opportunity to earn more than on mature markets, the volatility supplement commitments being offset by a supplement to the profitability of investments made. For international investors, investing in such savings is basically an opportunity to diversify their portfolios, especially because most emerging markets are rather weak correlated with developed markets. According to a report from the International Monetary Fund (IMF, 2012), considered countries with an economy in transition in July 2012 are: Argentina, Brazil, Bulgaria, Chile, China, Colombia, Estonia, Hungary, India, Indonesia, Latvia, Lithuania, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine and Venezuela.

Many economists believe that the economies of emerging countries will be those that will boost the world economy and that they will be the new force in the world, in a specified time-frame. The same IMF report makes an analysis of the evolution of the global economy as a whole and separating performance of developed economies,from those of emerging economies and in the developing world.

It can be seen from the following figure that the performances achieved by the developing countries are higher than those of developed markets, both for the period of crisis and for the year 2012. These are the practical element that maintains the world economy on positive economic growth rates.
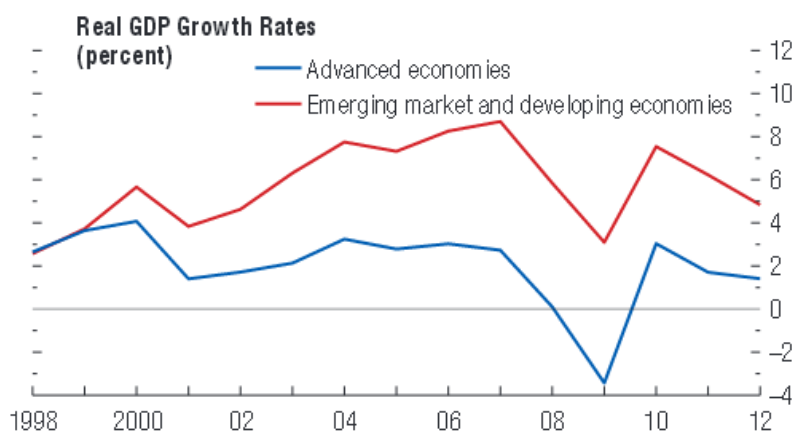
Figure 1. The evolution of economic growth in emerging countries in the developing world and for developed countries
Source: World Economic Outlook. April 2014, the International Monetary Fund (IMF, 1986, p. 114)

The previous figure shows trends in the rates of increase in real gross domestic product for the emerging countries in the developing world and in developed countries.

The major advantage of the emerging countries in the developing world is that including the period of the crisis, they have recorded positive economic growth. Of course, the year 2009 was marked by a severe decline in the pace of economic growth in these countries, however, economic growth in 2009 is maintained at approximately + 3%. You may also have noticed the steep decline of the indicator for developed countries, in the most affected year of the crisis. At that time, the vast majority of developed economies have seen a regression of the real GDP, unable to speak of a positive economic growth. The year 2010 has brought a greenbelt area in both the developed economies that have been

able to re-enter on the territory of positive economic growth, as well as for emerging economies in the developing world.

In mid-2012, the IMF made a forecast for world economic growth to the end of 2012. This prognosis was + 3.5%, this being achieved by developed countries for which contribution it was estimated an increase of 1.4% but especially emerging countries for which estimated an increase of 5.6% at the end of 2012. Statistics show that by the end of 2012, the average economic growth of developed countries was about 1.5%, while the average economic growth of emerging countries in the developing world was approximately 5%.

Also in mid-2012, the IMF has expanded its forecast for the end of 2013, according to which the world economy was supposed to achieve a 3.9 percent advance developed countries generated with 1.9% and economic growth in emerging countries of 5.9%, as in the following figure.
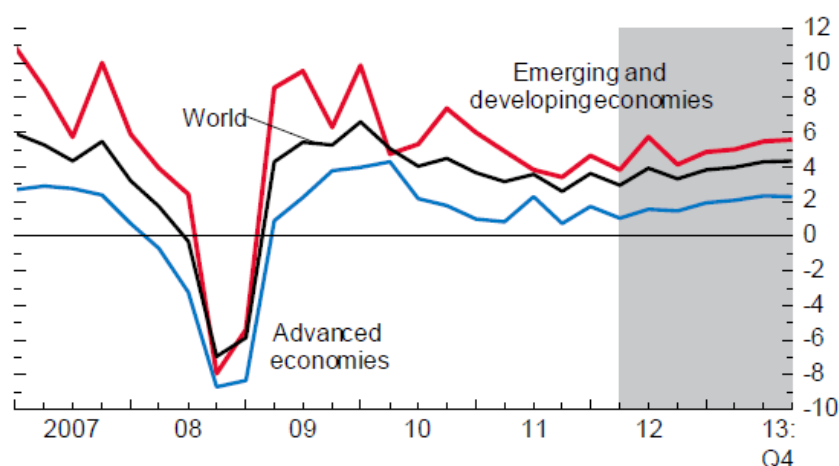
Figure 2. The IMF forecast of economic growth for the end of 2013
Source: World Economic Outlook. International Monetary Fund (IMF, 2012)

We conclude therefore that the emerging markets have brought an extra touch of interest from investors in the financial market, and the IMF forecasts encourages trading on these markets as long as the forecast is for growth of these economies.

The four BRIC countries, as they've been named by Jim O'Neill: Brazil, Russia, India and China are the ones that will dominate the world economy. Their importance is underlined in many analyses of Goldman Sachs, who believes that by the year 2050, China will bring forward the economy of the United States of America. Research carried out by Goldman Sachs (Goldman Sachs, Dreaming with BRICs. The Path to 2050, 2003) forecasts a growth of the most important economies of the world by 2050, as follows:

GDP-billions of dollars
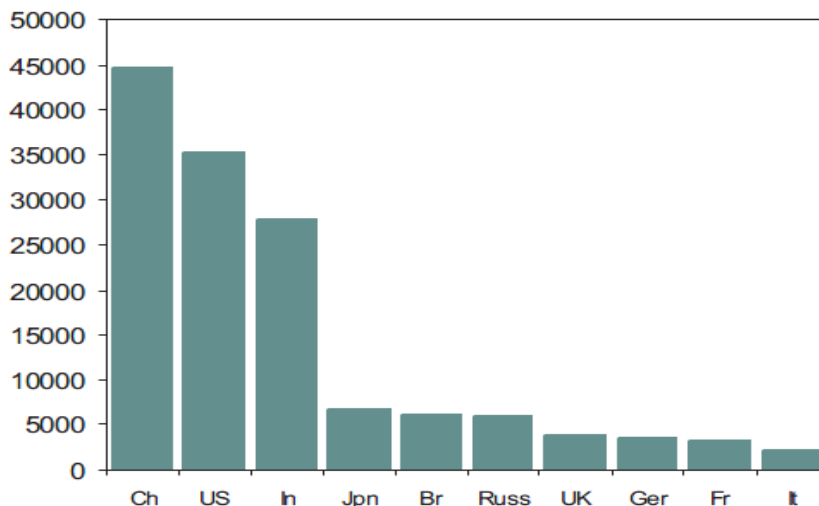
Figure 3. Forecast rankings of the most important economies in 2050
Source: (Goldman Sachs, Dreaming with BRICs. The Path to 2050, 2003)

According to forecasts made by Goldman Sachs, the U.S. economy will be in second place in the world, followed by that of India. Brazil's and Russia's economies will seriously compete with Japan's economy in the year 2050. In a subsequent analysis of Goldman Sachs (Goldman Sachs, 2005), it shall revise forecasts trends in BRIC countries thanks to the strongest increases registered by them in relation to initial forecasts, from the moment of the first analysis. Thus, acording to Goldman Sachs, top countries in terms of gross domestic product in 2025 will look like the following figure:

GDP-billions of dollars
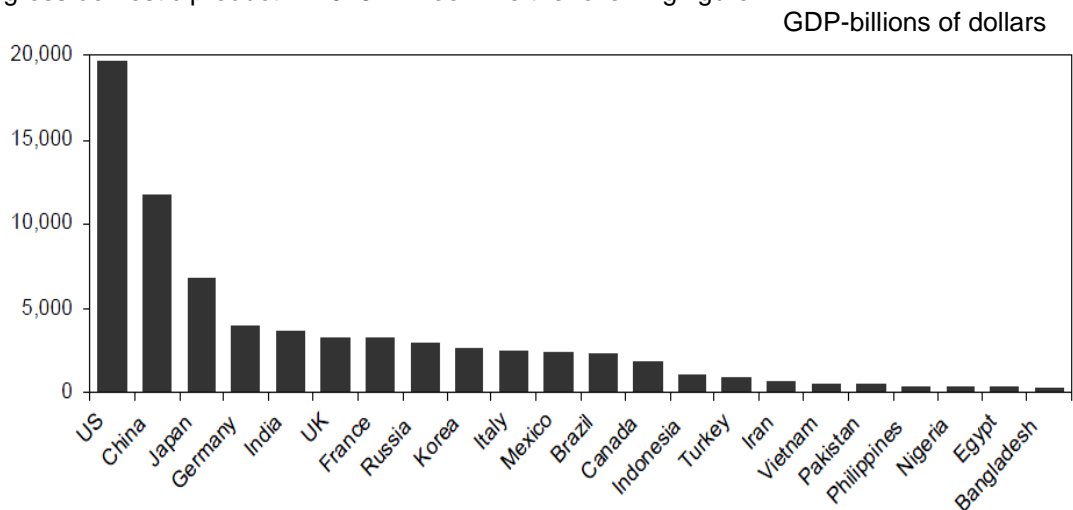
Figure 4. The largest economies in 2025
Source: (Goldman Sachs, How solid are the BRICs?, 2005)

According to the same analysis, after 2025, respectively, by 2050, this will bring: first China, Germany will be brought forward from Russia, Mexico, Brazil and India. The standings will look like:

GDP-billions of dollars
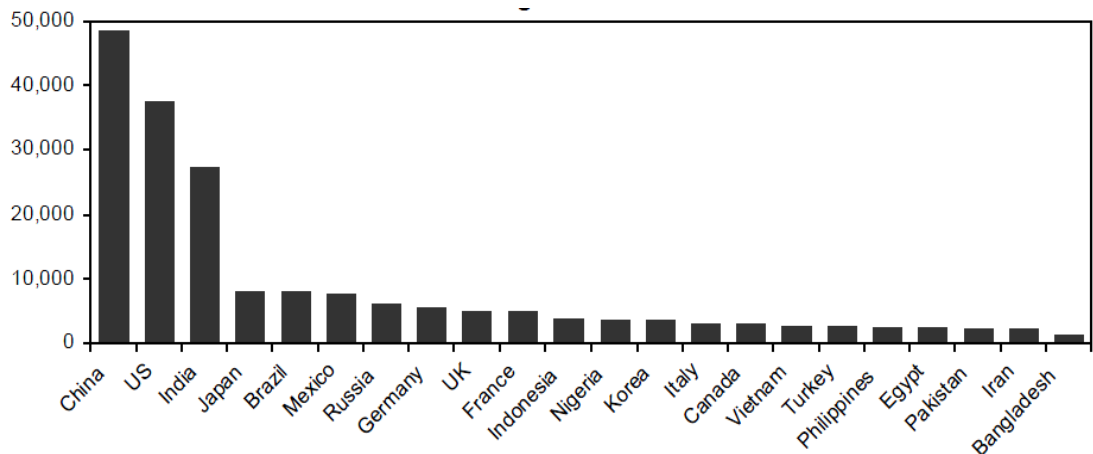
Figure 5. The largest economies in 2025
Source: (Goldman Sachs, How solid are the BRICs?, 2005)

In 2010 South Africa joined the BRIC countries and so was taking birth the BRICS Association. South Africa has the same coordinates as well as major economic countries from BRIC. The location on the globe of the five emerging countries as members of the BRICS are as follows:
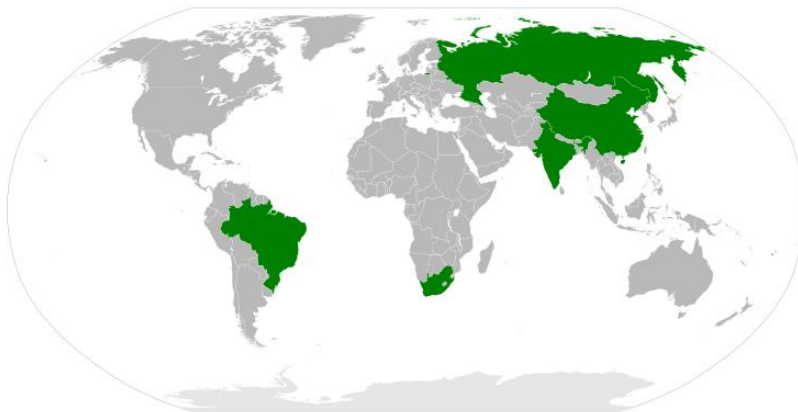
Figure 6. The location on the globe of the BRICS countries
Source: (www.wikipedia.org, 2014)

The following figure shows the evolution of the average economic growth for BRICS countries without China's economy (pink line), compared with the average economic growth for the 16 emerging economies (blue line) and China's economic growth (red line).

3. BRICS: Brazil, Russia, India, China, and South Africa
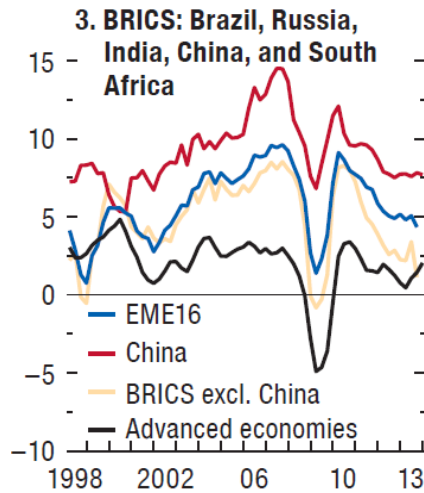
Figure 7. Evolution of the average economic growth for BRICS countries in comparison with the average of developed economies.
Source: World Economic Outlook. April 2014, the International Monetary Fund (IMF, 2014, p. 137)

In the previous figure, China's economy was dealt with somewhat distinct from the other BRICS countries economies because it is the most dynamic of these, it is basically the engine of the global economy, during the crisis. BRICS countries average in terms of economic growth, not taking into account China's economic performance, gets even in the negative territory most affected crisis year- 2009.

3. Characteristics of the stock exchange in emerging BRICS countries.
We propose a comparison of market shares in the five member states of the BRICS. The following figure shows that the market size operations are comparable between themselves, like many indicators of macro-economic nature of these states.
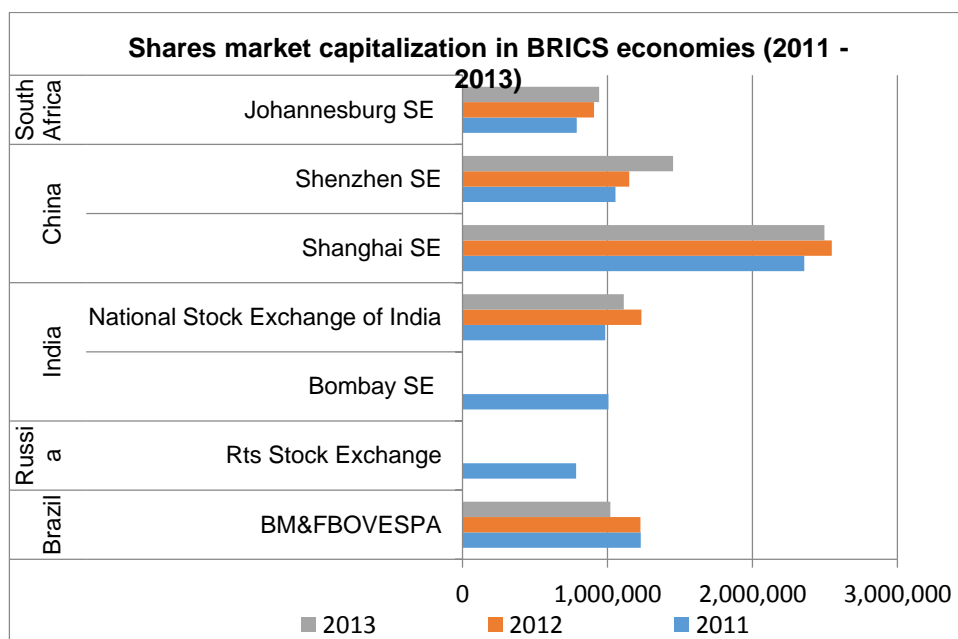
Figure 8. The market capitalization of the shares market of the BRICS countries within 2011-2013

Source: after processing statistical data provided by the WFE (www.world-exchanges.org, 2014)

For 2013, is somewhat noted the Shanghai Stock Exchange (China) with a market capitalization of two times higher than the average of BRICS, the conditions under which, the capitalization of the stock exchange has increased by over 1000% in the last 10 years. After 1990, when stock market capitalization has totaled just over 11 billion dollars, Brazil stock exchange, BM & FBOVESPA had a spectacular rise due to the successful implementation of a new trading system that offered new perspectives for investors on this market, but also because of a policy to promote financing opportunities through stock exchange which has attracted numerous IPOs on the exchange market. The two representative stock exchanges of India, National Stock Exchange of India and Bombay Stock Exchange seem to be in a close competition, at least at the national level, in 2011 their stock market capitalisation were about 1,000 billion dollars each. The reason we did not take into account the market capitalisation of the market shares for the stock exchange in Bombay in the year 2012 and 2013, lies in the fact that the World Federation of Exchanges no longer provides statistical data about this stock exchange in 2012.

The BRICS countries, Russia and South Africa's stock exchange have the lowest market capitalization of just over $ 780 billion, at the end of 2011. For Russia's stock exchange, World Federation of Exchanges no longer provides statistical data starting the year 2012. The market capitalisation of the stock market by the end of 2013 for the Johannesburg Stock Exchange can be compared to that of the Brazil Stock Exchange (BM & FBOVESPA), both being around 1,000 billion dollars.

In an interesting study about who influences more the development of stock exchanges in BRICS member countries, the United States or Japan (Jeyanthi, 2010), based on calculations, Jeyanthi came to the conclusion that, at least in the short term, the development of stock exchanges in India is influenced to a large extent of developments in the United States of America stock exchange, those in Russia are influenced more by

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the evolution of stock exchanges in Japan, member states and the other BRICS are not influenced either by the U.S. or Japan stock exchanges.

With regard to the importance of market capitalization in the GDP of each country, by the end of 2011,in the BRICS countries, the situation looks like the following:
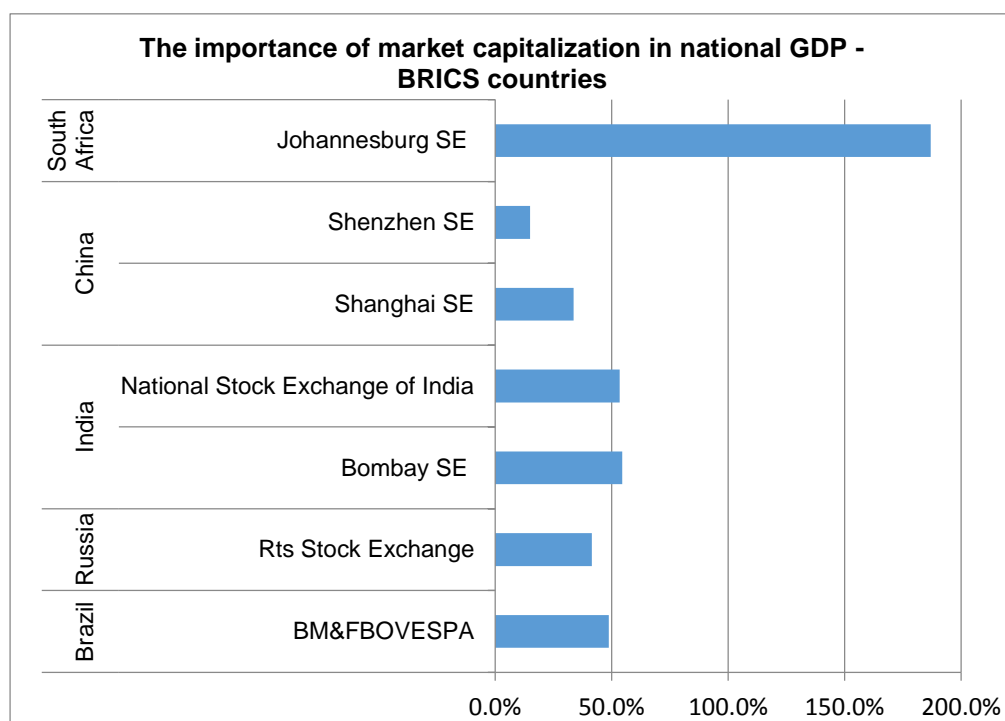
Figure 9. The importance of market capitalisation in the GDP of the BRICS countries
Source: after processing statistical data provided by the WFE (www.world-exchanges.org, 2014)

By far the highest percentage of market capitalization in the country's GDP, by the end of 2011, belong to the stock exchange in Johannesburg (South Africa), 187%, therefore market capitalization exceeds the GDP of the country. Of note is that this stock exchange is the only one on the African continent that counts on the world map, the stock exchanges of other countries have very small stock capitalization. For the other BRICS countries, market capitalization accounts for approximately half of the gross domestic product of each state in which they operate.

In the last decade, many companies that have their headquarters in the BRICS countries have chosen to list their shares on the stock exchange in America or Europe (Wójcik & Burger, 2010). The best ' host ' for international listings was the United Kingdom (London Stock Exchange) and the United States of America, for which international listings in 2006 accounted for approximately 60% of the total.

4. Conclusions

The most powerful emerging economies, as the authors call them in a work under the aegis of the Romanian Academy (Oehler-Șincai, Ghibuțiu, Laghari, Miru, Bah, 2010 &) is like through a series of characteristics such as: massive natural reserves as both volume and diversity, competitiveness is more visible in the industrial sector and the agriculture and consumer markets are robust. The distinctions that they bring into question on the

same spot refer to the endowment with factors of production or the predominance of different sectors in the national economy.

We find interesting the analysis done on the evolution of stock exchanges capitalization in the BRICS countries, even if it is done in a short period of time, in 2011 to 2013. We are of the opinion that one important aspect linked to the development of stock exchanges in emerging BRICS countries is that of innovation and of financial engineers in this area. Of course, the starting points of financial innovation are developed economies and its stock markets. Access to financial innovations within these economies is essential, but the opening of the emerging BRICS countries stock exchange have is a proper aspect of each of these. Tied to the opening of markets in emerging countries, financial innovation has created for the investors, new instruments so that the investment process can achieve transfer of risk between various market participants.

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GENERAL GUIDELINES CONCERNING THE RELATION INTERNATIONAL INTELLECTUAL PROPERTY BUSINESS VERSUS HUMAN RIGHTS AND CIVIL LIBERTIES

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Abstract: Today, *the intellectual property protection is no longer an absolute social and legal that justifies adoption of any measures necessary to protect it. Initially seen as the prerequisite for sustainable development, implementation of new technologies, and encouragement of international trade, the intellectual property, especially prior to ACTA (Anti-Counterfeiting Trade Agreement) international trial implementation, and also thereafter, was increasingly identified as a source of violation of fundamental rights and civil liberties, i.e. the right to protection of personal data, the right to privacy, freedom to send and receive information freedom of information, freedom to contract, and freedom to carry out economic activities (freedom of commerce). As far as international trade transactions have often a component of intellectual property that requires to be protected, it is necessary to identify the landmarks, the rules establishing de facto limits in order to protect the intellectual property without risk of infringement of fundamental rights and civil liberties of other persons, in particular users or potential users of goods and services incorporating intellectual property. The best guidelines in this regard may be provided by the CJEU (Court of Justice of the European Union) case-law both due to its reasoning underlying the decision of the Parliament to reject ACTA ratification and the fact that the case-law of this Court, especially the most recent one, is highly complex and nuanced, not denying in any way the importance of intellectual property, and identifying certain cases where their primacy persist and whose analysis leads to laying down some general rules in the field.*

Keywords: international business, intellectual property, human rights, civil liberties, ACTA, propter rem obligation

JEL classification: O31, O34, O35, O38

Even if the acknowledgement of the rights on tangible properties, particularly the lands, leads to a winning for the entire community through a better exploitation thereof, the protection of intellectual works has the potential to affect and even to encourage the inventive activity. More precisely, the acknowledgement of several rights in the field of intellectual works, even if it apparently seems to represent an inducement for the authors, does not necessarily lead to the increase of the quality and quantity of the production of intellectual works, comes with an adverse effect too. This may happen because of the fact that the rights in the field of intellectual property can somehow hinder not only the inventive activities through the drawbacks set in the subsequent research works (Boyle, 2008), but also the free access to information and knowledge, including here the excessive limitation of the free circulation of intellectual works. The problem of balance between the rights acknowledged in the field of intellectual property and the third parties' rights to access the protected creation is highly stringent and approached not only from its theoretical perspective, but also at the level of international regulations. Therefore, the amendments brought to the Convention of Berne and the Universal Convention on the copyright as a consequence of the problems raised by the developing nations, are relevant in terms that these nations need to obtain materials legally protected under the

intellectual property rights to support their educational programs and other initiatives designed to facilitate the implementation of the cultural development programs (Sterling, 2003). Therefore, the protection of copyright meant to serve creativity and promote access to information turned into a real obstacle for both, particularly due to a higher protection term that can easily exceed a century (Boyle, 2008). A proper example in this case is the judgment ruled by US Supreme Court in the case of Sony Corp. of America vs. Universal City Studios, Inc., also known as the Betamax case which gives an example of setting relevant landmarks in terms of limiting the control of the holders of intellectual property rights over the new technologies which can contribute to the illegal reproduction and communication of intellectual works; these landmarks can also be enforced to the latest technologies applicable to internet. In this case the judges of the US Supreme Court, criticizing the ruling of the court of first instance, in this case, the US Ninth Circuit Federal Court of Appeal, underlined that "it is extraordinary to argue that the legislation in the copyright field confers to all holders of these rights, including here the two plaintiffs, the exclusive right to distribute video recording devices VTR (Video Tape Recorders) by the simple fact that these could be used to infringe their rights" (Boyle, 2008). Starting from this case, we can make an analogy with the ACTA's regulation, which is intended to be the answer of the regulatory system in the field of intellectual property to the danger posed by the internet and the new piracy technologies, considering the fact that, although the new technologies pose new risks regarding the breach of the rights applicable to the field of intellectual property, they also came with tremendous benefits. For example, even if the greatest movie producers in the United States of America feared the new technology of video tape recorders can seriously affect the cinematographic industry, it was almost in no time proven that, until the implementation of the DVD technology, almost half of the cinematographic industry market was covered through distribution of video tapes; so, the disadvantages were clearly inferior to the benefits brought by this new technology that has significantly contributed to the dissemination of the cinematographic creations (Boyle, 2008). Even in the subsequent case-laws, i.e. A&M Records, Inc. v. Napster, Inc. and MGM Studios, Inc. v. Grokster, Ltd., the same law courts, more precisely, the Ninth Circuit Federal Court of Appeal and the US Supreme Court of Justice, even if they seemed to go back to and amend the judgments previously delivered, they didn't; moreover, the courts insisted that the intellectual property rights should be protected in relation to the technologies that appear to be explicitly promoted among the users, in terms of copyright infringement (Boyle, 2008).

The purpose of the protection of intellectual creations must be properly understood. The first goal was to encourage the authors of intellectual works by stimulating their creativity, helping thus implicitly to the development of the entire society. To encourage creativity and develop the society, the lawmakers decided to allow the authors to have access to the civil circuit; in other words, the authors gained rights and took upon themselves a series of obligations in relation to their own intellectual works. This entire legal protection must be outlined in relation with the targeted objective: the development of the society using the very means that have been identified for this purpose: the inclusion of the intellectual works in the civil circuit whose direct consequence is the protection of the author's interests. Presently, there is the tendency to support the idea that the essential purpose would be solely focused on the protection of the author's interests, disregarding somehow the general context that talked about the development of the society. This tendency poses a serious risk in terms of deviating the legal protection from its initial purpose and turning it into a blockage of the development of society, obstructing the access to information and hindering the development of the previously agreed contractual relations as a consequence of acknowledging some super- prerogatives of the author to block thereof by invoking the moral rights, for example. Given these aspects, I consider that it is of paramount important to establish a balance in the relation between the holders

of intellectual property rights and the other legal subjects because the legal protection shall never deviate from its purpose when the interests of all participants in the legal relations applicable to this field are properly and vehemently defended. The current imbalance is particularly due to the fact that the legislation in the intellectual property field was created at the initiative of the holders of intellectual property rights, who totally ignored or at least, they disregarded the rights of the other legal subjects. For example, the Berne Convention of 1886 on the protection of literary and artistic works has been prepared and signed under the powerful influence of the International Literary and Artistic Association presided by Victor Hugo. The effect of this legislative politics that inevitably led to the hindering of the progress is now analyzed in the American doctrine by an author who made an analogy. Professor James Boyle (2008) wondered what would have happened with the ordinary consumers, if the gas lamp sellers had the chance to set the rules designed to govern the activities carried out by the companies working in the electricity field "*intellectual property legislation had always been a cozy world in which the content, publishing, and distribution industries were literally asked to draft the rules by which they would live. The law was treated as a kind of contract between the affected industries. Rationally enough, those industries would wish to use the law not merely to protect their legitimate existing property rights, but to make challenges to their basic business plans illegal*".

A person cannot appropriate the intellectual creation, by its very nature, if such person cannot totally identify it with the material support of the creation. Again, we are talking about the natural property right over the material support and not over the work itself as the latter cannot exist without its material support. Moreover, this impossibility to appropriate an intellectual work is not just a consequence of its immaterial nature; it derives from the relation between the intellectual creations and the society, the universal patrimony and the knowledge, in general. More precisely, the very nature of the intellectual creation requires no legal protection, as opposed to the tangible properties. Furthermore, by its nature, an intellectual creation, irrespective of the fact that it is a work subject to copyright protection, a utilitarian creation or a distinct trademark, circulates freely from one individual to another, enriching thus the stage of knowledge and contributing to the social progress and the human development. This characteristic is not met in the case of other tangible properties. These properties, by their nature, have no vocation to contribute to the development of the society. On the other hand, the intangible properties contribute to the development of society to the same extent as the tangible properties, encouraging the private property and the relations between natural persons, contributing thus to the social welfare. In a letter sent by Thomas Jefferson to Isaac McPherson, as an answer to one of his requests to advise about his opinion on a patent released to Oliver Evans, he uses this opportunity to firstly review the rights acknowledged to the inventors by means of different patents, and then to express his reserves regarding the extent to which Evans' device, which consisted of several containers able to move cereals, represented a real invention. In the same letter, Thomas Jefferson gives several pertinent arguments on the different between the tangible properties and the intellectual property, summing up that every intellectual creation is intrinsically meant to enter the public domain, since it is protected under certain conditions set out by the law solely to encourage the creative activity required to develop the society by remunerating the author thereof. Thomas Jefferson underlines that the rights over an invention do not automatically highlight a natural right because, the permanent property upon the tangible goods that goes beyond the simple possession is a characteristic of the laws set up by an organized society; therefore, the inventions, by their nature, cannot be subject to the ownership title as long as, by their nature, they circulate freely unlimitedly from one individual to another, provided that they have been disclosed by their author (Boyle, 2008). Starting from this point, Jefferson launches a real warning where he underlines that the

holders' rights in the field of intellectual property are not revealed from the natural right. Therefore, he demonstrates that everything that is protected under the intellectual property rights is totally different from everything that is protected under the property rights over the tangible properties. Partly due to these differences, Jefferson does not perceive the intellectual property as a natural right based on work of the intellectual creation's author, but as a temporary monopoly created by the state to encourage creativity. Secondly, he argues that no person is directly entitled to the acknowledgement of his/her intellectual property right as these rights may be or not granted depending on both the will of the law-maker and the social standards ("will and convenience") without any claims or complaints from a person ("claim or complaint from anybody"). Thirdly, the intellectual property rights are not and must not be permanent; in fact, they should be quite limited and should not last longer than it is necessary to encourage creativity. Fourthly, a connection point, the intellectual property rights pose certain risks from the perspective of the nature of the monopoly. So, due to the fact that the intellectual property confines the natural tendency of the ideas and creations of the mind to be freely disseminated from one person to another for educational purposes - "ideas (....) freely spread from one to another over the globe, for the moral and mutual instruction of man" - in certain cases it can discourage creativity instead of encouraging it. Fifthly, the decision to have an intellectual property system is just a first choice in a long row of choices. Even if it is considered that the protection of intellectual property is a good idea, there should be determined the categories of intellectual creations which to justify, in terms of community ("worth to the public the embarrassment"), the disadvantages of an exclusive right; hence, it is very difficult to determine such limits (Boyle, 2008). In light of these reasons, I consider that the rights in the field of intellectual property represent the exception as the general rule stipulates that all intellectual creations are meant to enter the public domain. For the same purpose the dissident opinion of Judge Stands concerning the decision pronounced by the Supreme Court of Justice of the United States of America in the cause of International News Service v. Associated Press "*the general rule of law is, that the noblest of human production-knowledge, truths ascertained, conceptions, and ideas-become, after voluntary communication to others, free as the air to common use* (...) *the creation or recognition by courts of a new private right may work serious injury to the general public, unless the boundaries of the right are definitely established and wisely guarded. In order to reconcile the new private right with the public interest, it may be necessary to prescribe limitations and rules for its enjoyment; and also to provide administrative machinery for enforcing the rules*" (Boyle, 2008). The title of legal protection of an intellectual creation is conferred the moment it satisfies certain conditions referring to novelty, utility and the existence of an author. Indeed, talking about property in the field of intellectual creations is quite improper. In spite of how strange it might seem that the intellectual property does not involve a property right, it must be considered that the name of the intellectual property has its origin in a wrong translation of a word from English into French, due to the fact that in the first revolutionary decrees from France which acknowledged the exclusive rights of the authors and inventors, we may find the influences of English and American law that uses the word property; this word has been translated into French as propriété, although the French conception about property corresponds to the English word ownership, in the context in which in the Anglo-Saxon law, the concept of property is broader and includes even personal rights - *jus in personam* (Roș et al., 2005). There is a characteristic that differentiates the exclusive use in the field of intellectual property from the use itself (*usus*) as an attribute of the property right, and from the prerogative of the inherent use of the property right. In the case of the creations of the mind, the use thereof is "non-rival" (as stated by James Boyle), and non-exclusive respectively. In other words, the use does not exclude the simultaneous use of the same object. There cannot be multiple and simultaneous uses of the same land, but we can

definitely talk about the multiple uses of a MP3 file or an image by more than one person, as the use of such items by one person does not interfere with the use of the same intellectual creation by another person (Boyle, 2008). The argument according to which this rule might be applicable to all intangible assets is not valid, and the example for such invalidity is given by the goodwill that simply excludes "multiple" uses thereof. In reality the patrimonial rights in the field of the intellectual property represent the *jus in personam* correlative to a propter rem obligation of the owner of the material (electronic) support of the intellectual creation. As a matter of fact, Remo Franceschelli, in an article addressing the legal nature of the rights pertaining to authors and inventors rights, published in a deferential volume dedicated to Roubier, makes a similar observation, stating that the characteristic that defines the intellectual property right is the fact that the owner of the material support of the intellectual work cannot reproduce the work, and the classification of the patrimonial rights in the field of intellectual property as a *jus in rem* does not explain the reason based on which the author of the intellectual creation can, even if after having sold the material support of such creation, prevent the buyer from reproducing the work and to act as the owner of a tangible asset. Remo Franceschelli underlines this aspect by giving a series of simple and easy-to-remember examples: the wheat we buy can be sowed, the potatoes can also be planted, the eggs we buy can be either consumed or put into an incubator; then, he draws the conclusion that the core, the essence of the intellectual property which however does not exist in default of the implementation of the special legislation in this field, lays in this negative, *non facere* obligation-, and not in the possibility of the author to use the intellectual creation.

The entire international regulatory system is built based on several considerations focused on the protection or lack of protection of intellectual property. For example, the first argument set out by ACTA stipulates that the efficient implementation of intellectual property rights is essential to support economic growth in all industrial sectors, as well as worldwide. When talking about setting up the relation between the interests protected under the intellectual property and the interests of the other persons, it is difficult to draw a line between the rationales that justify the restrictions of an exclusivity given by a legal protection status, at the community level, and the reasons that give no justifications for this aspect (Boyle, 2008). Taking into consideration the international regulations, one of the questions ACTA tries to give a relevant answer is how far can we go to protect the intellectual property and to what extent can the individual freedoms of the users or the potential users be limited to protect the intellectual property rights. The answer was that we can go quite far and that the interest of both the authors of intellectual works and the holders of intellectual property rights is of paramount interest compared to the individual rights, interests and freedoms of the other legal subjects. The question for which ACTA seemed to give a favorable answer for the holders of such rights has been launched again after the rejection of ratification at European Union level. The answer which seems to be offered in the European Parliament provides for a certain balance between holders' rights and the rights of users / potential users. This line is also followed by the case-law of European Court of Justice in the NETLOG cause: the European Court of Justice in the decision pronounced in cause C-360/10 BELGISCHE VERENIGING VAN AUTEURS, COMPONISTEN EN UITGEVERS CVBA (SABAM) c/ NETLOG NV of February 16th, 2012 restates the necessity of a balance between the interests of the holders of the intellectual property rights and the interests of all other legal subjects, invoking thus the fundamental human rights. For precision the answer to the preliminary question was " *In the light of the foregoing, the answer to the question referred is that Directives 2000/31, 2001/29 and 2004/48, read together and construed in the light of the requirements stemming from the protection of the applicable fundamental rights, must be interpreted as precluding an injunction made against a hosting service provider which requires it to install the contested filtering system*".

The Anti-Counterfeiting Trade Agreement entered into by and between the European Union and its member states, Australia, Canada, Japan, Korea, United Mexican States, Morocco, New Zeeland, Republic of Singapore, Swiss Confederacy and the United States of America was based on the desire of the United States of America, the European Union, Switzerland and Japan to establish a new standard of protection in the field of intellectual property, paying a special attention to the works subject to and protected by copyright. Subsequently, other states, such as Australia, South Korea, New Zeeland, Mexico, Jordan, Morocco, Singapore, United Arab Emirates and Canada joined negotiations: and the agreement was signed on January 27th 2012. The fact that the negotiations have been confidential and the procedures governing the negotiation and signing of this agreement have not been concluded under the patronage of an international organization gave rise to powerful controversies - this fear is not fully justified because the conclusion of some of the most efficient international instruments in the field of intellectual property was not led by any international organization; on the contrary, these instruments laid the foundations of certain international organizations (as the Berne Union), the most powerful counter-example being the Universal Convention regarding the copyright, the negotiations for its conclusion being led by UNESCO, and the TRIPS Treaty designed to regulate the incidence of intellectual copyright on the trade, signed under the aegis of the World Business Organization; this fear can be justified to the extent in which the contracting parties of this international agreement would have particularly intended to block the participation of some international organization, especially of World Intellectual Property Organization and it is worth to mention the fact that the agreement lays the basis of a new international entity, more precisely under the grounds of Chapter V of Anti-Counterfeiting Trade Agreement being settled the Anti-Counterfeiting Trade Agreement Committee - regarding the rules set forth by this international treaty, which finally culminated with the rejection of the treaty by the European Parliament on July 4th 2012. In other words, the treaty could no longer be considered a de facto and de jure part of the legal regulations implemented by both the European Union and the member states. In favor of the ACTA, its supporters invoked the fact that it provided efficient and proper means, which complement the TRIPS Agreement, to apply the intellectual property rights, considering the differences between their legal systems and their procedures; they also argued that it gave relevant alternatives to other international regulations on intellectual property, which, at that moment of societal development, provided "the raw material for the economy". Against ACTA there has been invoked the fact that the agreement was too ambiguous and that could lead to potential misinterpretations, particularly in terms of the excessive limitation of citizen's rights and freedom. The opponents underlined the fact that ACTA would bring about an imbalance between the intellectual property rights and the holders thereof, between the service providers from the digital media and the users of such media, resulting thus in a breach of the citizens' freedoms.

The NETLOG case-law ACTA was rejected on in the European Parliament is not singular, but rather follows a decision given in the Case C-70/10 SCARLET EXTENDED SA c/ SOCIETE BELGE DES AUTEURS, COMPOSITEURS ET EDITEURS SCRL (SABAM) by which the European Court has laid down that EU law (Directives 2000/31/EC, 2001/29/EC, 2004/48/EC, 95/46/EC, 2002/58/EC corroborated and interpreted in relation to the requirements stemming from protection of applicable fundamental rights) precludes a court order issued by a national court which requires an Internet access provider to establish a system for filtering all electronic communications traveling through its services, in particular through the use of "peer-to-peer" software, which applies indiscriminately to all its clients to prevent illegal file transfer. On this occasion, CJEU sets a landmark in the control of the balance between intellectual property rights and other fundamental rights, when recognizing that protection of intellectual property right is enshrined in the EU Charter of Fundamental Rights, but does not follow in any way either its table of contents

or the Court case-law, and that such a right should be intangible and, therefore, its protection should be assured. In this decision, the European Court outweighs the importance and the need of intellectual property protection with the right to personal data protection, freedom to send and receive information, and freedom to information.

This view of the European Court was later strongly nuanced, when identifying certain cases in which primacy of intellectual property to the legitimate rights and interests of other people, users or potential users of goods and services incorporating intellectual property subsists. More specifically, it is about the CJEU decision of April 19, 2012 in the Cause C-461/2010 BONNIER AUDIO AB et al. c/ PERFECT COMMUNICATION SWEDEN AB where it has been essentially established that Internet service providers can provide a copyright holder with the personal data of users to identify the illegal distribution of protected works, and also the CJEU decision of March 27, 2014 in the Cause C-314/2012 UPC TELEKABEL WIEN GMBH c/ CONSTANTIN FILM VERLEIH GMBH where it has been essentially established that an Internet access provider may be required to block its customers' access to a website that is detrimental to copyrights. Is this a change in the case law of CJEU based on which ACTA was rejected? A response to such a powerful question is extremely important since giving up the arguments for the decision of the European Parliament to reject ACTA would call into focus the need for such protection standards. The answer can only be negative and not change the case-law of CJEU, as proven by the fact that the 2014 judgment insists on the need of a fair balance between the fundamental rights in question, which in fact reaffirms that the holders of intellectual property rights are, at least legally, on a par position toward other participants in the economic circuit. However, a less informed reader might consider that we are facing a change in case-law since, at least formally, in its recent decisions, CJEU ignores the case-law of NETLOG and the one underlying it, not doing formally any reference to it.

After closer inspection, we can see that CJEU nuances its old legal considerations based on factual particularity of the new cases. A common point is that the European Court makes a distinction between the need to protect *in abstracto* the intellectual property, on the one hand, and the need to preventively protect *in concreto* the intellectual property, on the other hand, following infringement of intellectual property. By its recent case-law, CJEU does nothing but reaffirm that in the second case the rights and freedoms of other participants in the economic circuit, especially beneficiaries of goods and services incorporating intellectual property, even if the first hypothesis cannot be limited, may be limited to protect the legitimate rights and interests of holders of intellectual property.

In the *Bonnier Audio* case law, the preliminary question addressed to CJEU by a Swedish Court, concerns the situation in which the applicant of the summons (the copyright holder) proved the existence of solid evidence to the copyright prejudice caused by the intended user. This decision comes after a series of preliminary rulings where European Union law rules have been interpreted in favor of protecting the identity of Internet users and their online privacy; unlike *Bonnier Audio*, they concerned situations where the Internet provider was required the large scale monitoring of users' online activities and filtering of all materials posted on social networking sites to avoid copyright infringement. This is the difference made by CJEU between an actual and a potential injury, the latter not justifying a large-scale monitoring and filtering. In the case-law of *UPC Telekabel Wien,* the European Court goes further by showcasing the situation justifying the implementation of preventive measures against third persons who have not committed any illegal act, and showing that a concrete infringement of intellectual property must lie behind these preventive measures. Specifically, by this decision, CJEU responds to the Supreme Court of Austria that a person who publicly posts protected objects without the consent of the copyright holder, on an Internet website, he uses the services of Internet access provider of persons accessing these objects, and that a provider such as UPC Telekabel enabling

clients to gain access to protected objects publicly made available on Internet websites by a third party, is nothing more than an intermediary whose services are used for copyright infringement. Starting from this factual premise, the European Court stresses that the directive aiming to ensure the rights' holders with a high level of protection, does not require a special relationship between the person prejudicing the copyright and the intermediary against whom a summons may be brought, and also that it's not necessary to prove that the clients of the Internet access provider effectively access the protected objects publicly made available on websites by a third party, as the Directive requires for the measures taken by Member States in compliance thereof to aim not only at the cessation of infringements of copyrights and related rights, but also at their prevention.

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SUB-SECTION:THE IMPACT OF FOREIGN LANGUAGES ON THE BUSINESS ENVIRONMENT

METHODS OF EVALUATING LEARNERS STUDYING ENGLISH FOR SPECIAL PURPOSES

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Abstract: *The present paper intends to present the perceptions of 90 students, studying at the University of Oradea, Faculty of Electrical Engineering and Information Technology and Faculty of Civil Engineering and Architecture, about two evaluation methods used at the English course, namely the classical, end-of-semester testing method and the so-called "progressive evaluation", which is carried out during the course and results from weekly in-class grading. At the end of the two years of studying English as part of their curricula, students were asked to complete an anonymous questionnaire of 11 items, in which they reported either their contentment or discontentment with the two evaluation methods used, and expressed opinions about the efficiency and usefulness of the English course they have attended. A copy of the questionnaire is included as an appendix to this paper. This paper begins with a brief discussion and definition of English for Specific Purposes (ESP), after which it focuses on the description of the evaluation methods applied, on students' response to these methods and some personal consideration of the advantages and disadvantages of the two evaluation methods. ESP is a very broad domain, referring mainly to teaching English to students or people who need it for specific purposes, i.e. at work, or in their future career. In these faculties ESP is the main instrument for teaching a foreign language. In contrast to general English, ESP starts from the assessment of those functions and purposes for which English is required, as well as of the skills the learner might need most. In order to give students the possibility to compare two evaluation methods, they were evaluated at the end of their first semester, by using a method that is often used at the University of Oradea, namely that of testing learners' achievement at the end of the semester. Starting with the second semester, we have presented students with the other evaluation method, which we called "permanent evaluation", based on weekly in-class grading.*

Keywords: English for Specific Purposes (ESP), the progressive evaluation method

JEL classification: Y9

1. Introduction

At the University of Oradea, Faculty of Electrical Engineering and Information Technology and Faculty of Civil Engineering and Architecture all students are required to attend a foreign language course (during the first two years of study, 2 hours per week, 14 weeks per semester). As students are preparing for a career in the engineering domain, the course is structured so that it might meet the specific needs of learners, namely to approach topics and themes that would be related to the field in which they will probably activate in the future. It includes reading and vocabulary sections, which focus on the language appropriate to the field of engineering, starting with a reading section and continuing with multiple-choice exercises, matching words with their definitions, translations, gap-filling, matching headings with paragraphs or sections of text, sentence completion, true/false/not given text information, and other content-embedded exercises. There are sections dedicated to the grammatical structures encountered in the text, which might help students become better communicators when using English; writing sections, giving learners hints and practice in selecting and summarizing information, presenting information based on tables, graphs, images, and writing information sheets, letters, reviews, reports; speaking sections, encouraging and helping students to demonstrate their ability to exchange personal and factual information, to explain or summarize, to compare and contrast images, charts, graphs [1]. Extra-materials are brought so as to give student practice in listening and understanding a spoken text in the foreign language. As illustrated by the presentation of the course above, it gives attention primarily to English for Specific Purposes, but also to General English. This situation is determined by the fact that groups are heterogeneous, with sometimes important variations in their language level. This is a result of the fact that students are grouped according to their alphabetical order rather than according to ability. Therefore, when the differences were too obvious to allow the teaching and learning of English in a homogeneous group, the class was split into groups according to students' English ability level, based on a pre-test.

Given the situation presented above, this paper starts with a brief discussion and definition of English for Specific Purposes (ESP), and then focuses on the description of the evaluation methods applied, on students' response to these methods and some personal consideration of the advantages and disadvantages of the two evaluation methods.

2. The origins of ESP. Characteristics of ESP courses

Especially after World War II, ESP has become important due to the process of globalization, the adoption of English as a means of international communication, and the increase in vocational training and education throughout the world. This situation has triggered a change of perspective in the field of linguistics, where the accent started to be placed on communication, rather than on the general features of a language.

ESP is a very broad domain, referring mainly to teaching English to students or people who need it for specific purposes, i.e. at work, or in their future career. Therefore it is associated with learner's specific needs [2]. In contrast to general English, ESP starts from the assessment of those functions and purposes for which English is required, as well as of the skills the learner might need most (for example speaking skills are given more attention when students are preparing to become tourist agents, air traffic controllers, etc, while reading might be emphasized for students of business administration; some universities offer specialized courses on legal writing; listening and speaking skills for legal students; communicating in the business world, etc.). However, it includes English language teaching, which makes it very appealing to students.

Many researchers have attempted different definitions of ESP: for example, Hutchinson and Waters (1987) argue that "the purpose of the ESP course is to enable learners to function adequately in a target situation" [3], while Dudley Evens, at a conference held in

Japan, tried to make the term clear, by emphasizing its absolute and variable characteristics, which are as follows:

"Absolute Characteristics
1. ESP is defined to meet the specific needs of learners;
2. ESP makes use of underlying methodology and activities of the discipline it serves;
3. ESP is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre.

Variable Characteristics
1. ESP may be related to or designed for specific disciplines;
2. ESP may use, in specific teaching situations, a different methodology from that of General English;
3. ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level;
4. ESP is generally designed for intermediate or advanced students;
5. Most ESP courses assume some basic knowledge of the language systems." [4]

David Carter (1983) has tried a description of different types of ESP, namely:
1. English as a restricted language (usually found in tourist phrase books, or used by some professionals, such as air-hostesses, air-traffic controllers), which gives its learners practice only in restricted contexts.
2. English for Academic and Occupational purposes (e.g. English for Science and Technology, English for Business and Economics, English for Nurses, etc).
3. English with specific topics (which anticipates people's future English needs, such as working in a foreign institution, speaking on behalf of their company, etc) [5].

In conclusion to the opinions presented above, one may argue that ESP refers to the teaching of English in accordance to learner's specific interests and needs, which would imply some previous knowledge of general English on the part of the learner, though lately courses are designed for beginners as well.

3. Analysis of the "progressive" evaluation method
As indicated in the introductory part of this paper, though intended as an ESP course, the English course taught at the University of Oradea, Faculty of Electrical Engineering and Information Technology and Faculty of Civil Engineering and Architecture, during the two years we have considered for the purpose of this study, to mix some general English teaching with ESP teaching, given the differences between the students presented in terms of their ability to use English.

In order to give students the possibility to compare two evaluation methods, we have chosen to evaluate them, at the end of their first semester, by using a method that is often used at the University of Oradea, namely that of testing learners' achievement at the end of the semester. Starting with the second semester, the students were presented with the other evaluation method, which we called "permanent evaluation", based on weekly in-class grading. The classes were organized as follows: 70-75 minutes were dedicated to teaching and exercises, and the last 30-25 minutes were dedicated to students' completion of different tasks (80% of each student's grade was based on the completion and marking of these tasks, while 20% of the final grade took into consideration students' attendance and contribution to class activities). At least 80% of the classes became compulsory in order to get the final mark.

As indicated by their responses to the questionnaire completed at the end of the four semesters of English learning, students' impressions on the benefits of permanent evaluation were consistently positive, with few exceptions on most items. This is very significant, especially since the permanent evaluation method requires students to work a lot during the classes. Some of their comments, relating to items 1-3 of the questionnaire, may be classified as follows:

Category	Positive	Negative	Total
1. Which evaluation method contributes to a more objective evaluation of the English-language knowledge? a. the classical method b. the progressive method	87	3	90
2. Which of the 2 evaluation methods presented more advantages for you? a. the classical method b. the progressive method	87	3	90
3. Which evaluation method made you more attentive during the English-language classes? a. the classical method b. the progressive method	89	1	90

Students were asked to bring arguments for their answers at each of the 3 first items of the questionnaire. Most answers came from those who chose alternative b (the progressive evaluation method) and generally emphasized students' possibility to monitor their progress and improve their marks on the way; the possibility for evaluating both oral and written abilities; the step-by-step evaluation of fresh knowledge; avoiding the necessity to learn a lot before an exam; better marks; less busy final session of exams; students' determination to be more active and attentive during the classes; reduced amount of stress; increased motivation to attend and focus on teaching and activities during the English class. Those who have chosen the first alternative (the classical evaluation method) argued that the necessity to attend at least 80% of the classes was a chief disadvantage for them, as for different reasons they could not be present at all the required classes.

Item 4, asking the students about the extent to which their participation to the English classes was determined by their awareness that their mark depended on their presence, received the following answers:

Category	Number of answers
1. to a very high extent	25
2. to a certain extent	27
3. to a little extent	15
4. not at all, as I am motivated to take part at the English class for other reasons than that of receiving a mark	23

At item 5, requiring students to point out some of the disadvantages of each method in particular, the answers were as follows:
- *the classical method*: is boring, not appealing to students; students are not encouraged and motivated to attend and be attentive during classes; too much subject matter to be assimilated at the end of the semester; the tendency to learn only before the final examination; the final mark does not reflect student's participation and contribution to the English course during the semester; a single mark might not reflect students' knowledge;
- *the progressive method*: demands students' presence at courses; sometimes students' only motivation is to be present at classes just to make sure they will get enough marks; students might encounter problems when they have to express themselves freely in a foreign language, especially in front of the class; the tendency not to repeat the topics or issues presented, and study thoroughly; little time for preparation before the test, some information might not have been assimilated properly during the course; more time dedicated to evaluation.
It is worth mentioning here that many students said they could see no disadvantage in the progressive method.
As the progressive evaluation method demands much more work and time on the part of the teacher, first for the organization of classes and second for the out-of-class reading and response to students' papers, item 6 asked students to say to what degree has the teacher contributed to the efficiency of the progressive evaluation method. Their answers may be classified as follows:

To a great extent	83
To some extent	5
To a little extent	1
The effort was insufficient	1

At item 7, students were encouraged to enumerate arguments, other than the need to get a mark (as they were informed they were going to be evaluated through the progressive method), that motivated them to attend the English classes, some accepted that initially they were encouraged to be present mainly to get a mark, but that they gradually came to enjoy classes and appreciate the new things they could learn and the practice they could get; others said they were motivated by their desire to learn English, learn new things; the possibility offered to express themselves freely in a foreign language. Ten students said they had no other reason, besides the need to get a mark, to participate at the English classes.

As far as their suggestions for the improvement in the application of the progressive method were concerned (Item 8), some students said that the evaluation should take place once in a fortnight rather than weekly, ensure more time for debates and dialogue, the presentation of some subjects proposed by students. Most students said they had no suggestion for improvement, while 3 answered "I don't know".

Item 9 asked students to evaluate how much new knowledge they have acquired during the 4 semesters of ESP. Their answers may be classified as follows:

Item 10 evaluated students' contentment or discontentment with the fact that the 4-semester English course was compulsory so as to obtain the 2 transferable credits. Their answers may be classified as follows:

I have acquired new knowledge	88
I have acquired little new knowledge, but I managed not to forget the knowledge acquired previously	2
I have acquired no new knowledge	0

Very content	60
Content	30
Indifferent	0
Discontent	0

The last item, 11, asked students to express their opinions about the number of classes of ESP they had per week. They were asked o say if they would:

Increase the number of foreign languages at their faculty	22
To let the current situation unchanged	68
To make the foreign language course optional	0
To eliminate the English course form the curriculum	0

4. Conclusions

Teaching ESP may be a very demanding task for teachers, though it might give them opportunities to constantly improve their teaching and evaluation methods.

This study has focused on students' perception of two evaluation methods for their ESP course at the University of Oradea, Faculty of Electrical Engineering and Information Technology and Faculty of Civil Engineering and Architecture: the classical and the progressive method. As indicated by their answers to the questionnaire referred to above and included in Appendix 1, the weekly, in-class evaluation method is perceived as more efficient a motivating by the largest percentage of students. Among its most important benefits, the increased motivation to make constant effort, involvement of students to classroom practice, the possibility to improve marks as the course progresses, the encouragement to attend classes and the constant feedback received from the teacher may be worth mentioning.

Though the teacher is faced with the necessity to spend much more time in evaluating students' activity, the satisfaction that comes with realizing that students are more involved in learning English may compensate for the out-of class activities of the evaluator.

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[1] See Simona Veronica Abrudan, *English for Computer Science Students*, Editura Universitatii din Oradea, Oradea, 2009.
[2] Hutchinson and Waters emphasize that the process of organizing and designing and ESP course should start with the identification and evaluation of the target situation, a process they call *needs analysis*. See Hutchinson, T; Waters, A, *English for Specific Purposes. A learning-centered approach*, Cambridge, Cambridge University Press, 1987, p.12.
[3] Idem.
[4] Dudley-Evans, T. and St. John, M*., Developments in ESP: A multi-disciplinary approach.* Cambridge. Cambridge University Press, 1998, pp.4-5.
[5] Cf. Carter, David, *Some Propositions about ESP*, in *The ESP Journal*, 2, 1983, pp.131-137.

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Appendix I

Questionnaire for ESP Students
During the 4 semesters in which you studied English, you were evaluated in 2 different ways, namely through:
a. the classical method, obtaining a final mark at the end of the semester, based on a test aimed at evaluating the knowledge acquired during the semester;
b. the progressive method, based on in-class weekly evaluation of the topics presented during that particular class.
The following questionnaire aims at gathering information about the way in which you perceived the two evaluation methods referred to above.
1. Which of the two methods contributes to a more objective evaluation of your English language knowledge?
      a.   the classical method
      b.   the progressive method
      Bring arguments in order to support your choice.
2. Which of the two methods presents more advantages to you?
a. the classical method
b the progressive method
Bring arguments in support of your answer.
3. Which of the two methods determined you to be more attentive during the English language course?
a. the classical method
b. the progressive method
4. After you were informed that you were going to be evaluated through the progressive method, to what extent did you participate at the English language course just to get the mark?
a. to a large extent;

b. to a certain extent;

c. to a little extent;

d. not at all, I am motivated to take part at the English course for other reasons than the intention to get a mark.

5. Enumerate possible disadvantages of each method in particular.

6. In order to be efficient, the progressive evaluation method requires a very good organization of classes and increased effort on the part of the teacher. To what extent do you believe that the teacher has contributed to the efficient application of the progressive method?

a. to a large extent;

b. to a certain extent;

c. to a little extent;

d. the teacher's effort was insufficient.

7. If you were informed that you were going to be evaluated through the progressive method, were there any other reasons for coming to classes, besides the required presence? Enumerate.

8. What suggestions would you have for the improvement of the progressive method in the evaluation of your English language knowledge?

9. After four semesters in which you studied English, which of the alternatives below would best reflect your current situation (more alternatives may be chosen):

a. I have accumulated new knowledge;

b. I have acquired little new knowledge, but I managed not to forget the knowledge acquired previously;

c. I have accumulated no new knowledge.

10. The fact that it was compulsory to take part at 4 semesters of English courses and obtain 4 marks, the equivalent of 2 credits each, made me declare myself:

a. Very content. I believe that the knowledge of English for a specialist in my field is a must.

b. Content. I consider that it is good to know English.

c. Indifferent. As it was compulsory, I have participated at the English language course.

d. Discontent. The English language course should not be compulsory.

11. If I could:

a. I would increase the number of English language classes at our faculty;

b. I wouldn't change the current situation. 2 hours of practical English course per week, during four semesters, are sufficient;

c. I would make the English course optional;

d. I would eliminate the English course form the curricula.

THE CARTEL IN THE EUROPEAN UNION AND ROMANIA – RETROSPECTIVE OF THE YEARS 2009-2013

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Abstract: *The cartel is considered the most harmful anti-competitive practice; therefore the competition authorities were concerned about the continuous improvement of the legislation governing this practice. In order to stimulate companies to withdraw from participating to a cartel in the European Union, the leniency policy has implemented. The present paper aims at achieving the hindsight of the years 2009-2013 regarding the evolution of cartel cases detected both at EU level and in Romania. The research methodology used is the study of literature, followed by the analysis of the legislation governing the European cartel and the analysis of all decisions issued between 2009-2013, both by the European Commission and by the Competition Council of Romania. The paper is structured in four parts. The first part presents the cartel from the theoretical and legislative point of view. The second and third parts of the paper include the analysis of cartel cases detected both at European and national level. The following aspects were taken into account when analysing the cartel cases: the date when the decision was issued by the competition authorities, the number of companies involved in the cartel, the opening date of the investigation, the method of opening the investigation, the field in which the cartel operated, the duration of the cartel as well as the amount of the fine. The final part of the paper highlights a number of conclusions. In the reviewed period 22 cartel cases were detected in the European Union and 23 cartel cases in Romania. The amount of the fines imposed at a European level is 251 times higher than the fines imposed by the Competition Council of Romania. In the European Union there were 11 long-term cartel cases, 10 medium-term cases and only one case lasted less than a year. In Romania there have been detected 4 long term cartel cases, 7 medium-term cases and 12 cases of short-term cases.*

Keywords: cartel; fine; duration; competition policy; European legislation

JEL classification: K21; L40

1. The Cartel - theoretical and legislative approach

The cartel is an anti-competitive practice regulated at European level. Germany is to be found among the first European countries to adopt legislative measures against cartels. The literature defines the cartel as a tacit understanding between two or more enterprises which activate in the same field or similar fields of activity, in order to eliminate direct competition. Three main characteristics of cartels can be detected: market sharing and price fixing by cartel members in order to maximize profit; setting of production quotas among cartel members, so as the most effective companies to be discouraged to increase production; and preventing the entry on the market of new companies that could be attracted to the high prices imposed by the cartel (McGowan, 2010: 31).

In order to maintain fair competition in the market, and especially to protect consumers, in the EU there functions the competition policy that is constantly improving. The beginnings of the competition policy can be found in the Treaty establishing the European Coal and Steel Community and in the Treaty of Rome. As far as the cartel is concerned, it is currently regulated by Article 101 of the Treaty on the Functioning of the European Union. The main objectives of Article 101 are single market integration and competition protection. The European Commission sees competition as a vital element in achieving the goal of integration of the single market, because it is only through the existence of a single market that the objective of economic welfare of consumers can be achieved (Bennett and Padilla, 2009: 57).

According to Article 101 of the Treaty on the Functioning of the European Union, any agreement between enterprises is prohibited covering the following issues: fixing, directly or indirectly, both the purchase price and those for sale; limiting or controlling production; sharing markets and sources of supply; discriminate between trading partners and acceptance of trading partners only if they offer certain additional services not covered by the contract (*Consolidated version of the Treaty on European Union and the Treaty on The Functioning of the European Union*, 2010: 90).

The devastating effect cartels have on competition, and especially on consumers in conjunction with the difficulty of detection and demonstration of such anti-competitive practices have caused the European Commission to establish the leniency policy in 2006. The circumstances that allow a company which was part of a cartel to benefit from immunity from fines are clearly highlighted by the Commission notice on immunity from fines and reduction of fines in cartel cases from 8.12.2006. The procedure applied throughout the investigation of a possible cartel case is strictly regulated by Regulation no. 773/2004 of the Commission for the conduct of proceedings by the Commission pursuant to Articles 81 and 82 EC.

The cartels functioning in Romanian fall under the jurisdiction of the Romanian Competition Council of Romania. In Romania cartels are regulated by Article 5 of the Competition Law no. 21/1996, republished in 2014. Romania being a EU member country has harmonized competition law with the European Union.

2. The cartels detected in the European Union in the period 2009 - 2013

The analysis of cartels detected in the European Union took into account six aspects: the date when the decision was issued by the European Commission, the opening date of the investigation, the method of opening the investigation, the field in which the cartel operated, the duration of the cartel as well as the amount of the fine imposed. Regarding the duration of the cartel the following statement has to be made: we refer to a short term when the cartel was on the market less than a year; to a medium term when the cartel operated between 1 and 5 years; and to long term, when the cartel was on the market for more than five years.

During the analyzed period 2009-2013 there have been detected a number of 22 cartel cases at EU level.

Table 1 examines the cartel cases that were detected by the Commission in 2009. It can be seen that the average period of investigations in 2009 was of 4 year. The largest fine was imposed to the cartel operating in the field of gas supply, worth about 1,100 million euro, the total amount of the fines imposed in 2009 reaching EUR 1.346.972.000. Of the 5 cases of cartel it was only one cartel investigation that was opened by ex officio, the rest being based on immunity request filed by one of the companies involved in the cartel.

Table 1: Cartel cases detected in the European Union in 2009.

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount euro
28.01.2009	6	immunity request/ 2007	marine pipelines	long	101,960,000
08.07.2009	2	ex-officio / 2006	gas supply	long	1,106,000,000
22.07.2009	9	immunity request / 01.2007	chemicals / steel and gas industry	medium	61,120,000
07.10.2009	7	immunity request / 2003	transformers	medium	64,674,000
11.11.2009	11	immunity request / 02.2003	heat stabilizers	long	13,218,000

Source: carried out by the authors on the basis of the decisions of the European Commission, available on-line: http://ec.europa.eu/competition/elojade/isef/index.cfm

2010 was the year of the analyzed period with most cartel cases detected in the European Union, 6 in number. As it can be seen in Table 2, cartels lasted for medium and large term, the fines totaled 2,674,480,919 euro. The average duration of ongoing investigations in 2010 was of 6 years. The fields in which cartels operated were diverse, the largest cartel fine having been applied to the aeronautical domain nearly 800 million. All cases analyzed were based on the inquiry request for immunity lodged by one of the companies involved in the cartel.

Table 2: Cartel cases detected in the European Union in 2010

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount euro
19.05.2010	11	immunity request/ / 29.08.2002	computer components	medium	331,273,800
30.06.2010	17	immunity request / 18.06.2002	prestressing steel	long	269,870,750
20.07.2010	2	immunity request / 28.11. 2003	alimentary phosphates	long	59,850,000
23.07.2010	17	immunity request / 15.07.2004	bathroom accessories	long	565,116,369
09.11.2010	11	immunity request / 2006	aeronautics	long	799,445,000
08.12.2010	6	immunity request / 2006	electronics (LCD)	medium	648,925,000

Source: carried out by the authors on the basis of the decisions of the European Commission, available on-line: http://ec.europa.eu/competition/elojade/isef/index.cfm

In Table 3 it can be seen that in 2011 the European Union have detected four small and medium term cases of cartel. In the analyzed year the Commission imposed fines amounting to 603,025,900 euro, the average time of investigation was of 3 years. All investigations were based on the immunity request, and in all cases the companies that requested for immunity were exempted from paying fines.

Table 3: Cartel cases detected in the European Union in 2011

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount euro
13.04.2011	3	immunity request / 2008	washing powder	medium	312,200,000
12.10.2011	2	immunity request / 08.04.2005	fruit (bananas)	short	8,919,000
19.10.2011	4	immunity request / 03.2009	glass for cathode ray tubes	medium	128,736,000
07.12.2011	5	immunity request / 2009	electronic components (refrigeration compressors)	medium	161,198,000

Source: carried out by the authors on the basis of decisions of the European Commission, available on-line: http://ec.europa.eu/competition/elojade/isef/index.cfm

Comparing 2012 with 2011 we can see that the number of cartel cases detected at EU level was maintained. By analyzing Table 4 it is obvious that the largest cartel fine was paid to the electronic components cartel that lasted for 10 years. The fines for the year 2012 totaled EUR 1,739,052,000, and the average time of investigation went on for 5 years.

Table 4: Cartel cases detected in the European Union in 2012

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount euro
28.03.2012	9	immunity request / 12.06.2007	mechanical components	long	85,876,000
28.02.2012	14	immunity request / 2007	aeronautics	medium	169,000,000
27.06.2012	3	immunity request / December 2008	products for water management	medium	13,661,000
05.12.2012	7	immunity request / 2007	electronic components (monitor tubes)	long	1,470,515,000

Source: carried out by the authors on the basis of decisions of the European Commission, available on-line: http://ec.europa.eu/competition/elojade/isef/index.cfm

The last year examined is the year with the fewest cartel cases detected by the Commission, three in number. In the analyzed period the highest fine was paid in 2013, the fine amount reaching 1,712,468.000 euro, which represents over 90% of all fines levied in the year in question (1,882,975,000 euro).

Table 5: Cartel cases detected in the European Union in 2013

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount euro
10.06.2013	5	immunity request / February. 2010	vehicles (electric parts)	long	141,791,000
27.11.2013	4	immunity request / 2007	food (shrimp)	long	28,716,000
04.12.2013	8	immunity request / 2008	financial services	medium	1,712,468,000

Source: carried out by the authors on the basis of decisions of the European Commission, available on-line: http://ec.europa.eu/competition/elojade/isef/index.cfm

3. The cartels detected in Romania in the period 2009 - 2013

The analysis of cartels detected in Romania, in the period 2009-2013 used the same criteria as the ones used in identifying the cartels in Europe, and during the analyzed period the Competition Council detected 23 cartel cases.

Looking at 2009 we can see that 4 cartels were detected in Romania, all of a short duration, is less than one year. All investigations were opened ex officio by the Competition Council and the fines granted amounted to a total of 1.84633 million euro. The average duration of development of investigation in 2009 was about 2 years.

Table 6: Cartel cases detected in Romania in 2009

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount lei/euro*
23.06.2009	32	ex officio / 20.04.2008	auto enrollment services	short	1,524,555 lei 359,794 €
07.12.2009	17	ex officio / 23.05.2007	agriculture (cereals)	short	8,185 lei 1,932 €
07.12.2009	31	ex officio / 23.05.2007	bread manufacture	short	5,666,627 lei 1,337,320 €
07.12.2009	17	ex officio / 23.05.2007	bread manufacture	short	624,086 lei 147,284 €

Source: carried out by the authors on the basis of the decisions issued by the Competition Council decisions available online: http://www.consiliulconcurentei.ro/ro/documente-oficiale/concurenta/decizii.html
*according to the annual rate of the National Bank of Romania in 2009 (1 € = 4.2373 lei)

Table 7: Cartel cases detected in Romania in 2010

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount lei/euro*
17.06.2010	5	ex officio / 18.02.2009	auto services	short	1,094,366 lei 259,951 €
07.09.2010	14	ex officio / 03.12.2007	financial services	short	5,214,491 lei

Date	Companies	Method / Date	Field	Duration	Fine amount
					1,238,626 €
02.11.2010	42	ex officio / 25.02.2009	accounting services	long	4,056,264 lei / 963,506 €
18.11.2010	7	ex officio / 15.06.2009	tourism	short	4,202,303 lei / 998,195 €
29.12.2010	11	ex officio / 27.08.2008	transport services (taxi)	medium	348,710 lei / 82,831 €
29.12.2010	10	ex officio / 15.04.2008	transport services (taxi)	short	302,235 lei / 71,791 €

Source: carried out by the authors on the basis of the decisions issued by the Competition Council decisions available online: http://www.consiliulconcurentei.ro/ro/documente-oficiale/concurenta/decizii.html
*according to the average annual rate of the National Bank of Romania in 2010 (1 € = 4.2099 lei)

In 2010, six cartel cases were detected. The largest fine was received by the cartel operating in the financial services 1,238,626 euro. The amount of the fines imposed by the Competition Council in 2010 was of 3.6149 million euro. All investigations were opened ex officio and the average period of ongoing investigations was about 1 year and 6 months. In Table 7 it can be observed that the duration of cartels differ from case to case, i.e. small, medium and long.

Looking at Table 8 it can be noticed that in 2011 there were the most cases of cartel detected of the whole period under review, 8 in number. All cases had a medium and long term of anti-competitive infringement. In 2011 the fines imposed were worth 18,017,743 euro, the highest amount, seen in the whole analyzed period. It is to be noted that the highest fine was imposed on the cartel operating in the pharmaceutical domain, a cartel made of 11 members. The average duration of the investigation in 2011 was of 2 years.

Table 8: Cartel cases detected in Romania in 2011

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount lei/euro*
31.05.2011	3	ex officio / 29.09.2009	fruit	medium	16,698,530 lei / 3,940,284 €
30.09.2011	3	ex officio / 15.10.2009	clothing	long	1,273,501 lei / 300,503 €
28.10.2011	4	ex officio / 07.09.2009	pharmaceutics	long	4,374,834.111 lei / 445,502 €
28.10.2011	2	ex officio / 07.09.2009	pharmaceutics	medium	1,877,992.405 lei / 443,142 €
18.11.2011	5	ex officio / 10.03.2010	transport services (taxi)	medium	21,525 lei / 5,079 €
27.12.2011	11	ex officio / 07.09.2009	pharmaceutics	medium	51,522,130 lei / 12,157,467 €
27.12.2011	21	ex officio / 02.12.2009	cosmetics	long	2,112,588 lei / 498,499 €
27.12.2011	8	ex officio / 27.08.2008	transport services (taxi)	medium	963,134 lei / 227,267 €

In 2012 the Competition Council detected three cartel cases. All three investigations were opened ex officio and the average time of ongoing investigation was of 1 year. Also, the cartel duration was less than one year and the fines reached a total of 6,399,365 euro.

Table 9: Cartel cases detected in Romania in 2012

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount lei/euro*
14.11.2012	2	ex officio / 29.09.2011	natural gas transport	short	13,620,003 lei
					3,056,554 €
14.11.2012	2	ex officio / 01.11.2011	natural gas transport	short	11,844,862 lei
					2,667,159 €
13.12.2012	5	ex officio / 06.03.2011	road marking	short	3,010,705.61 lei
					675,652 €

The last analyzed year reflects the fact that in Romania there were detected 2 cases of cartel a short term one and a medium term one. In Table 10 it can be seen that in one case the investigation was initiated following a complaint lodged by a company operating in the same field. The total amount of fines imposed in 2013 was of 2.929 million euro.

Table 10: Cartel cases detected in Romania in 2013

Date of decision issuance	Number of companies involved	Method / Date of opening of the investigation	Field	Cartel duration	Fine amount lei/euro*
29.11.2013	4	ex officio / 27.10.2009	armament	short	12,487,017 lei
					2,825,756 €
23.12.2013	5	complaint / 23.10.2010	dental products	medium	456,237 lei
					103,244 €

4. Conclusions

Taking into account the analysis performed in the second and third part **of the paper, we can draw a series of conclusions. There were 22 cartel cases detected in the EU** respectively, in Romania, there were **23 cases,** during the period **2009-2013**. In the cartels cases analyzed by the European Commission, of the 22 investigations opened only one was ex officio, the rest being open on the request for immunity lodged by the companies involved in these cartels.

In Romania the situation is reversed, one investigation was initiated following a complaint, the rest being automatically opened by the Competition Council. It can be seen that the leniency policy is fully used in the EU, while in Romania in the period under review no company received immunity from fines.

Regarding the average time of ongoing investigations for the years under review, in the European Union we speak about an average of 4.6 years, while in Romania the average is 1.5 years.

In the European Union there have been detected 11 cases of long term cartels, 10 medium term cases and only one case that lasted less than a year. In Romania there have been detected 4 long term cartel cases, 7 cases of medium term cartels and 12 short term cases.

The fields of activity both in cartel cases detected in Romania and in the EU are diverse, the largest fines being applied in the pharmaceutical field in Romania, respectively in financial services in the European Union. With regard to the fines imposed in the period 2009 - 2013, in the European Union there been have imposed fines in the amount of 8,246,505,819 euro, while in Romania the fines totalled 32,807,338 euro that is 251 times less than in the European Union. This proportion is logical bearing in mind that fines are calculated based on the turnover of the companies involved in the cartel, and the duration of the cartel.

The importance of competition policy and the role of the competition authorities that watch over the maintenance of fair competition, and also on the consumer welfare have to be emphasized. In this case it is to be noticed that there is concern and activities of competition authorities, both at European and national level regarding the cartel, one of the most harmful anti-competitive practices.

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THE PROGRESS OF ECONOMIC THOUGHTFULNESS CONCERNING THE SERVICES

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Abstract: Many interpretations of the services concept and the concerns related to other configurations in the field have determined the occurrence of vast and various literatures, provided by studies, analysis and research of some of the coryphaeus of the economic world, carried out during almost three centuries. Each of them has had its own significance and individuality, always deriving from the uppermost economic doctrine, but from the crystallization of new points of view and study directions. The variety of definitions issued by the representatives of the services theories consists in the result of heterogeneous activities that are included within the services class, as well as those many notions of the *service* term used in the current discourse. Basing upon the invoked issues, as regards the structure of services, one can see that the difficulty of evaluating services can be found within the presence of the following characteristics: the intangibility, the inseparability, variety of services, the outage or the lack of property. The situation can be corrected by means of some dominant attributes attached to services: sending some proofs credible to consumers; tangibility of services; using palpable indications and using the personal sources of information; carrying out the standardization of services, customization and automation of services.The conventional formula of promoting the services has recommended the investments in human capital and within the business infrastructure, as factors of stimulating the economic growth. The challenges of modern times have confirmed the risk taking carried out by the undertakers when implement the "Schumpeterian type" innovation within the services sector, as well as the need of new investments in their fields of activity, development and customization. One supports the idea according to which the unprecedented growth and diversification of services, the shape of useful effects resulted within the services production processes and the use of high level technologies will lead towards the growth f production level and the living standards of people. For the time being, one can characterize the economies of the developed countries and of many countries in progress of development, as being services oriented economies; the development and diversification of services was determined by the need of satisfying social needs, more and more diversified. In this way, the part of services aimed to become proportionally to their contribution, as regards the economic growth.

1. Classical thought about services
Unassertive theoretical concernments related to services could be noticed to some representatives of the mercantilist current (XIV-XVIII centuries), which saw them as being

part of the assembly of the activities that create economic wealth, without making a distinguish as regards other activities of this type.

The services and their part within creating the economic wealth have represented one of the topic themes of the mercantilism, since the very beginning stage; the mercantilist doctrine has identified the wealth exclusively with the money, more exactly with the precious metals from where the money was created within the XVII-XVIII centuries. The most important part in developing the nations and modern states richness came prevailingly from the external trade. The mercantilist doctrine, seen as expression of the trade bourgeoisie interests in full ascension made out a case for stimulating the external trade, of the maritime transports, to protect the inventions, for making easy the naval constructions, for training and employment, for protecting the national economy, and so on. The main concern for both the individuals, and state, as well, was directed towards the increase of wealth under the form of money, and precious metals, as well, especially by means of the external trade. In this way, one can see theories aiming towards the stimulation of external trade to Jean Baptiste Colbert (1619-1683), Thomas Mun (otherwise seen by Adam Smith as a major creator of the mercantilist system) and so on. One can see that a high number of classical thinkers that "marked" significantly the issue of services in generating the social wealth were inspired and completed each other by the progress in time by the concept on this topic; one can identify a methodical process, of true intellectual "effort", in order to draw up, shape and localize step by step the current part that services have within a modern economy.

Filling out the theories of this stage, Adam Smith (1723-1790) made a more obvious distinction between *the productive work* (meaning the ability of an activity on achieving the profit or value; regarding from this point of view, the main activity seen as creating value and national wealth consisted in the material goods production, in accordance to the well known thinker) and *the non-productive* work (which by antithesis, will no longer add value over the topic to which it carries out). He discussed about the existence of two sectors, and he made a distinction between *the productive work* – embedded in material products (workers in factories, farmers etc.), and *the non-productive work*, meaning the financiers, lawyers, physicians, actors and other social-professional categories (Smith, 1962, regarding the efficient work and the non-efficient work: "there is a work class, which adds value to the object over which the labor is carried out, but there is also another labor class, which has not the same effect. The first, by producing a value, can be seen as productive work; the last one can be seen as non-productive work. In this way, the labor performed by the workers in manufacturing will add in generally the value of subsistence and the value of the employer's benefit to the final value of the material over which the workers perform activities. The work of an attendant, as contrariwise, will not add value".).

In this way, starting from the famous dichotomy between the productive work and the non-productive work, Adam Smith described these activities in the following way: "The work of an attendant will not increase the value of any object… In generally, his services will disappear in the moment of their fulfillment and will not leave behind any shape or value, able to serve back to the procurement of an equal quantity of services. The work of some of the most respected social categories, or the work of the attendants, will not produce any value and will not be fixed, will not materialize in any object or merchandise to be sold, able to last even after the work was carried out… their work, no matter how honorable or useful might be, or no mater its necessity, will not produce anything by which an equal quantity of services can be procured afterwards… In the same class, according to Smith, the following job positions can be framed: the churchmen, the attorneys, the physicians, the actors, the buffoons, the musicians, the opera singers, the dancers etc" (Smith, 1962). In his famous paper, entitled *The wealth of nations, The Research over nature and its causes* (named rightfully *the bible of the classical liberalism*), this well-known thinker wrote down that "services will be lost starting with the moment of their

carrying out" (Smith, 1962), so no value will be taken into account (with the exception of trade). According to the theory of A. Smith, one can deduct that work is seen efficacious when, by means of its carrying out, one can achieve vale and profit; in a similar way, one can also deduct that services do not embed the efficient work, so therefore, they do not create value o profit. Although, Smith admitted that, at least implicitly, the idea of a minimum of usefulness of services, in achieving what one might call nowadays "social comfort"; surrounding this deductible idea related to Adam Smith thinking, new research directions were developed, especially in the post-war time, as regards the consumer and his wishes, the concepts of social efficiency and usefulness within the human activity etc. A relevant point of view, related to services and their part in the society, was given by David Ricardo (1772-1823) affirmed in his paper *On the Principles of Political Economy and Taxation*, 1817; the optics of such thinker, as regards the nature and the services type, has significantly exceeded the vision of economists that forewent him (Ricardo, 1939). In this paper, being inspired by the thesis of Smith, the author Ricardo included in *the non-productive* class, the persons that were too young or too old for work, the women, the teenagers and the children, and then the *ideological* covers – as the government, the churchmen, the lawyers, the servicemen etc., to which are added all those whose exclusive occupation consists in gaining the benefits from others' work, such as the ground rent, the debt etc.

There are also many groundswells, either various or critical, as regards the Adam Smith point of view, opinions that contributed all over in time to generation of some different points of view, as regards the part of services in economy; one can mention here Jean Baptiste Say, John Stuart Mill and J. B. Quinn, which developed other concepts over the efficient features of the work.

The explanations of J.B. Say exceeded the frame shaped by Adam Smith, as regards the services; he considered productive all the work classes that compete on achieving a useful result of the society and its members. In the same time, Say filled out this chapter, by means of re-including the trade within the services class, by adding the banking activity, regarded also as a shape of trade in gold and silver, aiming on reporting the trade to the transport (the increase of prices in trade is put under the responsibility of transport, the banking debt being seen as depending on transport, as well). It is also obvious that Say treated in a different way certain classes of services, such as the army, seen as necessary institution, but non-productive (destroying other's work, even during the war).

Services providing has been also interesting, since it did not assume in generally, the use of complex devices, but the achievement and making appeal to acquaintances (for instance, the physicians, the lawyers, the musicians etc.), by their gathered training, and the gained capital, as well. This issue situates Say amongst the predecessors of the human capital theory, and the certainty that services have a result, meaning the non-material products (fact that differentiates him from Smith, according to which services don't leave anything behind), consecrated him within the economic thought, as an engine of the *immateriality* notion.

An important step within the progress of economic thought in the general way, but related to services was carried out by John Stuart Mill (1806-1873) in his paper published in 1844; paper entitled *The Principles of Political Economy*. J.S. Mill definitely removed from the economic thought the expression of *non-productive activities,* and saw useful the results of the work embedded within objects (services of industrial feature, the transport and the trade), the work over people (education, activity of physicians, government, activity of churchmen etc.), the work embedded in *nothing*, meaning those *volatile* services (services provided by musicians, actors, rhetoricians etc.), which bring towards the quality improvement of individuals or things. As regards Mill, the services are indirectly productive, since their results are not material objects aimed towards on exchange (including here those activities and services of high intellectual consignment, which

generate long time effects, difficult to be quantified, but unquestionably and even essential); they can be represented by utilities embedded in objects that create real products and of material richness (Mill, 1970).

Continuing the concepts of *productive and non-productive,* Karl Marx (1818-1883) signed within Smith tradition frame, of excluding from the sphere of services, those activities that he considers to be productive. Analyzing the interpretations of Marx (1954,1959, 1960, 2009), one can see a delimitation of more classes of services, respectively: *stricto sensu* services and *lato sensu* services. According to such differentiations, the services carried out by own designation or the collective way (artists, professors, physicians, churchmen, officials, attendants, hair dressers etc.) are seen as *non-productive*, while the services of transport, maintenance and repairing were included within the class of those productive.

As any other representatives of the non-Marx theory of the XIX century, Clément Colson (1853-1929) supported the need of appreciating an activity as *producing* or *non-producing* value, by reporting towards the existence or behavior of a need and adequate requirement. As regards Colson, satisfying the human needs is no longer carried out by means of the already existing wealth, but by means of carrying out useful activities.

2. Traditional approaching on services

In the first half of the XX century, the growth of free enterprise and increasing the living standards of people from the capitalist countries have determined the development of services frame, as well. More and more, these have played an important part on the functionality and health of an economy. During all this time, the debates were drawn up as regards the concept of efficiency or non-efficiency; the dichotomy productive-non-productive has yet lost from its signification, as result of a new way of understanding the economic phenomenon. In this way, the modern understanding of *the productive* term is related to efficiency, seen as performance of the delivery, and not as a classification, perceived as normative as regards the economic activities. An important part in this way is given by Alfred Marshall, according to which "all distinctions that underline on the *productive* term have an obsolete air…it would be better if these will be out of usage…any activity, with the exception of that not reaching its aim, should be declared productive" (Marshall, 1929), resulting therefore that the efficiency concept is no longer seen as being concluding.

Simultaneously, as regards the economic theory, *the sectorial point of view* was more and more imposed, as regards the economy, and especially promoted by Allan Fisher, Colin Clark, Jean Fourastié etc.; they approached the services as a different sector of the economic system.

Allan Fisher, seen as one of *the parents* of the sectorial approach of economy, according to his paper entitled *The Clash of Progress and security* (1935), made a differentiation between the production and services offer, including the services of the tertiary sector of the national economy. In the other two sectors, the agriculture and extractive culture were included (the primary sector), as well as the specific activities of the processing industries (the secondary sector).

Colin Clark, being inspired by the speech of William Petty (1690), filled out this structure of economy, by giving details about each activity, emphasizing the existence of a high productiveness and the increasing capacities in the secondary activities, as well as a lower efficiency in the tertiary activities (Petty, 1952, Term of "services" is used only in the edition of 1952, related to the paper *The conditions of economic progress*.). Here proposed in the paper *The conditions of economic progress* (London, 1941) an analysis that brought towards the grouping of the sectorial economy in the following (Colin, 1960): *primary activities*, characterized by decreasing efficiencies and the direct use of natural resources (agriculture, extractive industry, fishing and forestry industry); *industrial*

activities (named *secondary* activities in the edition of 1941 of the paper, and *industry,* in the edition of 1957), based upon transformation of raw materials, of fuels and energy in final products, with efficiency and increased productiveness (the processing industry, the civil engineering and public utilities); *tertiary activities* (named in this way in 1941, and renamed in *residual activities* in the edition of 1942, and *services* in the edition of 1957), which are based upon operations of low efficiency, that include the handmade activities, the engineering, the trade, the banks and the individual services (Colin, 1960). Regarding the point of view of Colin Clark, this classification let behind some interpretations, but one might see *the residual character* of the tertiary sector, as comparing to the primary and secondary sectors, as well.

The ideas of Fisher and Clark inspired Jean Fourastiè in the classification of activities fro economy, in accordance to the object of activity and the rates of increasing the work efficiency, underlying on the technical progress (Fourastiè, 1963, The primary sector includes activities of mean progress, the secondary sector includes the activities of higher technical progress and the tertiary sector will include the weak or null progress levels.). Continuing the series of such approaches, the sociologist Jean Fourastié (1963) emphasized the progress elements that characterize the three sectors of activity as related to the dynamics of the work efficiency and the level of the technical progress, as well as the idea of the tertiary sector, according to which this is formed of heterogeneous components, but it is not a freestanding economic sector, as regards the economy process. In this way, J. Fourastié considered that the work efficiency and the technical progress within the tertiary sector have registered a level under the average value; his ascertainments were especially based on the personal services (hairdressing etc.), services that have had as effects their free passing through the other two sectors, meaning the primary and the secondary, upon basis of increasing the technical progress (Fourastiè, 1965, one might see that the author analyses not only the services that are simple, primary, of inferior efficiencies, and not only to industry, but to agriculture, as well). Later on, he analyzed again these points of view (taking into account the informatics, consultancy and management services, as well), emphasizing the massive entrance of the technical progress within the services field; comparing to the level of intelligence, information, modern services, he underlined that some well established information services (belonging to the tertiary) and *the production of cereals, as the wheat, are situated at a high technical level*, while many branches of the industrial sector reveal a weaker technical progress (Fourastiè, 1989). From those already mentioned, it results the necessity of classifying the products only in accordance to the their efficiency, no matter the sector of activity (Fourastiè, 1989), as well as the fact that *the civilization of the technical progress will be a tertiary civilization.*

The interpretations above mentioned and the reporting to the level of the technical progress reached Fourastié towards concepts as *the productiveness of invisible, the productiveness of neurons,* and to the ascertainment, according to which "the neurons are those who lead the enterprise and, within the world competition, the muscles matter, but the essential is related to what happens in our heads" (Fourastie, 1989).

3. Services within the economic activity

One can actually characterize the economies of the developed countries, but of those in progress of development, as well, as being services oriented economies; the development and diversification of services have been determined by the need of satisfying some social needs, more and more diversified. In this way, the part of services aimed to become proportionally depending upon their contribution within the process of the economic growth.

One can definitely say that between services and the economic growth, a double conditioning takes place, meaning: on one hand, the development of services occurs as a consequence of the economic growth, and it will increase the economic growth, thus contributing on diversification of production, and on improving the level of training or qualification of work, on the other hand.

The experience of the modern economy countries has proven that, after a certain development level reached, the shape of services represents one of the few sectors of activity, where supported rhythms of growth are continued to be maintained, with significant incidences over the level of employment. This establishment is supported by the statistical proofs regarding the progress of the weight on people employed in the services field, in the main industrialized countries, for a long time.

As result, as regards the economies of the developed countries, the services have become the most important sector of economy and the main dynamic factor of the economic competitiveness. In such economies, the sector of services has absorbed the labor force coming from the other sectors, and this overcome of labor force was, in the same time, the cause of its expansion. The services have had a double part: they contribute on both the material maintenance of the labor force, and on taking care of the people's health state, on the physical and intellectual recreation, on individuals development, as regards the cultural and scientific points of view, and implicitly, on increasing the living standards.

On should also see that services have not occurred as a mean of connection between the needs of manufacturing and the needs of the target public, but they have carried out over both the proper production process and over the individuals, as well, together with his needs, and applying not just over the active people, but also to the third age persons, as well.

In order to cut the already existing differences between states, some modern theories have prefigured a potential solution, taking into account the close interdependency between the economic growth and the development of services, meaning the carrying out of massive and long lasting investments in the tertiary sector (services of applying informatics to communication, management or marketing etc.)

4. Conclusions

In this paper, the idea of extending and diversifying the services sector, as this has never been done before, is emphasized, where useful results can be achieved by means of the services performance, as well as using the high level technologies, all these adding value and creating higher levels of efficiency and of the living standards, for the time being, as comparing to the previous centuries. Such issues have identified the collocations of *post-industrial economy* or *economy of services.*

Simultaneously, the diversification of services has imposed the continuous improvement of the classifications, in the view of ensuring a correspondence between two or more assortments, carried out on different criteria, on both the national and international levels. Such harmonization between the national and international classifications were able to allow the comparison between the level of development of the tertiary sector of various countries, and achieving of information, in order to establish the measurements of economic politics.

The services have become an essential "segment", in continuous expanding and related to the world economy; regarding the OCDE countries, the empirical proofs have confirmed a more and more emphasized dynamics of this sector, as comparing to that of the economic growth of the last decades. This progress was possible by means of focusing over the intensive factors of the economic growth (knowledge, research and innovation), by stimulating the internal economy, by promoting the economic sectors that create value

and by stimulating the knowledge based sectors, by means of the infrastructure development, by means of making specialty on various classes of products and services, which offer competitive advantages, and not lastly, by conceiving and implementing some coherent and sustainable politics.

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REGIONAL TRADE AGREEMENTS AND COMPETITION POLICY. CASE STUDY: EU, ASEAN AND NAFTA

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Abstract: *The large number of regional trade agreements notified to the World Trade Organization (WTO) significantly influenced the flow of world trade. By April 2014 there had been notified 583 regional trade agreements to the WTO, of which only 379 are in force. The objective of this paper is to highlight the importance of regional trade agreements in world trade, especially the importance of establishing a regional competition policy in these agreements. The research methodology used is the analysis of legislation governing preferential trade agreements at the level of WTO, the collection and interpretation of statistical data provided by the WTO Secretariat, the case study, namely the study of literature. The paper is structured in three parts. The first part of the paper examines the basic laws based on which regional trade agreements are notified to the WTO and the evolution of these agreements in the period 1958-2013. The second part of the paper is devoted to the analysis of competition policy in regional trade agreements. In this part of the paper, to highlight the patterns of competition policy adopted under these agreements was analyzed by three case studies of competition policy in the EU, ASEAN and NAFTA. The three case studies have revealed that the three preferential trade agreements present regional competition policies with varying degrees of integration. The most complex form of competition policy is found in the European Union, because we are talking about a centralized model of competition policy. ASEAN presents a partially decentralized model, while NAFTA scrolls with a decentralized model of competition policy. The last part of the paper presents the characteristics of the four models of competition policy identified in the preferential trade agreements in force. It should be emphasized that if the initial preferential trade agreements have not put a great emphasis on the rules of competition policy, practice has shown the importance of competition policy at the regional level and there is now considerable progress in this regard.*

Keywords: regional trade agreements; competition policy; case study

JEL classification: F15; K20

1. Regional trade agreements

World Trade Organization (WTO) defines regional trade agreements as "reciprocal trade agreements between two or more partners, which include free trade areas and customs unions." (http://www.wto.org/english/tratop_e/region_e/rta_pta_e.htm)

Regional trade agreements take the form: free trade areas, customs unions, common markets, economic integration agreements and partial scope agreements.

The free trade area can be defined as an agreement between two or more states through which tariff and non-tariff barriers between Member States are eliminated and against third parties, each state sets its own import tariff policy.

The customs union can be defined as the area in which there are no tariff and non-tariff barriers between members and against third parties the state members shall apply a common customs tariff. We can speak of complete or incomplete customs union according to the sectors covered by the reduction of customs duties between members.

The Organisation for Economic Co-operation and Development defines the common market as a customs union, which also provides free movement of factors of production, namely the free movement of people and capital (http://stats.oecd.org/glossary/detail.asp?ID=3129)

The economic integration agreements take the form of economic and / or monetary unions. Economic unions stipulate the Member States' harmonization of the national economic legislation and the monetary union requires in addition to the economic union the adoption of a single currency. An example of this is the euro.

Partial scope agreements are agreements that cover only some of the products.

The five forms of regional integration referred to above are ideal types, but in practice we find combinations of these types.

We must look at regional trade agreements through the benefits created worldwide. Currently over half of world trade is covered by regional trade agreements. The members of these agreements should not be necessarily in the same region and the Member States may have different degrees of development. In the literature, the most common idea is that regionalism complements multilateralism.

1.1. Legislative issues

Analyzing only the WTO principles, we would be tempted to believe that regional trade agreements are contrary to these principles, mainly to the Most Favoured Nation Clause. Yet, regional trade agreements are allowed under certain conditions clearly specified by WTO rules. Regional trade agreements are notified under the WTO: Article XXIV of the General Agreement on Tariffs and Trade (GATT), Article V of the General Agreement on Trade in Services (GATS) and Paragraph 2 (c) called Enabling Clause of the Decision issued on November 28, 1979, entitled *Differential and more favourable treatment reciprocity and fuller participation of developing countries*.

Article XXIV of GATT was completed in 1994 and covers trade with goods. According to this article regional trade agreements are permitted in the WTO only if two conditions are met simultaneously: between the Member States Agreement tariff and non-tariff barriers for all major sectors will be reduced or eliminated and concomitantly with the elimination of trade barriers between the Member States the increase of tariff and non-tariff barriers to third parties is not allowed.

Article V of the General Agreement on Trade in Services (GATS) is called *Economic Integration* and it regulates regional trade agreements governing services for both developed countries and the developing ones. Of course, these agreements are permitted only if we speak of substantial sector coverage and discriminatory measures are removed. (General Agreement on Trade in Services, 1994)

Partial scope agreements are governed by the Enabling Clause of Decision *Differential and more treatment reciprocity and fuller participation of developing countries* issued in 1979, specifically in Paragraph 4 (a).

For a preferential trade agreement to operate legally several steps are required. When some states wish to conclude a preferential trade agreement, before starting the negotiations the states shall notify the WTO Secretariat of their intention. The next very important step is notification. Notification of preferential trade agreements is based on the legislation mentioned previously. It should be noted that when a preferential trade agreement covers both trade with goods and the trade with services two notifications are required to carry out. Subsequently, under the Transparency Mechanism the preferential trade agreements notified are carefully monitored at the WTO level.

1.2. Evolution

Over time, the preferential trade agreements have had an interesting evolution. Until April 2014 583 regional trade agreements were notified to the WTO, but now there are in force only 379 such agreements.
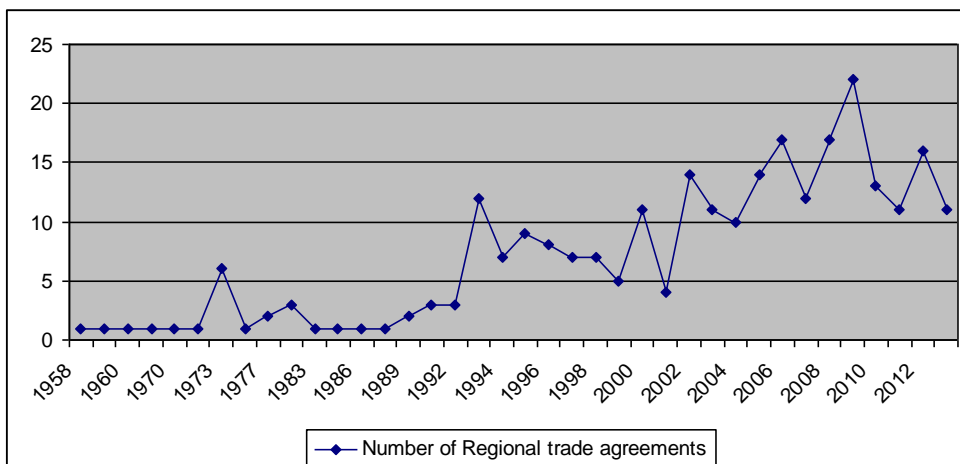
Figure 1: The evolution of regional trade agreements notified to the WTO during the period 1958-2013
Source: made by the author based on the WTO data, available on-line: http://rtais.wto.org/UI/PublicPreDefRepByEIF.aspx

Looking at Figure 1 it can be seen that during 1958-1993 the number of trade agreements notified to the WTO was low, yet after 1993 these agreements have enjoyed a real proliferation. In the analyzed period, the peak year was 2009 when 22 preferential trade agreements were notified to the WTO.
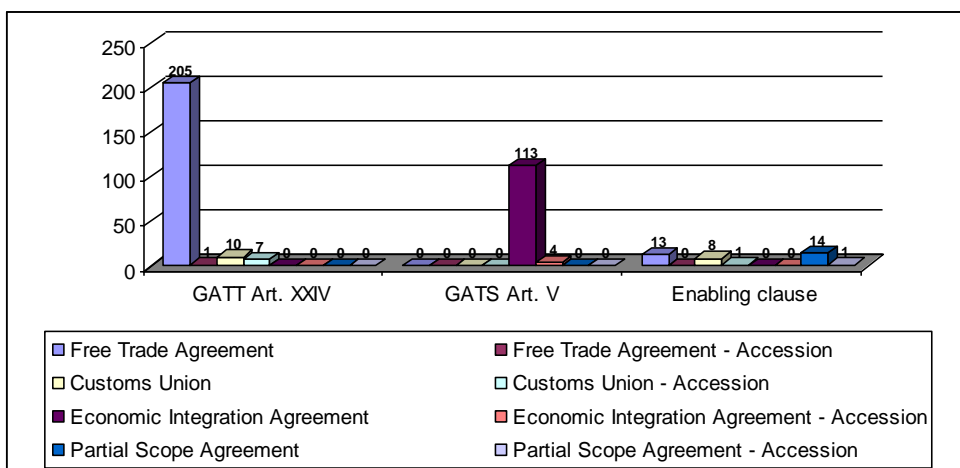
Figure 2: Number of regional trade agreements in force until April 2014 depending on the type of agreement and notification
Source: made by the author based on WTO data, available on-line: http://rtais.wto.org/UI/publicsummarytable.aspx

Figure 2 outlines the types of preferential trade agreements notified to the WTO and which are in force until April 2014. Free trade zones are predominant, counting 206 agreements, followed by economic integration agreements, counting 113 agreements.

2. Competition policy at the level of regional trade agreements

The benefits of regional trade agreements can be fully realized only if fair competition is instituted in the relevant market. The need of introducing regional competition rules at the regional level was notified, even if, initially it was thought that national competition laws of the Member States are sufficient. In this sense it can be seen that more and more regional trade agreements have introduced regional competition policy. One of the arguments that are in favor of introducing a regional competition policy in regional trade agreements concerns the possibility to sanction the anti-competitive behavior of certain companies which could adversely affect the intra-regional trade. Also, in the case of regional trade agreements concluded between states with different degrees of development a regional competition policy comes mostly in support of less developed countries. (Botta, 2011:3)

At the WTO level the possibility of introducing specific global competition rules targeting the competition had been raised, but the matter was still delayed and ultimately it has never materialized.

In the following we discuss how to manage the implementation of competition rules in some regional trade agreements, namely: EU, ASEAN and NAFTA.

2.1. Case study: EU

Currently the European Union a preferential trade agreement, concluded between 28 countries, namely to the WTO this agreement is notified as customs union and an economic integration agreement.

In the literature, the European Union is recognized for the competition policy, which is characterized by complex legislation and clear procedures. El-Agra (2007) identifies three fundamental pillars on which the competition policy at the European level is based: the cartel prohibition, prohibition of abuse of dominant position and mergers authorization.

The European Commission deals with the establishment of competition rules at the European level through Directorate General for Competition. The national laws of the Member States are harmonized in the field of competition and the national competition authorities cooperate with the European Commission.

The competition issues affecting only the national territory of the Member States are covered by the National Competition Authorities, while those that could threaten the domestic market are covered by the European Commission.

A preoccupation regarding the competition policy at the European level is noted in the early stage of signing the preferential trade agreement, namely the Treaty of Rome of 1957. Currently, the competition policy at the European level is regulated by Articles 101-109 of the Treaty on European Union (Treaty on the Functioning of the European Union). The cartel is governed by Article 101, abuse of dominant position under Article 102 and Articles 107-109 regulate the state aids.

At the level of European Union, the competition policy occupied and occupies an important place, which is why the procedures applied to anti-competitive practices have been improved constantly and the effectiveness of this policy is reflected in particular by the results of the competition authorities.

2.2. Case study: ASEAN

The Association of Southeast Asian Nations (ASEAN) is a preferential trade agreement notified to the WTO in 1992, as a free trade zone. ASEAN consists of ten members: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

At the ASEAN only in 2007 it was decided to create the ASEAN Experts Group on Competition (AEGC). AEGC is regarded as a regional forum for discussion and cooperation in the field of competition. This forum aims that by 2015 competition policy is regulated in all 10 Member States. The main objective of AEGC was to promote a competitive market. In order to maintain fair competition in the ASEAN market, the following measures have been proposed **(http://www.aseancompetition.org/aegc/about-asean-experts-group-competition-aegc**): **introduction of competition policy in all Member States by 2015**; **creation of a network of institutions to serve as a forum for** the **coordination of competition policies**; **and creation of a guide on directory lines of competition policy implementation at the regional level**.

Given the desire to implement a competition policy in the ASEAN the following were adopted: the ASEAN Regional Guidelines on Competition Policy and the Handbook on Competition Policy and Law in ASEAN, both launched in 2010.

The regulations on competition policy in ASEAN address three issues: anti-competitive practices, abuse of dominance and monopoly and anti-competitive mergers. (ASEAN Secretariat, 2013:8)

Even if the need for a regional policy in the field of competition was realized later in the ASEAN, the progress in this field is obvious. Indonesia, Singapore, Thailand and Vietnam have now a well-established competition policy, with comprehensive laws and vigilant competition authorities. In Malaysia, the competition policy has been operating since 2012 and currently the competitive policies of the following states are in the process of construction: Brunei Darussalam, Cambodia, Lao PDR, Myanmar and Philippines.

2.3. Case study: NAFTA

NAFTA, North American Free Trade Agreement has been notified to the WTO as a free trade area and an economic integration agreement. NAFTA members are the U.S.A, Canada and Mexico.

NAFTA included in the agreement provisions regarding competition. Chapter 15 of the agreement entitled *Competition Policy, Monopolies and State Enterprises* is dedicated to this area. Articles 1501-1505 delineate the aspects of competition. At the NAFTA level, competition is considered in two aspects: anti-competitive practices and state enterprises. It should be noted that the agreement provides also the operation of a Working Group on Trade and Competition, governed by Article 1504 of the Agreement.

By agreement, NAFTA Member States committed to introduce or maintain measures against anti-competitive practices and cooperation in this field between Member States should be permanently. In other words, NAFTA reinforces, yet it does not replace national competition policies in the Member States.

Regarding the coordination of competition at the level of NAFTA, the USA has developed bilateral cooperation relationships with both Mexico and Canada. This cooperation aims to promote the cooperation and coordination of national competition authorities to avoid conflicts that may arise between the parties, and when they appear different interests between the Member States they can be harmonized.

Regarding the cooperation and coordination of competition policies at the level of NAFTA two limitations can be noticed. The first is that the state is not obliged to provide information if this is considered confidential and the second limitation consists in the fact that a Member State is not obliged to act contrary to the national legislation in force and it is not required to amend that particular legislation. (Directorate for Financial and Enterprise Affairs Competition Committee, 2013: 5)

So we can see that at the level of NAFTA there is no supranational institution to deal with competition policy, and the maintenance in the market of a healthy competitive environment is achieved through the cooperation of competition authorities of the three Member States.

3. Conclusions

With the proliferation of regional trade agreements in the WTO it has been noted that to fully reap the benefits created by such an agreement it is necessary to include in these agreements rules aimed at regional competition policy.

Depending on the depth of regional trade agreement Dawar and Holmes (2011) identify four types of regional competition policy models: centralized, partially centralized, partially decentralized and decentralized. The characteristics of these models can be analyzed in Table 1.

Table 1: Models of competition policy applied in regional trade agreements

Model	Characteristics	Examples*
Centralized	Regional authority	*EU* COMESA Andean Pact
Centralized	Reginal law	*EU* COMESA Andean Pact
Centralized	Regional enforcement	*EU* COMESA Andean Pact
Partially centralized	Regional authority	CARICOM ANZECERTA
Partially centralized	Reginal law	CARICOM ANZECERTA
Partially centralized	Domestic enforcement	CARICOM ANZECERTA
Partially decentralized	No regional authority	*ASEAN* MERCOSUR
Partially decentralized	Regional law	*ASEAN* MERCOSUR
Partially decentralized	Domestic enforcement	*ASEAN* MERCOSUR
Decentralized	No regional authority	*NAFTA* SACU
Decentralized	No regional law	*NAFTA* SACU
Decentralized	Domestic law subject to harmonization criteria	*NAFTA* SACU

Source: adapted from: Dawar and Holmes (2011: 357)

*EU=European Union, COMESA=Common Market for Eastern and Southern Africa, CARICOM=Caribbean Community, ANZECERTA=Australia–New Zealand Closer Economic Relations Trade Agreement, ASEAN=Association of Southeast Asian Nations, MERCOSUR=Southern Cone Common Market, NAFTA= North American Free Trade Agreement, SACU=Southern African Customs Union

The most complex pattern of regional competition policy is the centralized pattern, at the opposite pole being the decentralized model. Given the three case studies presented in the paper, we can include EU in the centralized model, ASEAN in the partially decentralized model, and NAFTA in the decentralized model.

Even if there is no multilateral consensus regarding competition policy, we can notice that at the regional level there is considerable progress.

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SUB-SECTION: EU SUSTAINABLE ECONOMIC DEVELOPMENT AND COMPETITIVENESS

THE MOUNTAIN REGIONS IN CONTEXT OF 2020 STRATEGY

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Abstract
The mountain regions in Romania and European Union represent a special territory of interest, with a huge economic, social, environmental and cultural potential. More, mountain area is considerate a natural-economic region and constitutes an important objective for regional development policy.
The main sectors of mountain area are presented in agriculture and tourism fields that lead the key role in safeguarding the sensitive eco-system and thereby maintaining the general living and working space.
Mountain areas should have a specific policy defined by the sustainable development principle, which meets the needs of the present without compromising the opportunities of future generations.
The specific mountain policy aims to reduce the imbalance between favored and disadvantaged mountain regions, permanently marked by natural, economic, social, cultural and environmental constraints. In previous programming period, mountain regions among have profited from the intensive regional support, in specially, for constructing of and connecting them to fresh water and waste water networks, in particular for increasing of life quality.
In context of 2020 Strategy, the Member States will concentrate investments on a small number of thematic objectives. In advanced regions, 60 % of funds will used for only two of these objectives (competitiveness of SME and research/innovation). The all less developed regions will received about 50% of Structural Funds
In Romania, mountain representing 29.93% out of the total national surface and 20.14% from UAA (Utilised Agricultural Area) of total national. The mountain territory has around 20% of the national population and is overlapping almost 100% with the Carpathian Mountains.
Due to these conditions, Romania's regional development policy must take into account the specificities of mountain area, the problems they faced, and the requirements of 2020 Strategy.
This paper presents the main aspects to be taken into account for sustainable development of mountain areas in Romania, in context of 2020 Strategy.

Keywords: regional development, territorial policy, mountain regions, 2020 Strategy, economic and social cohesion

JEL Classification: Q01, Q23, R10, R11, R14

1.   Generally Introduction

In European Union, regional policy has the objective to reduce economic and social disparities between the regions and increase territorial cohesion.

Regional policy strongly covers the mountain regions and another type of region with similar problems.

The main issues for regional policy are correlated with the disparities presented in development of mountain regions and lowland areas. Also, there exist disparities between mountain regions in the "old" and the "new" EU (for example, Alpine area and the Carpathians).

From regional policy perspectives, exist a distinction between advanced regions, less developed regions and transition regions, a category between less developed and advanced regions. Depending on its economic and social development level, a mountain region belongs to one of these three categories.

The financial instrument of regional UE policy is: Regional European Development Funds, Cohesion Fund and Social Fund. These funds are allocated for the less developed regions, and smaller parts for the advanced and the transition regions.

2. Mountain regions and 2020 Strategy

At European level, mountain regions are the one of the territories with geographic specificities. The main characteristic of this regions are sparsely, deficient accessibility and connectivity as well as a weaker economic base (Table 1).

Table 1: Definition of mountain regions in different documents

Definition	Source
Areas characterized by limited possibilities of using the land and high costs of works due to: (a) the existence of different climate conditions, i.e, at elevations over 600-800 m; (b) presence of steep slopes, i.e, with a gradient of 1-5 per km2; or (c) any combination of (a) and (b).	European Council, 1999
Physical, environmental, socioeconomic and cultural region where disadvantages derived from elevation and other natural factors must be accounted for in conjunction with socioeconomic constraints, and spatial and environmental imbalance. Climate analysis should consider the latitude and geographical position in addition to elevation. Physical aspects must include the landform, soil type, and other factors in addition to the slope. Socio-economic disadvantages include the low density of population, isolation due to large distances from cities and other economic and political centers, and the dependence on agriculture.	Euromontana, 2004
Elevation, slope and the environmental gradients generated are key components of mountain regions, but their combination is problematic; elevation alone excludes old and low mountains, and includes high elevation areas with little landform and environmental variation.	Blyth et al., 2002

In the European Union, mountain areas represent over one third of the territory, an area that will expand considerably as alpine and mountainous regions become part of the EU with enlargement. The mountains are a source of strength in Europe providing great biodiversity, strategic goods such as water, and services such as leisure and tourism. At the same time, land use is limited, climatic conditions are generally harder, while access to markets and services is more difficult.	Community policies for mountain areas
The mountains are "underestimated ecological treasure", highlighting the many environmental functions they fulfill: water towers, which service lowland areas; recreational uses and aesthetics of the landscape; and areas of high biodiversity and many important habitats. Mountains are very rich in biodiversity and a crucial reservoir of species for Europe. The EEA (2010) identifies 42 mountain habitats and 256 species endemic to mountain ranges. The forests, the landscapes, the purity of air and water, the rich biodiversity of these areas benefit not only mountain people, but Europe as a whole.	European Environment Agency (EEA)

According to a recent European Commission study, mountains contribution to European economy, thus:
1. Produce up to 11.4% of European agricultural output;
2. Mountains occupy 15% of Europe's utilised agricultural area;
3. Represent a significant production potential which will be needed as demand for – quality - food increases.
4. New forms of food industries are being redeveloped. A new chestnut processing factory opened in Isola in France. Ancient cereals are being planted again in the Austrian mountains to produce local bread.
5. Mountains are an ideal place to experiment with the 'relocalisation' of the economy. Large mountain forests provide resources for excellent wood supply chains.
6. Mountains are also renowned for tourism, an economic sector which is considered by European Commission on its webpage to account for 10% of EU GDP and employ 12% of the labour force[1].

Mountain regions are placed mainly in the Alps and Central-Eastern Europe, face smaller barriers to social and economic development if they are located within commuting distance from urban centers providing services and employment opportunities[2].
Most mountain regions have a large ageing population compared to the national average (as an exception, young population predominates in large parts of the northern and north-western Alps) (Figure 1). These regions are considerate from regional policy point of view less favored/developed regions.

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[1] Toward Mountains 2020, Step 1 – Capitalising on Euromontana work to inspire programming, Version 1.0 - February 2013.
[2] http://www.espon.eu/export/sites/default/Documents/Publications/EvidenceBriefs/EEB3-GeographicSpecificities/196728_ESPON_EVIDENCE_BRIEF_NO_3.pdf
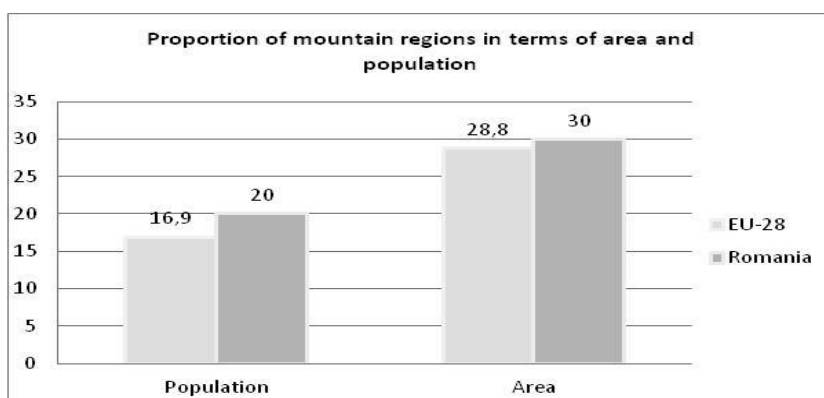
Figure 1: Proportion of geographically specific areas in terms of area and population
Source: author' compilation

From 2020 Strategy, regional policy establish that less developed region should have a GDP per capita which is below 75% of the EU average. An advanced region is characterised by a GDP per capita above 90% and transition regions that are the regions which have grown out of the class of "less developed regions" thanks also to EU support measures, these transition regions show a GDP per capita between 75% and 90 % of the EU average.
The Carpathians Mountain is included into the category of less developed regions and thus can allocate much larger funds than advanced regions.
In Europe, the mountain regions belong to the next categories:
1. The category of advanced regions: the Alps, the Pyrenees, the Vosges, the Black Forest, the Cantabrian Mountains and the Apennines;
2. The category of less developed regions: the mountain areas between Spain and Portugal, the Sierra Nevada in southern Spain, the Abruzzi in southern Italy, the western parts of Wales, the uttermost north of Scotland and all mountain areas in the new EU member states like the Carpathians, the Tatra, the Beskids, the Rhodopes.

Regional policy is projected in close interaction between the European Commission and each Member State/regions. Also, the principle of partnership establishes a Partnership Contract for fixed the thematic funding objectives.
Partnership Contract transposes the goals of 2020 Strategy (smart, inclusive and sustainable growth) into Regional Policy objectives. "Operational Programmes" will be elaborated for each region of European Union on basis of the "Partnership Contracts".
Another principle of regional policy is additionality, means that financial support must not substitute national cofinancing of projects. More, the 2020 Strategy for regional policy is characterised by a shift from "output" to "impact" and "effect".
In 2007-2013 programming period, mountain regions among have profited from the intensive regional support, in specially, for constructing of and connecting them to fresh water and waste water networks, in particular for increasing of life quality. Almost 20 million people have been connected to modern water supply systems, 23 million more people have gotten waste water treatment – both important contributions to regions to comply with EU environmental standards[3].

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[3] EU Regional Policy – a Policy also for the Youth in Europe's Mountain Areas, Directorate General "Regional Policy", European Commission, Brussels.

In context of 2020 Strategy, the Member States will concentrate investments on a small number of thematic objectives - 11 objectives. In advanced regions, 60 % of funds will used for only two of these objectives (Objective 1. Competitiveness of SME, and Objective 2. Research and innovation). About 20% of support will go to a third objective (Objective 3. Sustainable energy). The all less developed regions will received about 50% of Structural Funds.

The 2020 Strategy is considerate an important opportunity for mountain regions because it offer an important potential for hydroelectric power production, for wind and solar energy as well. Investments in sustainable development are economically strengthening mountain regions as important sources of energy an economic growth. More, the mountain regions represent an attractive base for tourism activities.

Regional Policy offers the big opportunities for mountain regions through Territorial Cooperation Programme (funding projects jointly developed and submitted by several regions together).

For 2014-2020 programming period, territorial cooperation programme for mountain regions is organised thus:

a. "Cross border cooperation" Programme – 6.4 billion Euro (covers 38% of the total EU population);

b. "Interregional cooperation" Programme;

c. "Transnational cooperation" Programme improving integration within a specific larger space (13 transnational cooperation areas)

Mountain regions play many roles in reaching the overall objectives set out in 2020 Strategy.

- *For smart growth*: the mountain regions are characterized by a low ICT system comparatively with the rest of European regions, so is the great need to provide access to services, markets and economic opportunities in general;
- *For innovation*: in the mountain regions exist a great potential for innovation in the green-economy and bio-technology, but is not well exploited because the conditions are not properly;
- *Efficient resource*: the mountain regions represent an important source of renewable energies (water, wind, sun, biomass etc.), for themselves and for another regions. At the same time, communities have a lack access to clean energy mix, while having important energy needs due to harsh climate and remote location;
- *Industrial investment*: investment in mountain regions contributes to EU 2020 objectives due the support to entrepreneurship, SME and businesses field. They also need a lot of support to improve competitiveness of supply chains (especially for wood and food industry);
- *An agenda for new skills and jobs* –human capital development is a strategic issue for sustainable development, a pre-condition for mountains regions to involve in green innovation and green growth.
- *Regional cohesion* – mountain regions represent a priority for investment localization (Article 174 of the EU Treaty on Territorial Cohesion). In this area live many rural poor people and marginalised communities especially in the Eastern and Southern part of Europe), with improper access to vital services (health, education etc.) and economic opportunities. In the same time, mountain regions can help people to face crisis (returning from urban declined areas or just looking for a better, healthy life).

3. Example of good practices

The following measures are already implemented in mountain regions and deliver example of good practices for other regions:

a. Good practices in local support diversification of SME activities:

First example of good practices is Ardelaine cooperative (« *coopérative de territoire* ») in Ardèche, Massif Central, France. Traditional sector of wool processing was in decline, but a group of workers reorganize the factory. In parallel, it decided to promote the heritage value of the buildings with new techniques of product creation and selling. In region was created three local museums ("Ardelaine", in St Pierreville, "The Wind School", in St Clément and - Renewable energies House, in Masméjan) and developed tourist activities (Figure 2).

Figure 2: Ardèche, Massif Central, France
Source: http://www.ardelaine.fr/

b. Good *practice in education*

In Hedmark[4] (Norvegy) the initiative SANN (School, employment, local environment, innovation) developed by the county and the Koppang High School, focuses on giving students in the first year of high school the opportunity to reflect and to create products in work related situation. Students can do short internships with a specific innovation related objective. The programme is running since 2002 and has had a big success both in terms of involvement of young pupils (+200% growth) and teachers, but also by increasing pupils' self-confidence and capacities[5] (Figure 3).

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[4] Hedmark (help·info) is a county in Norway, bordering Sør-Trøndelag to the north, Oppland to the west and Akershus to the south. The county administration is in Hamar.
[5] http://www.padima.org/

Figure 3: Hedmark
Source: www.hedmark.com

c. Good practice in environment
The project AlpFFIRS – "Alpine Forests Fire Warning System", created a network aiming at reducing the impacts caused by fires in the Alps. Another project is The Flood Early Warning System for the Rhine (FEWS-Rhine) has been developed by a Swiss-Dutch-German Consortium, enabling flood forecasts and warnings. Project Clim-ATIC project is am warning system for extreme weather events (e.g., avalanches, floods), was developed in Sogn og Fjordane, Norway, as part of the. The project CLIMAlpTOUR has an impact on tourism in the Alpine Space (provides sound knowledge of the different aspects of the climate change on alpine tourism).

4. Some characteristics of Carpathians Countries

Carpathians Mountains spread wider eight countries in Central and Eastern Europe (Austria, Czech Republic, Slovakia, Poland, Hungary, Ukraine, Romania and Serbia) and cover an area about 209.000 square kilometers.

Agricultural land proportions differ from 59% of land area in Hungary to only 21% in Ukraine. The mean country value is almost 40%. A relatively high proportion of this land is permanent grassland, mostly in the range 35-65% - up to 77% in Romania, and with lower figures in the Czech Republic and Hungary.

The remaining area is arable, though in Czech Republic, Hungary and Republic of Serbia orchards and vineyards form around 7%. Forests cover around 35-50% of the region in most countries, but 66% in Ukraine and only 14% in Poland[6] (Figure 4).

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[6] Ruffini, F. V., C. Hoffmann, et al. (2008). SARD-M Report for the Carpathian Convention Member States. Assessment of Policies, Institutions and Processes, Regional Synthesis for Czech Republic, Hungary, Poland, Romania, Republic of Serbia, Slovak Republic and Ukraine, European Academy of Bolzano/Bozen.

Land cover in Charpatian regions in countries (%)

	Czech Republic	Hungary	Poland	Romania	Serbia	Slovacia	Ukraine
Forest	33,4	34,8	14,1	55,5	43,5	50,8	65,5
Agriculture	53,9	59,0	42,4	37,6	56,0	41,2	21,3
agricultural land which is permanent grassland	20,4	13,6	40,7	77,4	37,6	57,5	62,0
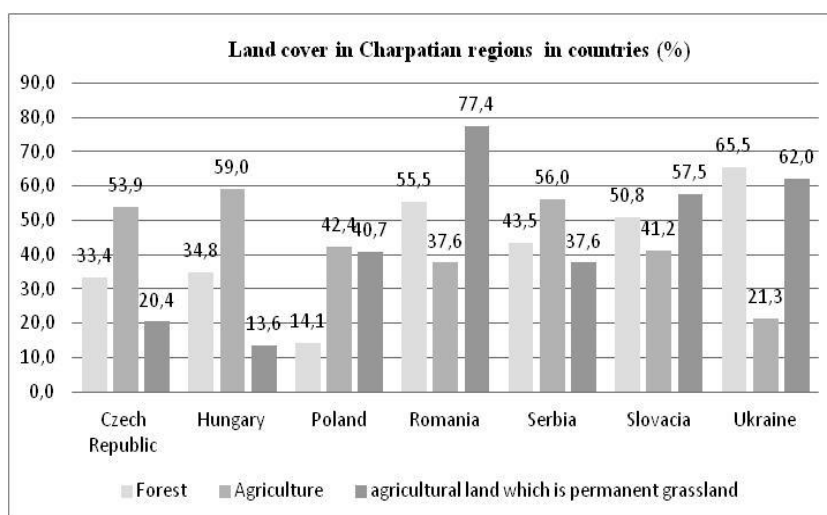
Figure 4: Land cover in Carpathian regions in countries (%)

Source: author' compilation

Agricultural employment (% in total employment) varies widely: from 25% in Ukraine and Romania 50%, whereas in the other countries it is always below about 5%. The total number of employees in the Ukraine and Romanian Carpathians greatly exceeds the combined total for the other countries, so total agricultural employment is also much greater there.

European Union has developed in all Carpathian countries (except Ukraine) policies and programmes for agriculture and environment.

Sustainable development in Carpathian is directly correlated with institutional and legislative aspects, but and the coordination between them.

The main problem of implementation of this programme is lack of funds that result in a failure to mountain areas supporting.

Romania is the only country with a specific legal instrument to promote the sustainable development of mountain regions. Also, only Ukraine is following a different national policy from European Union and Serbia is at an early stage of convergence with EU countries and has not yet followed the EU model.

The main objectives of the EU regulation are to finance the investment in the agriculture competitiveness, agri-environment, non-farm diversification, and community participation (LEADER).

The rural development programmes (Policy for Common Agriculture – PAC) provide great opportunities to support sustainable development in mountain regions. Another type of policy is Forestry policies that exist in all the states. Also, in this case, there are very limited resources.

Carpathian Convention protects the mountain regions and represents a new mode of governance taking to account the next principles: participation, policy integration and partnership (formal start of Convention was in Bucharest, Romania, April, 2001)[7]. Romania signed the Convention in May, 2003, and March, 2007, entry to force.

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[7] http://www.efi.int/files/attachments/publications/efi_tr_28_2009.pdf

5. The main characteristics of mountain regions in Romania

In Romania, mountain regions[8] have around 71,340 km2, representing 29.93% out of the total national surface and 20.14% from UAA (Utilised Agricultural Area) of total national. The mountain territory has around 3.2 million Inhabitants (20% of the national population).

Mountain Areas is overlapping almost 100% with the Carpathian Mountains. The average elevation value of the Carpathian Mountains is 1,136 m, and the highest values of altitude are over 2,500 meters[9].

Agricultural area present in Mountain region is around 2,802,000 ha. Out of this area, in 2007, only 1,290,000 ha (46%) was under commitment, but is estimated that in 2013 will be under commitment around 2,520,000 ha (90%) and this threshold is unlikely to be higher because of eligibility criteria that are referring to plots and farm sizes.

Due to natural restrictive condition (slope and altitude), Carpathian Mountains encounter obstacles in farming, with a negative consequence (a shorter period of vegetation period and supplementary costs). Also, the mountain regions are characterized by a low productivity and depopulation.

Mountain regions in Romania differ from other regions due to natural disadvantages (i.e., elevation,
clime, slope, low soil fertility, reduced access to the communication routes and markets), and structural disadvantages (i.e., ageing active population, migration trends, restricted jobs, distances from decisional centers, and insufficiently developed infrastructure).

(a) The quality and development of roads infrastructure are insufficient. The mountain regions do not have direct road access and/or cannot utilize them during the rainy seasons. This situation affects negatively the economic system and exchanges of people and products.

(b) Most households utilize well for water supplies, wood, oil, or coal stoves for heating and have limited Internet access.

(c) Low quality of education due to the infrastructure and lack of qualified personnel. This situation also affects the quality of the work force. Most young people from these areas abandon education due to poverty, lack of transportation and poor motivation originating from the income that education could bring.

(d) Access to medical services represents a serious issue, with particular focus on the ageing population, requiring special care.

Other economic and social issues of mountain areas in Romania are:

1. There are natural, economic and social disadvantages. Natural disadvantages including altitude, sloping terrain, cold and moisture, and poor soils are behind low agricultural yields and high costs of agricultural products. This puts mountain areas at a disadvantage in agriculture. The economic and social disadvantages are historical. Infrastructure is either underdeveloped or lacking altogether. As a result, mountain rural areas are isolated and have to cope with a lack of communications, low access to information, shortage of transportation of people and goods, all of which takes its toll on economic and social development.

2. The economic crisis slashed jobs in the nonagricultural sector, which resulted in growing unemployment, lower incomes, and the pauperization of the rural population.

3. Mountain agriculture is no substitute for the loss of nonagricultural income, which explains the ever higher pace of out-migration under way; however, with urban jobs in

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[8] Regulation (EC) 1257/1999

[9] National Rural Development Programme 2007-2013, consolidated version, June 2010, Number CCI: 2007RO06RPO001

short supply, migration may only lead to higher unemployment as mountain areas become deserted.

  4. Poverty increases aggression on natural resources, particularly forests and pastures which are overused, as other resources (such as landscape) are underused, unused or misused. With financial resources severely constrained, the scope of afforestation and land improvement has also been curtailed to prevent and control damage by different factors. Occasionally, farmers may heavily use pesticides and other chemicals, leading to soil and water pollution.

Conclusions

  In Europe, mountain regions are developing dynamically in some parte, while another parts it remained partially developed.

There is a living space for millions of people, but it is an object of pressure result from migration, fragmentation, exclusion, climate change impact, environmental degradation.

There is an important source of services and product for economic field: tourism, recreation, agriculture.

European mountain area actions are needed to support by regional policy. Also, European mountain policy must be much more than just a policy for subsidising agriculture.

One of the main conditions is increased regional implications of the stakeholders and exchanges of European experiences (good practices). This can be realized by regional agreements, arrangements and centers of excellence for sustainable mountain development.

In context of 2020 Strategy, is expected a more integrated approach to territorial issues. This new approach is translated in transversal regulations and a Common Strategic Framework explaining how the five main territorial EU funds (ERDF, ESF, CF, EAFRD and EMFF) should contribute to the Strategy. On this basis, Member States will elaborate partnership agreements, indicating how territorial policies will be implemented on the ground. Programme will be setup at national or regional level (depending on the country), with the possibility to conceive them as multi-fund programmes and to integrate territorial policy tools: *multi-fund tools*.

For mountain regions will be possible to set up thematic sub-programmes financed from Structural Funds. Macro-regional strategies for specific territories such as mountain ranges will play a greater role than ever have before.

For Romanian, the principal aims of regional policy in context of 2020 Strategy is to develop territorial development projects that contribute to cohesion, increased competitiveness, and the conservation of natural and cultural diversity. In order to implement these objectives, specific instruments aim to sustainable development of mountain regions based on in-depth knowledge of the ecosystems and environmental carrying capacity and identify areas with a complex and high-valued natural potential.

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GENDER GAP DIMENSIONS ON THE LABOUR MARKET IN THE EUROPEAN UNION

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Abstract: *While the importance of investments in economic assets for ensuring economic and social progress was acknowledged for a long time, sustainable development draws attention on the environmental and human dimension which constitute to equal extent key-dimensions for ensuring economic growth and social development. Up to date, the human capital part represented by women was under-used and their work less valorised, their potential contribution to economic and social progress being practically marginalised. Women's constraints in prioritising family life have influenced their career development inducing a certain lack of professional mobility, the resort to "part-time" work and even career disruptions. Career disruption limits access to on the job qualification and leads to human capital depreciation generating precarious results in wage, and career-advancement terms and in facilitating the return to job. Resorting to "part-time" work, in general, plays a positive role in the life of individuals from the perspective of rendering compatible professional commitments assumed with family life, the great shortcoming being that such jobs providing also for a high standard are less frequent. As a consequence, employees will suffer an adverse impact in terms of remuneration, occupational segregation (due to the concentration of these jobs in certain fields of employment such as services, trade, and office work), career advancement and even job insecurity. This reality frequently fed the stereotypes regarding gender which generated the "gender gap" currently existing between genders on the labour market with multiple dimensions: differences between genders regarding quantitative employment and unemployment indicators; occupational segregation with impact on the quality of employment, and as cumulative dimension of the effects of several factors the "gender pay gap" or the "wage differential". All these have constituted a topic arising much interest in the European area generating thus a statistical, analytical and policy approach. The motivation of this approach is that failing in making full use of the women's human potential most countries fail in ensuring the required level of investment in the human capital as driver of development sustainability.*

Keywords: gender gap; employment/unemployment rate; occupational segregation; wage differential.

JEL classification: J16; J24; J71.

1. Introduction

The trend of promoting increasing integration of women into the labour force and of the equality between genders was imposed at European level in the context of the same trend promoted at world level under the aegis of the United Nations (UN) and with the contribution of some important bodies and organisations such as the International Labour Office (ILO) and of the Organisation of Economic Cooperation and Development (OECD). The benefits generated at individual level, but also at social scale at the economic, social and policy level by optimum valorisation of this important segment of the human capital have imposed at European level a statistical, analytical and policy approach circumscribed to this direction.

The European statistics reflects the following dimensions of the gender gap: differences between genders regarding the quantitative indicators of employment and unemployment; occupational segregation with impact on the quality of employment, and as cumulative dimension of the effects of several factors the gender pay gap or wage differential.

The analytical approach at EU level focuses predominantly on the following dimensions of the gender gap or prerequisites of combating the aforementioned: women's occupational segregation, gender pay gap and the need of reconsidering the work-life balance.

Aiming in the same direction of promoting the equality between men and women on labour market and in all spheres of social life are several Communications of the European Commission, Directives of the European Council and Resolutions of the European Parliament which together represent an actual and decisive policy approach with this focus.

2. Realities of the Social Life in the European Area and the Objectives of the European Policy Imposing the Reconsidering of the Life-Work Balance

The complexity of the woman's status within the contemporary society and on the labour market resulting from the multiple responsibilities pertaining to her by virtue of her particular parental status, but also due to the recent trend of increasing integration into the labour force have led to imposing within the society of a true "culture of the woman's time".

In the past, the prevalent trend was the one of a less demanding professional employment of the women, by virtue of assuming some increased family responsibilities, but also due to the lower skills' level acquired.

The future desirable trends result from the realities of the social life within the European area and from some major objectives of the European policy directly related to the women's status on the labour market.

A first such objective, of major importance is the one substantiated within the European employment policy of increasing the employment rate up to the level of 75% for the age segment 20-65 years to which must contribute both the extension of active life, but also the increased integration of women within the labour force.

The second objective is the priority objective of "demographic renewal" as result of the existence of some low fertility models in all EU Member-States.

Next to these two major policy objectives, the realities of the social life within the European area with incidence on the occupational status of women are: the changes in the size and structure of family, mainly the shift from the extended family to the core family (which separates the generations that traditionally provided for mutual support); the individualisation of life styles (several mono-parental families, singles, and divorced individuals), in parallel with demographic ageing, which by the dynamics of the "fourth

age" triggers an important challenge for fulfilling the function of assistance within the family.

These incontestable social realities have imposed as concept, implementation, and monitoring issue the reconsidering of the work-life balance so that the two above-mentioned policy objectives do not remain only in the sphere of intention.

The evidence of active concern of promoting this balance is the organisation of a European Forum in Dublin already in 2004 having this purpose as focus. The main conclusions of the debates on the occasion of this event make reference both to benefits, but also to the challenges triggered in the social life by the increased integration of women into the labour force.

On one hand, the benefits at individual level consist in ensuring the economic independence of women and the transition from the "male breadwinner model" to the "dual earner model". On the other hand, the challenges cannot be underestimated: a lower predisposition of women regarding the birth phenomenon and about fulfilling the assistance function within the family motivated, both, by the "time poverty" issue. These indisputable challenges induce major requirements in the field of employment and in the social one as well.

In the field of employment, the imperative is the one of rendering flexibility to the labour market and of imposing some flexible employment alternatives, such as: parental leave of absence, and paternal leave of absence, flexible working time, access to the "part-time" programme, etc. Within the social sphere, the necessity of ensuring a family-friendly social environment imposes itself: a corresponding number of crèches and kindergartens with extended programme, an after-school programme and a support policy for the costs of child nurturing (with focus on the children of poor families).

3. Main Dimensions of Gender Gap on the Labour Market in the EU

The roles traditionally held by partners in the family life and in the EU area have marked the career evolution of women by a certain lack of professional mobility, the resort to part-time work, even disruptions of the career which all fed the stereotypes about gender, inducing a certain view of the employers against this segment of the human capital and thus generating the gender gap on the labour market. The main dimensions of the latter are reflected also in the European statistics and these are presently approached: the differences between the employment and unemployment rates, the occupational segregation of women and the gender pay gap.

3.1. Employment/unemployment rate and gap

Employment/unemployment rate and gap were analysed for the time-interval 2002-2007, before the outbreak of the economic crisis and subsequently up to the year 2012, respectively under the impact of the crisis. In the pre-crisis interval, the evolution of the employment rates was marked rather by significant increases in the case of women, while in the case of men the increases have been, in general, more modest with some exceptions (Table no.1). The values of the employment gap in 2007 can be characterised as follows: EU-27 had a value of 14.3 percentage points and a slightly inferior level to it in Romania; four extreme values in Malta, Greece, Italy and Spain and rather many inferior values to the inferior values.

Under the influence of the economic crisis in the interval 2007-2013 women's employment diminished (but not significantly) in a rather high number of countries, and unemployment rates not affected by undergoing the crisis period were recorded only in Germany, Austria, Luxemburg and Poland.

Men's employment rates were to a large extent influenced by the crisis with the reduction of the indicator rates in Spain, Ireland and Greece.

The resulting unemployment gap in 2012 can be characterised as follows: extreme values, but on decrease for Malta, Italy and Greece, and a erosion to less than half from the value recorded in 2007 in Spain. The general rule was of the gap erosion in all Member-States, save for Romania and Poland.

Table 1: Employment rates on genders for persons aged 15-64 years of age (%)

	2002		2007		2012	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
EU-28	70,3	54,4	72,4	58,1	69,6	58,5
Euro Area (17 countries)	71,6	53,0	73,3	57,7	69,5	58,2
Belgium	68,1	51,1	68,7	55,3	66,9	56,8
Bulgaria	54,1	48,2	66,0	57,6	61,3	56,3
Czech Republic	73,9	57,1	74,8	57,3	74,6	58,2
Denmark	80,2	72,6	80,8	73,2	75,2	70,0
Germany	71,8	58,8	74,7	63,2	77,6	68,0
Estonia	66,2	57,6	73,2	65,9	69,7	64,7
Ireland	75,0	55,2	77,5	60,6	62,7	55,1
Greece	72,5	43,1	74,9	47,9	60,6	41,9
Spain	72,7	44,3	76,2	54,7	60,2	50,6
France	69,6	56,4	69,1	59,6	68,0	60,0
Croatia	60,2	46,0	64,4	50,0	55,1	46,2
Italy	68,9	41,9	70,7	46,6	66,5	47,1
Cyprus	78,8	59,0	80,0	62,4	70,4	59,4
Latvia	63,6	57,6	72,5	64,4	64,4	61,7
Lithuania	64,3	57,2	67,9	62,2	62,2	61,8
Luxemburg	75,5	51,5	72,3	56,1	72,5	59,0
Hungary	62,9	49,8	64,0	50,9	62,5	52,1
Malta	75,6	34,3	72,9	35,7	73,3	44,2
The Netherlands	82,9	65,9	82,2	69,6	79,7	70,4
Austria	75,3	61,0	78,4	64,4	77,8	67,3
Poland	57,0	46,7	63,6	50,6	66,3	53,1
Portugal	76,8	61,7	73,8	61,9	64,9	58,7
Romania	64,5(b)	52,8(b)	64,8	52,8	66,5	52,6
Slovenia	68,7	59,8	72,7	62,6	67,4	60,5
Slovakia	61,9	51,2	68,4	53,0	66,7	52,7
Finland	70,9	67,3	72,1	68,5	70,5	68,2
Sweden	75,5	72,5	76,5	71,8	75,6	71,8
United Kingdom	77,3	65,2	77,5	65,5	75,2	65,1

Source: Eurostat   Code: [lfsa_urgan] Update: 30-10-2013

The development of the analysed employment rates for the same period of time, respectively 2002-2012 highlight the impact of the economic cycles on the values of the indicator.

In the pre-crisis interval, the trend which imposed itself was of decreasing the unemployment rates registered for both men and women. In the case of both genders, an exception to this trend was registered in the following countries: Portugal, Luxemburg, Hungary, Cyprus, Sweden, the Netherlands, Belgium and Ireland. In the case of women, an additional deviation from the evolution trend of the indicator's value was found in Germany and Austria.

Table 2: Unemployment rates on genders for persons aged 15-64 years of age (%)

	2002		2007		2012	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
EU-28	8,4	10,0	6,7	8,0	10,6	10,6
Euro Area (17 countries)	7,5	10,1	6,7	8,6	11,3	11,6
Belgium	6,3	7,8	6,7	8,5	7,7	7,4
Bulgaria	19,0	17,5	6,6	7,3	13,7	10,9
Czech Republic	5,8	8,6	4,3	6,8	6,1	8,3
Denmark	4,3	4,4	3,5	4,2	7,7	7,7
Germany	8,8	8,3	8,7	8,9	5,8	5,3
Estonia	10,4	8,9	5,5	4,0	11,2	9,5
Ireland	4,7	3,8	5,0	4,2	18,1	11,1
Greece	6,6	15,4	5,3	12,9	21,6	28,3
Spain	7,9	16,4	6,4	10,9	24,9	25,5
France	7,8	9,8	7,5	8,6	9,8	10,1
Croatia	13,5	17,8	8,5	11,4	16,5	16,0
Italy	7,1	12,7	5,0	7,9	10,0	12,0
Cyprus	2,7	4,2	3,5	4,6	12,8	11,2
Latvia	15,1	11,7	6,6	5,7	16,5	14,2
Lithuania	13,4	13,0	4,4	4,4	15,5	11,8
Luxemburg	1,9	3,6	3,6	4,7	4,6	5,9
Hungary	6,1	5,1	7,2	7,7	11,3	10,7
Malta	6,3	8,3	6,0	7,6	5,9	7,4
The Netherlands	2,3	2,9	2,8	3,7	5,3	5,2
Austria	5,2	4,6	4,0	5,1	4,4	4,4
Poland	19,6	21,0	9,1	10,4	9,5	11,0
Portugal	4,1	5,6	7,0	10,1	16,6	16,2
Romania	9,1(b)	8,3(b)	7,6	5,7	7,8	6,7
Slovenia	5,7	6,4	4,1	6,0	8,5	9,5
Slovakia	18,7	18,8	9,9	12,7	13,6	14,6
Finland	10,7	10,2	6,6	7,3	8,5	7,1
Sweden	5,4	4,7	6,0	6,5	8,5	7,8
United Kingdom	5,7	4,4	5,7	5,0	8,5	7,5
Norway	4,0	4,2	2,6	2,5	3,7	2,7
Switzerland	2,9	3,2	3,0	4,6	4,1	4,6

Source: Eurostat   Code: [lfsa_ergan]   Update: 30-10-2013

In the time interval 2007-2012, under the impact of the economic crisis, the obvious trend was of increasing unemployment rates registered for both men and women.
An exception was noted only in the following countries: in particular Germany, with only marginal variations, Malta, and less significant diminishments of the indicator's values only for women was registered in Belgium, Austria and Finland.

For the majority of cases, increases of the unemployment rates were higher among men. As result of these evolutions, the gap between the unemployment rates recorded on genders has differing characteristics in the period foregoing the crisis and after undergoing it.

In the year 2007, the unemployment gap registered in general positive values, which signify higher values of the indicator among women, and standing out by the level of this dimension was the gap in Greece (+7.6 percentage points), Spain (+4.5 pp) and Portugal (+3.1 pp). However, some countries – Romania, Estonia, Latvia, Ireland and the United Kingdom – have still registered a negative unemployment gap, which signifies higher rates of unemployment among men.

The subsequent developments of the unemployment gap, in the time interval 2007-2012 were the following: the positive gap registered in 2007 either diminishes, or is cancelled under the form of some unemployment rates equal between genders (Austria, Denmark), or converts to a negative one; the negative gap previously registered deepens, with an extreme value in Ireland (-7.0 pp), save for Romania where it attenuates; a significant positive gap (+6.7 pp) is maintained only in Greece.

3.2. Occupational (Horizontal) Segregation of Women on the Labour Market

The negative fingerprint of women's employment interpreted from the viewpoint of average EU-28 shares, associated with the distribution on occupations of employed working-age women (15 to 64 years of age) consists in the following: a diminished share of women managers (4.3% for women against 7.2% for men); an excessive concentration in certain occupations that have turned typically feminine (about one quarter are workers in services and trade, and in a share of 14.7% office workers); a sensibly higher share than men are unskilled workers (Figure 1).

We consider that it is necessary to underpin some positive valences of women's employment: to a share of one fifth they are experts in various fields and to a share of 17% they are technicians and experts in the technical field, that is superior shares than the corresponding ones for men.

The distribution of employed women, on categories of occupations in Romania indicate the following distinctive features against the European average shares: women are no longer excessively concentrated in the category of office clerks (a share of only 6.4% against the European average of 14.7%); the category of workers in services and trade they don't hold the highest shares being only second as size (19.1%), after the category of skilled workers in agriculture (22.3%); the share of expert women (18.3%) is close to the European average.

With respect to men, the average EU-28 shares indicate a more uniform distribution, these being balanced for the following occupations: experts, technicians, industrial operative workers, and workers in services, and trade.

The excessive concentration of women in certain occupations brings to attention the issue of "self-selection". This presupposes that at the time when women opt for a certain occupation and economic sector, as consequence, they opt also for a certain wage statistic, which constitutes a linking bridge between occupational segregation and gender pay gap or wage differential.

Employed population (15-64 years of age) on genders and occupations,in the year 2012, average shares EU-28
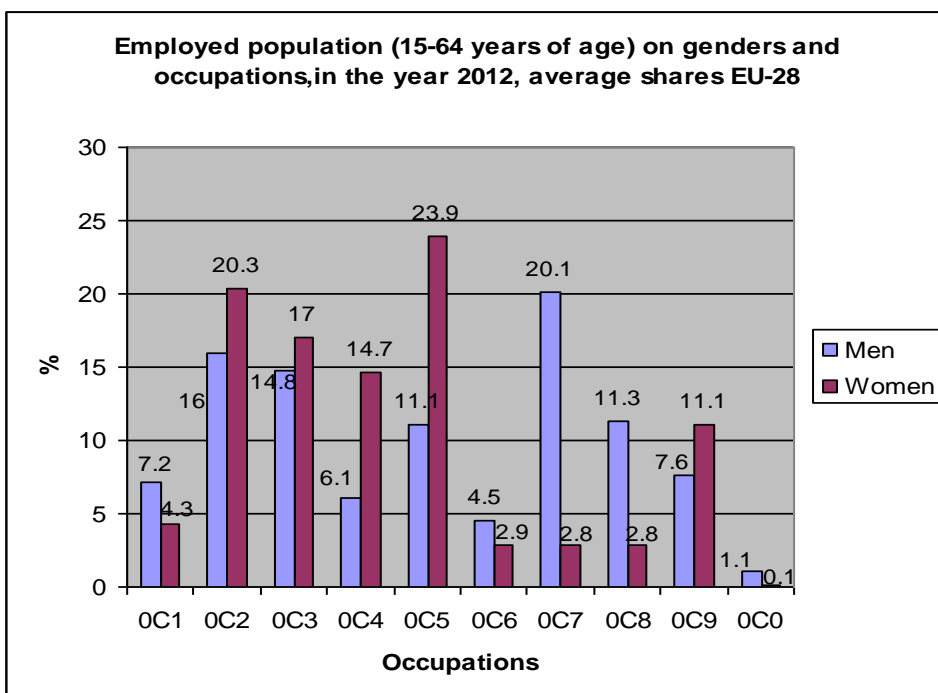
Note:
0C1=Managers
0C2=Experts in various fields
0C3=Technicians and assimilated
0C4=Office clerks
0C5=Workers in services and trade
0C6=Skilled workers in agriculture, forestry and fishing
0C7=Craftsmen
0C8=Operative industrial workers
0C9=Unskilled workers
0C0=Employees of the armed forces
Figure 1
Source: Eurostat Code: [lfsa_egais] Update: 15.11.2013

3.3. Gender Pay Gap (Wage Differential)

The gender pay gap or wage differential between men and women in Europe is one of the major concerns of the European Commission and one of the structural indicators used to monitor the European Strategy for Growth and Jobs, under the heading of „employment". The gender pay gap represents perhaps the most important dimension of the gender gap induced by a multitude of factors.

Table 3: Gender pay gap in unadjusted form (%) (CAEN Rev. 2)

Country	2007	2008	2009	2010	2011
EU-27	:	**17,3**	**17,2**	**16,2**	**16,2**
Belgium	10,1	10,2	10,1	10,2	10,2
Bulgaria	12,1	12,3	13,3	13,0	13,0
Czech Republic	23,6	26,2	25,9	21,6	21,0

Denmark	17,7	17,1	16,8	16,0	16,4
Germany	22,8	22,8	22,6	22,3	22,2
Estonia	30,9	27,6	26,6	27,7	27,3
Ireland	17,3	12,6	12,6	13,9	:
Greece	:	22,0	:	:	:
Spain	18,1	16,1	16,7	16,2	16,2
France	17,3	16,9	15,2	15,6	14,8
Croatia	:	:	:	15,5	17,6
Italy	5,1	4,9	5,5	5,3	5,8
Cyprus	22,0	19,5	17,8	16,8	16,4
Latvia	13,6	11,8	13,1	15,5	13,6
Lithuania	22,6	21,6	15,3	14,6	11,9
Luxemburg	10,2	9,7	9,2	8,7	8,7
Hungary	16,3	17,5	17,1	17,6	18,0
Malta	7,8	9,2	13,8	13,4	12,9
The Netherlands	19,3	18,9	18,5	17,8	17,9
Austria	25,5	25,1	24,3	24,0	23,7
Poland	14,9	11,4	8,0	4,5	4,5
Portugal	8,5	9,2	10,0	12,8	12,5
Romania	12,5	8,5	7,4	8,8	12,1
Slovenia	5,0	4,1	-0,9	0,9	2,3
Slovakia	23,6	20,9	21,9	19,6	20,5
Finland	20,2	20,5	20,8	20,3	18,2
Sweden	17,8	16,9	15,7	15,4	15,8
United Kingdom	20,8	21,4	20,6	19,5	20,1

Note: : = unavailable data
Source: Eurostat   Code: [earn_gr_gpgr2] Update:26-08-2013

Occupational and sectoral (horizontal) segregation of women – both within the labour market and within the company is regarded as a main factor affecting the difference in wages.

To an equal extent, vertical segregation (differences regarding promotion and career dynamics) and stereotypes, fed by the burden of family responsibilities pertaining to women constitute an essential factor of the gender pay gap. There are situations (for instance Malta) when the stereotypes are very strong: in this country according to a widespread assumption women are not "breadwinners" and should not earn as much as men, and placing them on equal footing could be a threat to the traditional roles held within the family life.

Incontestable is also the influence exerted by some objective factors, such as: education and skills, work experience and length of service, contractual characteristics, their preponderance varying on countries.

The statistical data reflect the existence of a substantial gender pay gap within the EU Member-States, save for Slovenia, Italy and Luxemburg.

In the time interval 2008-2011, the diminishment of the indicator's level from the viewpoint of the European average was insignificant, of only one percentage point.

The same trend was registered in most Member States, or an insignificant diminishment (Denmark, France, Luxemburg, the Netherlands, Austria, Slovenia, Finland, Sweden, and the United Kingdom), or even a stabilisation of the indicator's level (Belgium, Germany, Estonia, Spain, Italy and Slovakia).

Significant variations of the gender pay gap occurred in a very small number of countries: a considerable diminishment in Lithuania, Poland, the Czech Republic and a significant increase in Romania, Malta and Portugal.

4. Conclusions

The optimum value of this segment of the human capital which is represented by women and whose contribution to the economic and social progress was up to now marginalised is acknowledged in the specialised literature and at the level of the political decision as an important factor of increasing the potentiality of economic growth and of generating some strong economies, of a better financing of the social security systems and thus of supporting development sustainability.

The constraints of women in prioritising the family life have fed the stereotypes regarding gender and have induced a certain view of the employers that left its fingerprint on the career promotion and dynamics of women.

Some European policy objectives, such as the ambitious employment target (75% for the age segment 20 to 65 years of age), and the objective of demographic renewal, but also the realities of social life (changes in the dimension and structure of the family, individualisation of lifestyles, in parallel with demographic ageing) continue to induce particular demands for women both in family life, but also on the labour market. Acknowledging this state of affairs led to the initiative of reconsidering the life-work balance at European level as a determining prerequisite of combating the gender gap on the labour market.

The main dimensions of the existing gender gap on labour market within the EU, respectively the employment/unemployment gap, women's occupational segregation and the gender pay gap made the object of a statistical, analytical and policy approach at European level, and also the object of the present discussion.

The analysis of the employment and unemployment rates highlight the impact of the economic cycles in the case of both genders, but the values of both indicators were to a larger extent affected by the crisis in the case of men.

With respect to occupational segregation, the negative fingerprint of women's employment consists in: their concentration in certain occupations that turned typically feminine (services and trade, office clerk activities); registering a lower share for the category "managers" and of a sensibly higher share for the category "unskilled workers" than the corresponding share registered among men.

Gender pay gap registers within the EU area a substantial level in the majority of countries and the trend was not of significant diminishment but for a very restricted number of the countries.

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SUSTAINABLE DEVELOPMENT PARADIGM – SYNOPSIS

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Abstract: Even if sustainable development is a concept that gained quite recently its scientific prestige, through contribution of researchers its content has upgraded to a high degree of conceptual luggage and, through contribution from governance representatives, has gained an impressive good-practice background. Allowing the use of different methodological premises and conceptual tools, sustainable development paradigm is equipped with all the elements that would allow the opening of new horizons of knowledge. Based on the facility which can operate the concept of sustainable development, the European Union aims to develop both a more competitive economy based on environmental protection as well as a new governance of economic policy. This on one hand demonstrates the sustainable development ability to irradiate creativity towards the establishment of interdisciplinary bridges and on the other hand explains the growing interest of researchers interested in the problem of analyzing in detail this fruitful concept. Launched first as a theoretical framework to serve justify actions responsible for weighting economic growth, the concept of Sustainable Development has quickly become a topic of ethical debate circumscribed to the area of perfectibility of human nature to the necessity registry. In this regard, the philosophical content of this paradigm could not remain outside researchers concerns, who want to provide both policy makers and the general public a wide range of evidence to demonstrate the viability of this paradigm. Academia waits until maximization of the contribution of governance to achieve sustainable economic development, which consists in conjunction of this upward path with the momentum given by public policy sync, perfectly adapted for globalization era and all crises to come. However, because this concept based its structure and composition on three pillars, equally important – economy, society and environment – any attempt to strengthen and expand its epistemological foundation by highlighting not only its practical value but also the conceptual view, it is not strictly philosophy but rather an interdisciplinary vision, called to best respond to challenges of current issues. From this perspective, we argue here that assuming sustainable development principles in society leads to establishment of a comprehensive global peace regarding planet's resources. Therefore, in this paper we addressed both conceptual path of development and theoretical and practical implications of the paradigm of sustainable development and its implications for the controversy created around areas of application and that of actual interference with other key concepts involved in the study of development and competitiveness.

Keywords: economy, education, management and sustainable development philosophy

JEL Classification: Q01, Q56

Introduction
In an emblematic style, the European diverse continent is promoter of unitary sustainable development, in belief that precisely diversity can guarantee preservation of its priceless potential. Transferring to the concept of Sustainable Development heritage values of humanity, European Union takes further the example of great nations regarding historical reconciliation upon resources and transformation of its regions into vectors of solidarity

and international cooperation. Therefore, we intend here to bring arguments to support the idea that, far from being a sentence of stagnation rendered against those who take entrepreneurial advantage from progress, essentially, *sustainable development is a humanist plea against states battle for the planet's resources and for the establishment of a global peace*.

Reviewing the issue of sustainable development paradigm, we argue the premise stated using both historical-critical method of analysis as well as that of *synthesis of valued content*, operating an original selection of research corpus dedicated to multifaceted nature of the topic. By combining these methods we hope, on one hand, to reduce to common ground issues involved in sustainable development and, on the other hand, to highlight the major impact of an emerging field from multidisciplinary approach.

Based on contextualization of mutations occurred in the Sustainable Development definition, we analyze the main aspects of its philosophical content from the perspective of relevant responses. Also due to strong interest in Sustainable Development operationalization, we analyze its principles under pressure of alarming scenarios. We believe that the premise on which we started is supported by the fact that currently, *based on Sustainable Development paradigm, new answers are being looked for*, to the crisis of resources, as well as operating and consumption of resources. It is a signal that the conceptual building of Sustainable Development has done its full duty to scientific community, still being far to have consumed its relevance, both on instrumental and axiological level.

Without questioning the fact that the central element of Sustainable Development concept is interaction between demographic landmark, economic progress and reporting to natural resources and to the need for optimization of relationship between needs and aspirations, also we emphasize its cultural and educational dimension. Also, the trend towards sustainability of socio-economic development process compels researchers to periodically review the limits and opportunities of Sustainable Development globalization and the politicians to develop new programming documents to be endorsed by major European and international actors engaged in specific actions.

1. Operational definition of Sustainable Development concept

The origins of Sustainable Development concept should be looked in the occurrence of humanity awareness on the need to preserve the environment, transposed into environmental laws. Even though they are relatively new and were usually reserved for the protection of species of plants and animals, as early as 1930-1940, the international community has begun to recognize the need for cooperation of nations to preserve resources across borders (Djoghlaf, 2006). Although first report of the Club of Rome, of 1972 was giving Sustainable Development power to stop abuses against the environment (Meadows et al., 2004), this raises a number of issues that initially could not be taken into account, such as those related to vulnerability, poverty, threats of climate change, etc.

Therefore, researchers include today in this concept a plurality of elements that offers Sustainable Development paradigm a greater operational capacity (Turner, 2008). In *The plundering of the planet continues* - final report of the Club of Rome from 2013, it is highlighted that we are at the limits of economic growth based on extraction of minerals, including metals and fossil fuels (Bardi, 2013).

However, the iconic definition of Sustainable Development is due to the commission led by Gro Harlem Brundtland from Norwegia, because of inclusion in the UN World Commission on Environment and Development Report, - *Our Common Future* from 1987, of two key concepts related to the capacity of the environment to meet the needs of present and future "needs" (in particular, those essential of poor countries) and "limitation" (imposed on states that have advanced technology and social organization). On the other hand, concerns of the sustainability report entitled *Is it possible?* (Worldwach, 2013) fall

in an attempt to restore the meaning of Sustainable Development at the expense of its use as a marketing tool, investigating the ways in which we can prepare for drastic changes of environment and resource depletion, seen as outbreaks of migration and conflict.
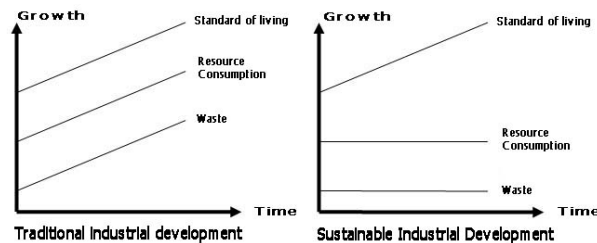
Figure 1: Traditional development models and Sustainable Development models
Source: Şoaită, 2010.

In Figure 1 is shown comparatively the Sustainable Development model under Johannesburg Declaration, adopted at the Rio +20 Conference, suggesting courses of action on the possibility of increasing production and consumption without creating a negative impact on the environment. This issue of breaking the direct relationship between economic growth and environmental impact as a result of consumption, resource use and waste generation arises for all countries but, unlike traditional patterns of economic and industrial development, which consumes increasingly more natural resources generating pollution, only the implementation of the sustainable production and consumption patterns favors optimal use of resources (Şoaită, 2010)

Whether for the Brundtland Commission, which had in mind that the environment does not have unlimited resources and it cannot absorb the amount of waste we produce and the pollutants we issue, Sustainable Development should aim combining optimization measures, transparent evaluation processes and long-term measures, for the Rio de Janeiro Conference, in 1992, called the Earth Summit, these things were included in a concrete action plan (Agenda 21) imposed by the need to tackle climate change, conservation biodiversity and stop deforestation heavy (Deslandes, 2011).

The fact that Sustainable Development takes into account human resource development, could lead to termination of disagreements on planet's resources, thus, bringing this theory down from utopias among unitary approach of present threats (Bonciu, 2013). So, epistemological evidence brought to its support, can provide a natural transition of communities to sustainability (Ciumaşu, Stephen, 2008).

2. Sustainable Development Concept Coordinates
Roots of Sustainable Development theory are in welfare economics and the social market economy, the concept being mostly a product of experience of early environmental action programs (Bourdages, 1997). Although generous and floor covering through topics and problematic, theory of Sustainable Development has forged early on a self epistemological base and a notional and categories system that is used whenever desired an exposure or analysis of its conceptual content (Pohoaţă, 2006). Currently, it is considered that *introducing the term Sustainable Development in the usual vocabulary of economics was an objective necessity*, and surveys show that people perceive strong moral weight of that concept (Cajes, 2011).

The humanists' desiderata contained in *sustainable development paradigm* supports the idea that *it was built to bring humanity a comprehensive peace on global resources*. In order to steer the economic thinking towards a new approach, a new paradigm in which respect for the environment become constitutive element, it must be highlighted Nicolas

Georgescu-Roegen *Bioeconomics* contribution (Constantin, 2005), leading to creation of a timeless perspective on consumption and preserving natural capital intact.

Among the authors warning on imbalances caused by current civilization development due to growing pressure on base resources, is Lester R. Brown, which suggests, as solutions to save civilization, building an energy efficient global economy, harnessing renewable energy, restoration of natural systems, poverty eradication, rescuing "failing states" and, finally, providing food for eight billion people (Brown, 2006). However, these practical solutions arising from understanding Sustainable Development paradigm in the sense of an argument for world peace on planet's resources represent a new way to turn Sustainable Development into a policy objective, suitable to respond to the great problems of mankind (Nordhaus, 1998).
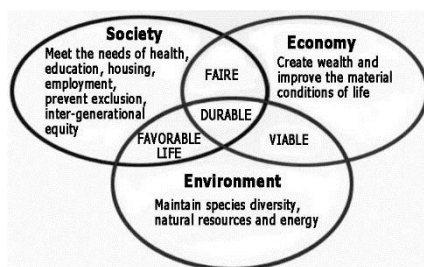
Figure 2: Confluence of main sustainable development fields
Source: Petrişor, 2006.

In Figure 2 is established that convergence of the three major spheres ensures elements of Sustainable Development tracing in all policies mixes - environment, economy and society. First, it establishes that any environment development should be analyzed quantitatively, at least in theory, by magnifying the likely impact on preserving the ability of future generations to meet their own needs. Secondly, the company receives a fair perspective on the economy that can rebuild intra-generational solidarity and, thirdly, the economy get rid of considering economic growth as an imperative of development itself, thus meeting through environmental responsibility, conditions consistent with environmental sustainability (UN, 2012).

3. Verifying the sustainable development paradigm through holistic theories

As the sustainable development paradigm becomes accessible to the general public and common sense, there is a tendency of abandoning the usual scientific slang. However, according to the falsification theory developed by Karl Popper, no scientific system can claim to be complete and valid for all times. Probabilities must be formulated, waiting for invalidation, since a theory which is not invalidated by any possible scientific event, is not scientific (Popper, 1981). This view of scientific progress in stages consisting of quantitative accumulation followed by revolutions in which paradigm of science is changing fundamentally, was made by Thomas Khun in his theory under which scientific revolution means replacing a paradigm by another (Khun, 1999). Together with this, the ideas of Ludwig von Mises of human reporting to his condition in a general human action, called praxiology, according to which man constantly makes choices at every step finding options and solutions (Mises, 1998), close the scientific verification of Sustainable Development paradigm consistency. Successfully overcoming the three types of checks above, it can be considered that Sustainable Development can become a scientific field by itself and not just a chapter in the theory of economic development (Pohoață, 2006).

An important direction explaining adherence of Sustainable Development paradigm to the scientific community is the fact that it has become a strategic goal of humanity due to the

supreme threat posed by ecosystems disappearance (Nicholas et al., 2005). Considering that, ultimately, Sustainable Development is development of people for people, attempts are made to replace the concept of sustainable economic growth with *sustainable human development*, given that the first concept focuses exclusively on obtaining income, while the second one requires consolidation of all opportunities, economic, social, cultural and political (Şoaită, 2010).

On the other hand, using the valences of unsustainable concept in shaping human development possible scenarios to verify the conditions of Sustainable Development falsifiability theory, we are reducing the risk induced by a series of crises at the level of our entire socio-economic and environmental system (Anand, Sen, 1994). Appealing to the full range of global issues and taking into account that they are interlinked, the concept of sustainability is also a challenge for organizations, individuals and governments, from which is required integration in new frames of thinking and acting. In this regard, the concept of integrated Sustainable Development appeared which is intended to be a response to all scattered calls initiated by researchers, to put an end to fragmentation in this area (Brown, 2006). Passing the test of holistic theories, an attempt to unify the area of Sustainable Development and of frameworks and methodologies for its implementation, corresponds to termination of disputes on resources.

4. Milestones of sustainable development paradigm

A first axiomatic component of definitions for Sustainable Development is the attempt to integrate ethical judgments in economics, bringing closer the sustainable development paradigm to the cultural level. Corresponding to the moral progress desideratum, ethics that lies at the core of sustainable development issue requires fair sharing of resources within population of a state, between states and between generations (Cajes, 2011).

Therefore, the concept of sustainable development is today not only a solution to combat global warming, but also the engine of socio-political development. Directions of action of policies for sustainability means achieving cooperation based on the principles that give consistency to Sustainable Development paradigm (UN, 2012). Its general principles requires five basic conditions that must be met in order to achieve the transformation of the current development into Sustainable Development: integrating environment and economy, preservation of biological diversity and natural resource conservation, care, prevention and assessment of environmental measures and long-term focus partnership and participation in the transformation of Sustainable Development into joined responsibility through actions at all levels of activity (Bourdages, 1997). *It can be said that sustainable development is the supreme political problem of the XXI century.*

In Figure 3 we have a representation of the main spheres of influence of Sustainable Development paradigm corresponding both to its dedicated definitions as well as its current application trends. Unquestionably appreciated as a dynamic process of change in the institutional and human level, Sustainable Development enables people to achieve their potential in terms of protecting the environment and thereby aspire to a sustainable future economic prosperity and social justice for a time frame as large as possible (Ghica, Bulearcă, 2009).

Figure 3: Main influence areas of sustainable development paradigm
Source: Ghica, Bulearcă, 2009.

Some research activities use sustainability areas to argue that the environment is a combination of nature and culture left at the disposal of the political factor. Therefore researchers try expanding multidisciplinary capabilities of Sustainable Development paradigm by including some human development strategies (Comsa, Bogdan, 2011). Furthermore, while trying to prove that Sustainable Development should not jeopardize maximization of economic welfare, economic sustainability recognizes the subjectivity of the concept of welfare and economic incentives need in order to adjust market imperfections in optimal environmental management (Beckerman, 1994). Aiming to become a science not only of measurable quantities but also of human quality, it is believed that economy will need to rely on contemporary research of organizations behavior (Dinga, Ionescu, 2010). Thus, economic sustainability concept is based on scientific fact that all life and human activity takes place within the planet limits and, consequently, the economy - as basic function of society - has the role of promoting sustainability principles (Alvila-Pires et al., 2000).

5. Support instruments and concepts for sustainability paradigm

An important role in achieving Sustainable Development objectives is given to institutions, organizations and business, called to reorient strategies and technologies towards clean technologies and low material and energy consumption (Rusu, 2008).

A concept adapted to Sustainable Development paradigm is the Corporate Social Responsibility which facilitates operationality of Sustainable Development notion, CSR enabling enterprises to achieve economic ambitions reconciliation with social and environmental requirements (Kemp et al., 2005).

Given that the current development path chosen by humanity is not sustainable, it is clear that Sustainable Development makes more sense regarding peace over global resources of the planet. In this respect, the outcome document of Rio +20 Conference in 2012, entitled "The future we desire" didn't met the expectations, because it does not pay enough attention to the urgency of the crisis affecting us. Thus, through the expected launch in 2015 of Sustainable Development objectives, decided in Rio +20, it is expected to be set much stronger targets for environmental protection (Moldovan, 2011).

As both instruments and beneficiaries but also victims of all development activities, people are those who will decide the success of Sustainable Development, depending on the degree of involvement in its implementation and monitoring (Pragati, Prerna, 2013). In the better scenario case, the effect of economic and social development will put less pressure on the environment and natural resources (measured by the ecological footprint). *Ecological footprint* of a country, region, city or village includes the area of cropland, pasture, forest and fishery necessary for production, but also necessary to neutralize generated waste (Harris, 2003). While the Ecological Footprint meet sustainability criteria applied to human activities, *The Ecological Footprint Biocapacity Index* correspond better to the need to preserve natural capital. From its measurement follows *the ecological*

deficit, namely the extent to which a country, a region or a city exceeds through its ecological footprint the local ecological capacity of the territory considered, for example, urban areas, or *the ecological surplus,* which is the difference between a country, region or city ecological deficit, against available ecological capacity.

Because the tools and concepts dedicated to Sustainable Development continuously expanded its thematic area, the globalization trend of sustainability concept has become obvious. Those who were taken somehow by surprise by the end of the Cold War, now believe that the problem of Sustainable Development globalization is rather one related to consciousness than to globalized market economy system (Pisano, 2012). Reality shows that, while the global consumption will grow at the current rate, not far from now, in 2030, humanity may need not one, but two planets (Worldwach, 2013).

6. New conceptual horizons of sustainable development

Sustainable Development requires a set of quantitative, structural and qualitative transformations, both in economy and in scientific research, production technologies, operational mechanisms and organizational components of the economy, thinking and behavior of people and social relations (Nordhaus 1998). Also, Sustainable Development aims to integrate social and environmental concerns into economic decisions, which is why operating with the paradigm of Sustainable Development requires international cooperation and technology transfer based on participation and responsibility (Bourdages, 1997).

Unfortunately, Sustainable Development is at the intersection of functional blockages identified, particularly, in the implementation of environmental policies. Figure 4 offers a summary of the main concerns arising from the beginning of research on Sustainable Development, which allowed the opening of this paradigm to the current horizon analysis resuming from an interdisciplinary perspective, old themes that receive clarifications and additions as much as solid justification, both easy to use in order to justify action.
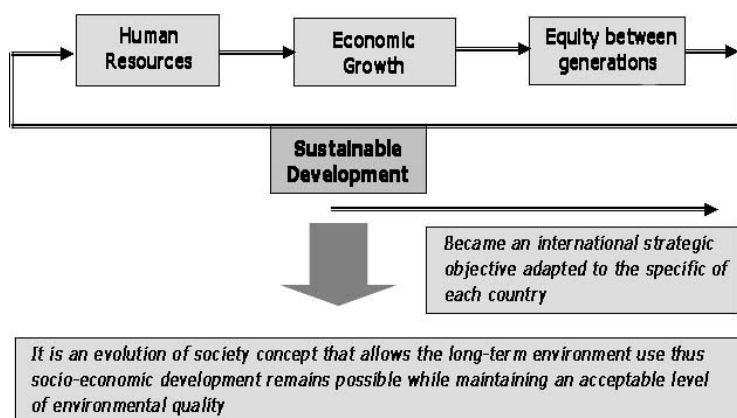
Figure 4: Sustainable development opening to new concepts
Source: Comşa, Bogdan, 2011.

Another phrase recently appeared in Sustainable Development paradigm, as an expression of the possibility of practical application of new environmental philosophy, is *Smart Sustainable Development.* This addresses a comprehensive approach of Sustainable Development, through the use of concepts related to *eco-bio-economy,* innovation and quality. Moreover, was released the term of *Integrated Smart Sustainable Development,* in order to stimulate networking of some concepts from economy, eco-economy, bio-economy, biology, ecology, biodiversity, integrating new approach areas

such as *eco-bio-economy, green agro-food, international diplomacy and eco-bio-diplomacy* (Chichilnisky, 1996).

However, among all emerging concepts within Sustainable Development paradigm, the most pervasive is **resilience**, due to its regulatory content. Although initially resilience had a purely technical signification, by extrapolation to the environment and living structure, it acquires meaning of regeneration capacity (Buchs, Blanchard, 2011). Therefore, although resilience involves complex computational models, hybrid multifaceted, many experts feel that this conceptual perspective on the changing socio-ecological system could open the door for a more sustainable world (Pisano, 2012).

Conclusions

During this scientific exposure, we could notice both the prolific foundation of the Sustainable Development concept, which lies in ability to integrate policies and economic goals with social and environmental protection requirements, as well as philosophical issues raised in its operationalization. By subjecting sustainable development paradigm to analysis from several research perspectives, including the holistic one, we can conclude that *sustainable development is a civilizing idea*, with continuous improvement possibilities (Pisano, 2012).

Analyzing the operational mutations of this concept, we believe that the mainstreaming practical premise, from which we've started, namely that *sustainable development aims towards a global agreement on planet's resource exploitation*, also may fall between the various concepts which represent the base of Sustainable Development paradigm. This, in turn, is supported through scientific work that gives society an innovative framework of multiple developments.

Since the beginning of this argumentation, it could be seize the Sustainable Development paradigm capability to provide a natural transition from the conceptual rigidity to operational flexibility that allowed us to structure the presentation so that we can highlight its interweaving capacity. Also, given the importance of contextualizing how the importance of sustainability is conceived and perceived, we found that there is a need to extend the current paradigm for the structures and policies that do not provide a basis for sustainable development (Anand, Sen, 1994).

As highlighted in the material hereby presented, research work and favorable local conditions to the principles and patterns of Sustainable Development action, are not sufficient to enhance the sustainability process so that it can withstand social pressures threats. Therefore, together with proper Sustainable Development management, the entire educational system is called to perform the change of mind needed to create a new sensitivity to what should concern in the most serious way all mankind (Bourdages, 1997). Staying in essence an expression of empowering people to make sustainable choices, sustainable development paradigm sets the coordinates of these choices, for the purposes shaping a desirable future.

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TRANSPARENCY IN ITALIAN NON PROFIT ORGANIZATIONS

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Abstract: *The aim of the paper is to evaluate the accountability and transparency of Italian non profits organizations. The main goal is to understand if a general accountability or transparency problem, or a systematic publicity deficit, exist in the third sector in Italy. Non profit organizations have an ethical obligation to their stakeholder and to the public to conduct their activities with accountability and transparency. Non profit organizations should regularly and openly convey information to the stakeholder about their vision, mission, objectives, activities, accomplishments, decision-making processes and organizational structure. Information from a non profit organization should be easily accessible to the stakeholder and should create external visibility, public understanding and trust in the organization, conditions necessary to find donors. Non profit organizations work with communities and community donors need to know how their money is used. In the first part the analysis of the definition of transparency and accountability is made and the sustainability report like an important instrument of communication is considered. In the second part an empirical research is presented. The Italian law allows taxpayers to devote 5 per thousand of their income tax to non profit organizations, choosing between charities, social promotion associations, recognized associations, entities dedicated to scientific research and health care, universities, municipal social services and other non profit organizations. The present study present a quantitative research and it's based on an empirical analysis of non-profit organizations that receive this donation in Italy in the year 2010 and 2011. In the paper we analyze the transparency and the accountability of the top 100 non profit organizations that have received the contribution of 5 per thousand, checking whether they prepare their Sustainability Report or any other kind of report for communicate the use of funds received. The new research was based on one previous research (Gazzola and Ratti, 2013) but we compared the data of the year 2010 with the date of 2011. Statistical method is applied for the purpose of this study. The analysis on the transparency and accountability in non profit organizations clearly requires further study, yet the results obtained in this study allow us to offer various reflections and encourages us to continue in this research because non profit organizations must increase their transparency.*

1. Introduction

Non profit organizations provide important opportunities for people to combine their energy, talents and values for community improvement and enrichment (Minnesota Council of Nonprofits, 2010). They have the role of entities that engage and inspire individuals and communities for public benefit. Non profit organizations have also an ethical obligation to conduct their activities in a way that is accountable and transparent because normally they work for the community (Carroll, 1991). In the non profit sector we consider transparency (Behn, DeVries and Lin, 2010) and accountability as the great

availability of relevant, reliable information about the performance, the financial situation, and the governance of the organization. They are the amount of information that an organization provides to the stakeholders about itself and how honestly and quickly it reveals this information. Public availability to the economic, social and financial information of non profit organizations is important because the non-accessibility may result in the loss of public confidence. A non profit organization has an obligation to responsibly use the resources toward its mission and to benefit the community. It has also a responsibility to establish and regularly determine clear performance measurements and to share the results with the stakeholder (Ebrahim, 2010).

In the research we highlight the importance for a non profit organization to give to the community the correct information on the activity and on the management. The particular socio-economic function can not be highlighted effectively using information tools designed to meet the needs of business. The management for the increase of the collective well-being can not be valued in economic terms. It is necessary to carry out a process of social information that can be both a public relations tool, communication, dialogue and coordination of the different social areas (Browne and Nuttall, 2013).

The opportunity for the stakeholder to access the financial and operational information of the non profit organizations who receive the 5 per thousand of the income tax of the donors is fundamental. Open access is important for efficient capital flow and for well-informed donation decisions.The non profit sector is a vital component of the world economy and of many national economies. Social systems complement the activity of the governmental and business sectors in supplying the public services and improving quality of life . We can understand the importance of this information if we consider that Italian non profit organizations represent un estimate of 4,3% of PIL and 2,5% of Italian jobs (Unicredit Foundation, 2012).

2. Literature review

According to Salamon and Anheier (1997), the term "non profit organization", utilized in the research, expresses that the organization does not aim primarily to make a profit, in reality, profits are often achieved. However, these profits are not distributed to the shareholders, but are usually used to realize the organization's purpose or are retained. The definition is integrated by Badelt   (1999) that considers, among the number of different viewpoints, there is only one common denominator namely to try to consciously distance oneself from the for-profit world of the private sector.

The acceptance of stakeholder theory (Freeman, 1984) has meant that organizations have had to redefine their competitive strategies and the way they manage social issues, since these are evaluated by stakeholder and determine how new groups of subjects judge the non profit legitimization. As a result outside communication represents an important opportunity for the organization to increase its social acceptance and offer its own point of view, supported by information that, as much as possible, is understandeable, objective and verifiable.

The idea of transparency is the idea adopted internationally, it is clear that it meant that organizations were open to public scrutiny whether though formal structures such as freedom of information acts or document availability and open meetings (Piotrowski and Van Ryzin, 2007 and Roberts, 2006). Transparency began to be used side by side with good governance and accountability to the stakeholder and openness to public scrutiny. With the help of the web, it has been possible to make more and more aspects of an organization's management available to the stakeholder. Taylor (1996) mentioned the

need for transparency in voluntary organizations, but the idea hasn't had wide circulation in the United States.

Nonprofits "need to be trustworthy and need to be trusted to succeed [in their missions] (Ortmann and Schlesinger, 2003). " One way to create trust is to be transparent in the administration of the organization by use of a website.

Understanding trust in nonprofits is even more important as government reduces the direct provision of services in favor of contracting with nonprofits to provide those services. Further, given a number of highly visible scandals and corruption, some see a "crisis of confidence" occurring for nonprofits, although, for example, O'Neill (2009) disputes this.

Following recent crises in the for-profit, nonprofit, and government sectors, the public has called for increased openness and transparency from organizations. Kelleher (2006) encouraged practitioners to use the Internet and social networking sites to advocate for their organizations and causes; however, the practitioners should be transparent in their online communication activities. For full disclosure, organizations must make sure to provide a detailed description of the organization and its history, use hyperlinks to connect to the organization's Web site, provide logos and visual cues to establish the connection, and list the individuals who are responsible for maintaining the social networking site profile (Berman, Abraham, Battino, Shipnuck, and Neus, 2007).

Waters, Burnett, Lamm and Lucas (2009) argue that non profit organizations could use Facebook for the communication. The research indicate that the nonprofits on Facebook wanted to be open and transparent by disclosing who maintained the site and what they sought to accomplish. However, they failed to take advantage of the interactive nature of social networking. They rarely provide information in forms other than external links to news stories, photographs, and discussion board posts, and they only attempted to get interested parties involved by providing them with a contact e-mail address to obtain more information

3. Methodology

This study is focused on accountability and transparency in non profit organizations. The research design in the first part is theoretical. In the second part predominantly employs the quantitative methods; authors present an empirical analysis based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief. It describes and synthesizes, with the use of statistical data, the dynamics and the evolution of the transparency in non profit organizations.

The research questions are:
- Are Italian non profit organizations transparent?
- Transparency is useful for fundraising?

The empirical analysis in about Italian non profit organizations that receive 5 per thousand of the income tax of taxpayers. In the paper the authors analyze the transparency and the accountability of the top 100 non profit organizations that have received the contribution of 5 per thousand, checking what kind of information they public on the web site and whether they prepare their Sustainability Report, the information document for excellence, or any other kind of report.

This article reviews the meaning of trust and transparency in the nonprofit literature and examines the websites for date of transparency and accountability.

The main contribution of this line of research is the analysis of the transparency about use of donated funds, and sources of funding in the Italian non profit organization who received the contribution of 5 per thousand from the public. The research demonstrate that transparency helps to inspire confidence with donors as well as board and staff. It is

in every non profit's best interest to engage in practices that raise the level of accountability and inspire donors' trust and confidence.

4. Transparency and accountability

It's possible to define the transparency as the widespread availability of relevant, reliable information about the performance, financial position, and governance of a non profit organization. Transparency allows stakeholders to gather information that may be critical in detecting and defending their interests (Burch Adiloglu, 2012)**.** It differs from disclosure in going beyond following the standards of reporting to provide users with all the information needed to help them taking rational decisions.

The transparency depends on the amount of information that an organization tells to the stakeholder about itself and it is related to the honest and quick revelation of this information. Donors today want to understand the need and how the non profit organization meets that need. Being able to quantify the impact of an individual donation helps secure donors, shows transparency, and supports the organization's overall mission (BSR, 2011).

The need thus arises for the organization to communicate, to make its actions visible to the outside, and as a result to obtain social legitimization for these actions (Gazzola and Meo Colombo, 2011). One common way to make public the organization is to put the information on the web. Facebook, YouTube, Twitter and LinkedIn are the four social media technologies that are highest in use. The Web has changed our world dramatically, and nonprofits are experiencing this change as well. For example, recent studies on the non profit organizations in Australia indicate that well over 97% of non profits have some type of Web presence (Wirth, 2012). This survey indicates that just over 26% of respondents do not have the financial records available on their Web site or readily available for donors. More and more donors are requesting this type of information early in their decision process to support an organization.

For non profit organizations is fundamental explain the mission, but it is not enough. They have to communicate the outcomes of their actions to the outside world. Donors today want to understand the need and how the organization meets that need and explain the quantitative impact of donations. Being able to quantify the impact of an individual donation helps secure donors, shows transparency, and supports the organization's overall mission.

Nowadays public and donors look to measure a non profit organization's trustworthiness. The current trend for funders and donors is to examine carefully overhead expenses; the ratio of spending on programs and services versus spending on administration and management; the costs of fundraising. There are wide discrepancies in how this information is reported; some non profit even reporting no fundraising costs. Being accountable means ensuring these figures are reported accurately. When overhead percentages are low or high it doesn't necessarily mean that anything is wrong but it means that it should be reviewed closely.

All non profits provide some type of community benefit (Colombo and Gazzola, 2012); that is why the organization gets the advantage of being a nonprofit entity. Accountability includes ensuring that you are effectively providing this benefit service (be it feeding the homeless, protecting the environment, offering a cultural endeavor, etc). Organizations need to evaluate their services impartially and perform a needs assessment of their stakeholder, making changes if needed. This often happens as part of a strategic planning process and it is a critical part of being an accountable organization (Anheier et al, 2011). Until several decades ago it was thought sufficient to declare to be non profit; today, instead, there is a general interest that is revealed not only as the sum of the expectations

of the individuals with whom the organization has direct relations but also as a collective interest.

A comprehensive way to be transparent is to produce an annual report (Meyer, Ferrari and Zoebeli, 2012; Zainon et als, 2013). The organization can lay out in a more compelling document the highlights of achievements, services and financial records with photos and graphics and make these readily available to the stakeholder by posting it on the website. This, however, can be a costly administrative expense for a smaller non profit.

The more the organization can assure that is accountable and transparent the more trustworthy the organization will be viewed by the public, donors, constituents and regulators.

5. Transparency in Italian non profit organizations

The first dates of the research are the funds collected from the top 100 non profit organization with the 5 per thousand of the income tax. The total amount collected in the tax year 2010 is € 97.250.812,20 (Table 1). The dates refer to the lists of admitted and excluded to the 5 per thousand in 2010 published on 28/12/2012 (Agenzia delle Entrate, 2012).

Table 1: Funds collected 2010

Funds collected from the top 100 non-profit organizations thanks to 5 per thousand	€ 97.250.812,20
Funds collected **from the top 10 non-profit organizations** ranging from a maximum to a minimum of	€ 10.699.131,30
	€ 2.237.380,75
The organization is located at **number 22**, has collected more funds equal to a value of	€ 1.036.597,69
From position 23 up to 39 descend up to a value of	€ 501.656,19
Only the last 4 organizations that are in the top 100 positions in the collection of 5 per thousand, receive donations of less than	€ 200.000,00

Source: Authors' elaboration

In the year 2011 the amount of founds is increased, in fact it is € 100.048.590,40 (table 2). The dates refer to the lists of admitted and excluded to the 5 per thousand in 2011 published on 09/05/2013 (Agenzia delle Entrate, 2013) and updated on 14/03/2014.

Table 2: Funds collected 2011

Funds collected from the top 100 non-profit organizations thanks to 5 per thousand	€ 100.048.590,40
Funds collected **from the top 10 non-profit organizations** ranging from a maximum to a minimum of	€ 11.023.415,46
	€ 2.486.828,35
The organization is located at **number 22**, has collected more funds equal to a value of	€ 1.017.434,38
From position 23 up to 39 descend up to a value of	€ 515.409,09
No organization in the top 100 positions in the collection of 5 per thousand, receives donations under	€ 200.000,00

Source: Authors' elaboration

In 2011 the total of funds collected is increased. If we compare the different non profit organizations and their position in the top 100 lists we can see that 33% improve the position, but 51% worsened the position (Figure 1)
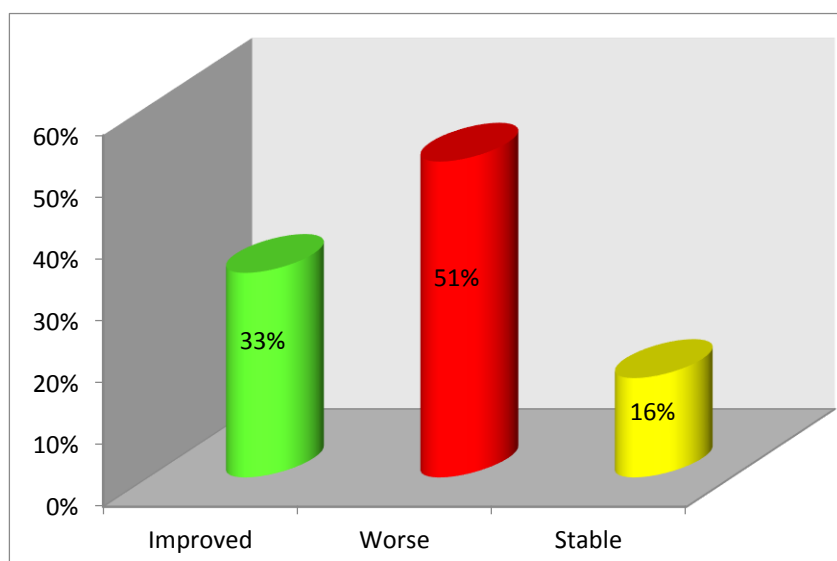
Figure 1: What non profit organizations have improved or worsened the position
Source: Authors' elaboration

In the research, for the evaluation of the transparency of non profit organizations, we have analyzed for the year 2010 e 2011 if organizations have published one kind of report on the web (Figure 2 and 3).

Presence or absence of a report

Absence
36%
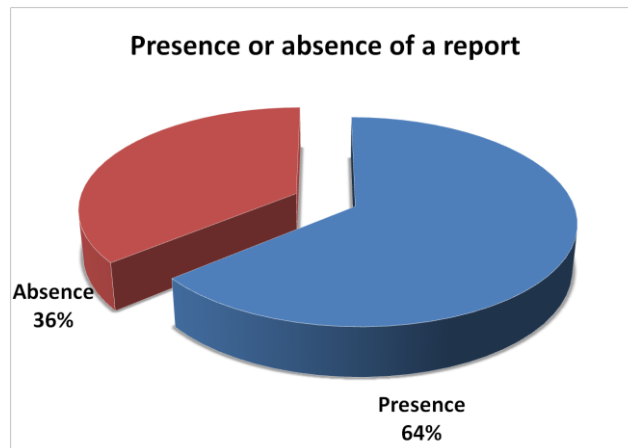
Presence
64%

Figure 2: Presence of reports 2010
Source: authors' elaboration

Presence or absence of a report

Absence
33%
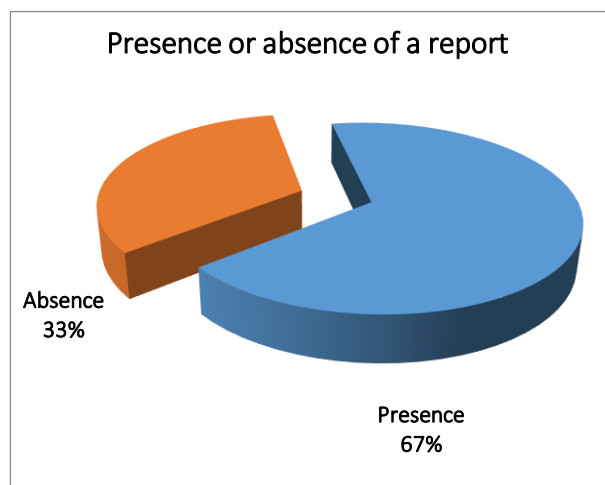
Presence
67%

Figure 3: Presence of reports 2011
Source: authors' elaboration

From 2010 to 2011 the number of Italian non profit organization, of the sample, that has a kind of report is increased: in 2010 they are 64% and in 2011 they are 67% .
Then we have divided the non profit organizations in 3 groups: non profit organizations that improve the position, that worsened the position and that have the same position. We analyze in these 3 groups the percentage of the non profit organizations that has one kind of report (Figure 4, 5 and 6).
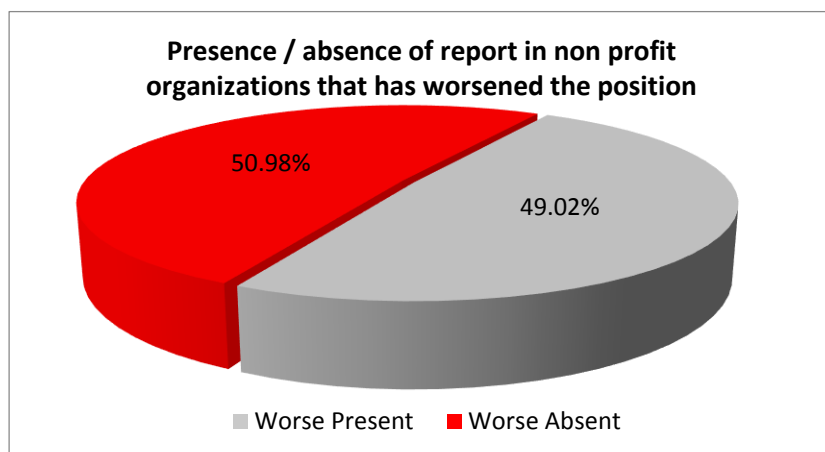
Figure 4: Presence of reports 2011
Source: Authors' elaboration
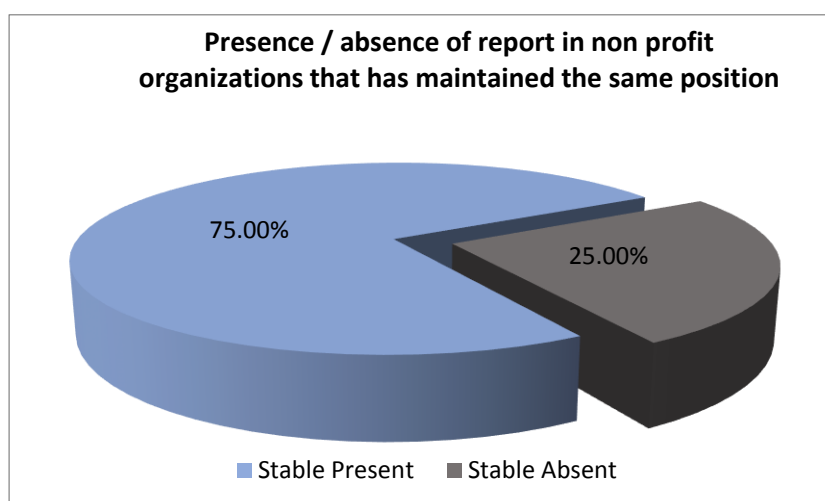
Figure 5: Presence of reports 2011
Source: Authors' elaboration

Presence / absence of report in non profit organizations that have improved the position

69.70%   30.30%

■ Improved Present   ■ Improved Absent
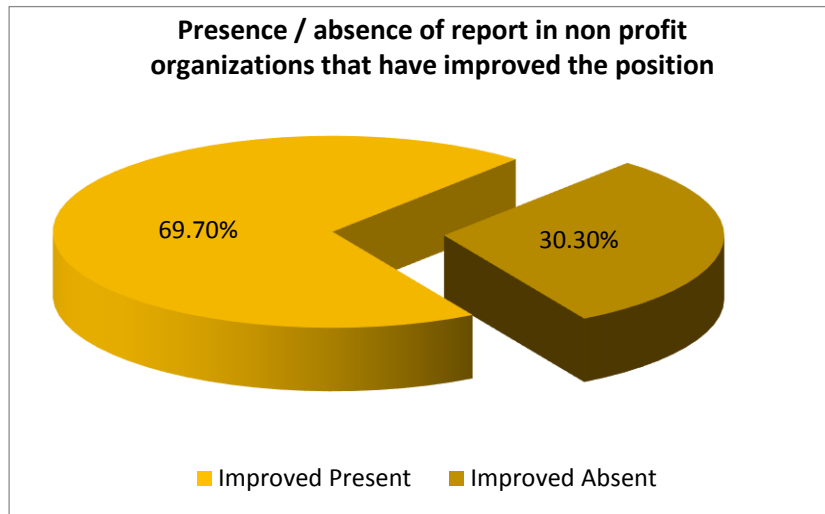
Figure 6: Presence of reports 2011
Source: Authors' elaboration

From the date it's possible to see that the non profit organizations of the second group (Figure 4), who have worsened the position, have the lowest percentage of reports.

6. Conclusion

Increased transparency on behalf of non profits and better information available on the Internet would achieve more confidence in the sector. Transparency works as a trust-building tool; the more accountable and transparent the organization becomes, the more trustworthy the organization will be viewed by the stakeholder.

Transparency involves how much the organization tells the public about itself. Increased transparency on behalf of non profits and better information available on the Internet would achieve more confidence in the sector.

The sustainability report is a perfect instrument for the transparency (GRI, 2011). Non profit sustainability reporting will attract the right talent and donors (Bolton and Guest-Jelley, 2012) save money; reduce the collective footprint and give the non profit organization greater leverage when working with big business.

Though issuing a sustainability report requires a lot of work, there is strong evidence that transparency offers a number of financial and social advantages that make it more than worth its costs. Respondents from organizations who issue a sustainability report most often identified data-related issues as among their challenges in the reporting process (Boston College Center for Corporate Citizenship and Ernst & Young 2013 survey).
The research show how it's important for a non profit organization to be accountable and transparent using sustainability report and the internet as a search tool. This study examines website material to determine levels of accountability and transparency and in the top 10 organizations, 9 have one report on the website. With the 5 per thousand non profit organizations have a responsibility to "give confidence" to donors and demonstrate that the figures have been donated a good investment of solidarity. The donors have the right to know and understand, before, during and after, the destination and the traceability

of donations; the organizational and functional reliability of the non profit organization; the value of projects to be financed and the ratio between investment donation and expected results. Sustainability report meets this needs.

7. Acknowledgements

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EURO AREA FISCAL STRUCTURES. A MULTIVARIATE ANALYSIS

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Abstract: *The European framework for fiscal policies is constructed mainly on the objective of monitoring budget balances and public debt, allowing national governments to decide on the specific fiscal policy that is more suitable to their internal context and public needs. However, for Euro Area member states this autonomy is restricted by the conditions imposed through the Stability and Growth Pact. As the recent macroeconomic dynamics underlined the necesity of improving the fiscal outcomes, the fiscal framework was updated and modified by the provisions of the new European economic governance meant to avoid unsound and unsustainable fiscal policies that could affect the stability of other Euro Area member states. The Six-Pack, the Fiscal Compact and the other conditions imposed by the reform of the fiscal governance framework are meant to ensure more discipline in drafting and executing national budgets. Even so, national authorities maintain their fiscal sovereignty and the decision regarding fiscal structures remains at their disposal, as long as the drafts are approved and the outcomes are maintained in the limits imposed through the supranational fiscal framework. Regardless of the numerous differences between member states, similar trends regarding tax mixes can be noticed in time. The objectives of this paper is to analyze fiscal structures of Euro Area member states and to determine, if any, groups with similar fiscal structures, their composition and the similarities that characterize Euro Area in this respect. In order to have a clear overview of fiscal structures within Euro Area, we analyzed data for 17 member states, for year 2012, taking into consideration total general government revenue, indirect taxation, direct taxation and social contributions. As one of the aims of this paper is to determine whether in Euro Area the main contributors are corporations or individuals, we also analyzed the structure of direct taxation, dividing it into taxes on income of corporations and taxes on income of individuals and households and other current taxes. Actual social contributions were also split into employer's actual contributions, employee's social contributions and social contributions of self- and non-employed persons. As the primary data analysis revealed many differences between Euro Area member states, but also similarities concerning various fiscal aggregates, we completed the analysis through multidimensional analysis, with the aims of classifying Euro Area member states into subgroups with similar fiscal structures. Taking into consideration the above mentioned variables, we used cluster analysis in order to determine which member states have similar fiscal structures and which are the main similarities that characterize Euro Area in this respect.*

1. Introduction
The Euro Area fiscal framework imposes few restrictions on member states regarding national budgets. Therefore, governments have a high degree of autonomy regarding

fiscal policies. The restrictions regard mainly the budget balance and public debt, as stipulated through the criteria that are meant to ensure stability and avoid the existence of unsustainable and unsound fiscal aggregates that could affect the other member states and also the stability of Euro Area as a whole. As the Stability and Growth Pact had proved to be insufficient, it was reformed and, due to the economic crisis and its effects, the Euro Area fiscal framework was updated and modified by the provisions of the European economic governance framework. The Six-Pack, the Fiscal Compact and the other conditions imposed by the reform the fiscal governance framework are meant to ensure more discipline in drafting and executing national budgets. Even so, national authorities maintain their fiscal autonomy, and therefore, the decision regarding fiscal structure remains at their disposal, as long as the outcomes are maintained in the limits imposed through the supranational fiscal framework. This context allows the existence of many differences between fiscal structures, as national budgets are constructed in every country regarding their structure, needs, taxation base and collecting capacity.

2. Primary Data Analysis
In order to have a clear overview of fiscal structures within Euro Area, we analyzed data for 17 member states, for year 2012, taking into consideration total general government revenue, indirect taxation, direct taxation and social contributions (all data are according to ESA 95, EUROSTAT database). As one of the goals of this paper is to determine whether in Euro Area the main contributors are corporations or individuals, we also analyzed the structure of direct taxation, dividing it into taxes on income of corporations, taxes on income of individuals and households and other current taxes. Actual social contributions were also split into employer's actual contributions, employee's social contributions and social contributions payable by self- and non-employed persons.
Euro Area is an area of high tax, as in average, in 2012, total revenue accounted for 46.3% GDP (Figure 1) even in the post crisis period, when economic activity registered slow and selective recovery. Five of the seventeen member states registered public revenue above Euro Area average (Austria, Belgium, France, Italy and Netherlands). The other states registered revenue below Euro Area average, among which Cyprus, Estonia, Ireland, Slovakia and Spain collected revenue that accounted for less than 40% GDP.
With total public revenue ranging form 33.2% GDP (Slovakia, 2012) to 54.4% GDP (Finland, 2012), Euro Area can be considered an area with significant fiscal difference among member states.
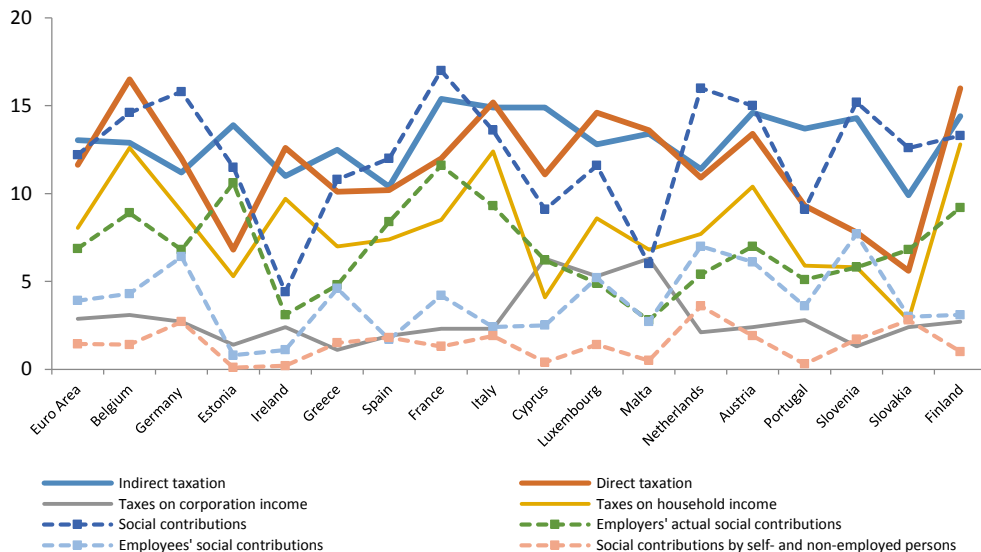
Figure 1 Fiscal revenue in Euro Area members states and Euro Area average, in 2012 (%GDP)
Source: EUROSTAT, authors' calculations

The structure of fiscal revenues and division between indirect taxation, direct taxation and social contributions differs between member states. Although most countries (Austria, France, Germany, Netherlands, Slovakia, Slovenia and Spain) rely mainly on social contributions, as the revenue collected is higher than those from the other types of taxation, the revenue collected through indirect taxation vary between 9,9% GDP to 15.4% GDP (Figure 2).
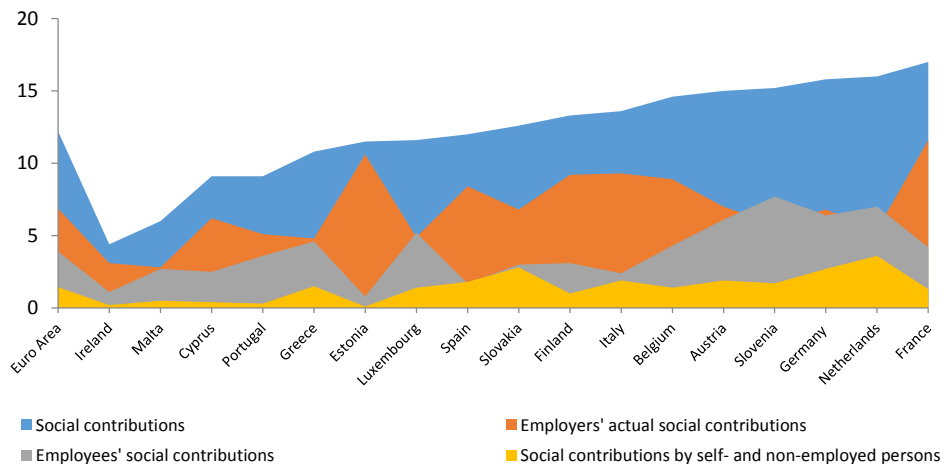
Figure 2: Social contributions and subdivisions, in Euro Area member states and Euro Area average, in 2012 (%GDP)
Source: EUROSTAT, authors' calculations

From the structure of social contributions, most revenue is collected through employers' social contributions. Even so, the differences are significant, as the percentages vary from 2.8% GDP (Malta) to 11.6% GDP (France). Only in Slovenia (5.5% GDP), Luxemburg

(5.2% GDP) and Netherlands (7.7% GDP) revenues from social contributions paid by employees' are higher than from the other two subdivisions of social contributions: employers' social contributions and social contributions paid by self-employed and non-employed.

Direct taxes are the main resource of budgetary revenue in five out of the seventeen Euro Area member states (in 2012), these being: Belgium (16.5% GDP), Ireland (12.6% GDP), Italy (15.2% GDP), Luxemburg (11.1% GDP) and Malta (14.6% GDP). Direct taxes are defined as current taxes on income, which we have divided into direct taxes payable by enterprises, taxes on individuals' and households' income, and other current taxes. Average Euro Area revenue collected through direct taxation payable by corporations as taxes on income is of 8.04% GDP, while taxes payable by individuals and households applied on their income is lower then 3% GDP (Figure 3). For most countries, direct taxation on individuals and households income is the main direct tax resource for government revenue, although revenue can vary from 2.8% GDP (Slovakia) to 12.8% GDP (Finland). In 2012, only Cyprus registered more revenue from direct taxes on income payable by corporations than revenue from direct taxes on individuals' and households' income.
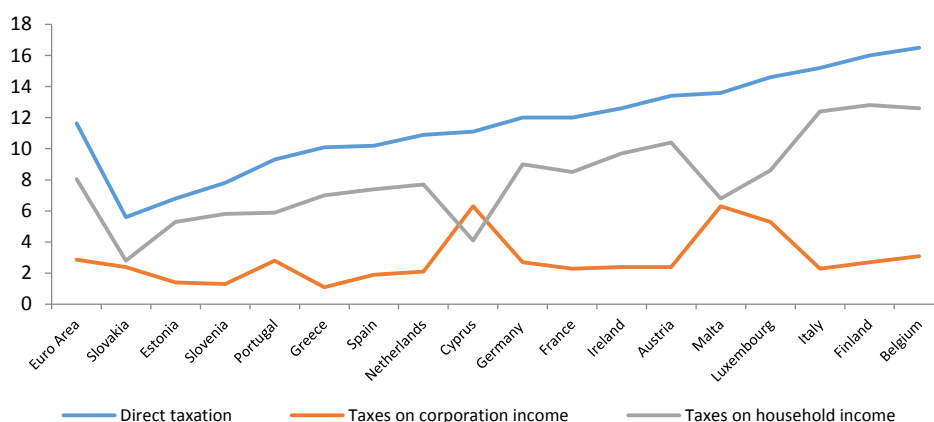
Figure 3: Direct taxation revenues, in Euro Area member states and Euro Area average, in 2012 (%GDP)
Source: EUROSTAT, own calculations

Countries that rely mainly on indirect taxation are Cyprus, Estonia, Finland, Greece and Portugal. Countries that registered indirect tax revenue above Euro Area average (13.3% GDP) are: France (15.4% GDP), Cyprus (14.9% GDP), Italy (14.9% GDP), Austria (14.6% GDP), Finland (14.4% GDP), Slovenia (14.3% GDP), Estonia (13.9% GDP), Portugal (13.4% GDP) and Malta (13.4% GDP). Although revenue collected from indirect taxation vary in Euro Area from 9.9% GDP (Slovakia) to 15.4% GDP (France), in most cases VAT type taxes remain the main resource for budgetary revenue.

3. Multidimensional Analysis

As the primary data analysis revealed many differences between Euro Area member states, but also similarities concerning various fiscal aggregates, we completed the analysis through multidimensional analysis, with the aims of classifying Euro Area member states into subgroups with similar fiscal structures. Taking into consideration indirect taxation, division of direct taxation into taxes on corporations' income, taxes on individuals' and households' income and other current taxes, and the structure of actual social contributions, employers' actual contributions, employees' social contributions and

social contributions payable by self-employed and non-employed, we used cluster analysis in order to determine which member states have similar fiscal structures.

Cluster analysis has been previously used in order to group OECD countries in accordance wit their tax systems taking into account the proportion of each type of tax in total revenue (Peters, 1991). Bernardi (2003) used a similar methodology for OECD Countries, while Kemmerling (2003) applied this procedure on European countries and obtained comparable results, regarding groups with similar fiscal structures. Delgado (2010) took into consideration fiscal pressure and tax structure in order to determine tax mix convergence within the European Union. Cluster analysis applied on fiscal pressure and division of tax structure on indirect taxation, direct taxation and social contributions was also applied for the study of fiscal convergence in the enlarged European Union (Vintila, Onofrei, Tibulca, 2014). There are also studies that differentiate from this methodology and used cluster analysis in their study of the effects of globalization on tax mixes (Kubatova, Vaneurova and Foltysava, 2008) or to determine the degree of nominal and real convergence (Miron, Dima and Paun, 2009).

Our study intends to take the analysis further, by identifying groups with similar tax structures based not only on tax revenue and main tax categories, but on their subcategories, taking into consideration the division into taxes payable by corporations and taxes payable by individuals and households. In order to achieve the before mentioned objective, we applied hierarchical cluster analysis on the above mentioned data set and decided to use the between group linkage method. We used range of solutions, from 2 to 7, as the maximum number of clusters in the literature was 6 we outreached and extended the range to 7, and measured intervals with squared Euclidian distance. The results of this exploratory analysis underlined the existence of six clusters (when deciding on the number of clusters we took into consideration the idea of greater segmentation of common features between the clusters obtained).

The cluster composition is as follows (Figure 4). Cluster 1 consists of Germany (2), Netherlands (12), Greece (5), Luxemburg (10), and Slovenia (15). Germany, Luxemburg and Slovenia are the only Euro Area countries in which social contributions payable by employees are higher than social contributions paid by employers. Clustering all the three countries in the same subgroup, underlines the criteria for grouping this way. Germany and Netherlands were grouped in the same cluster by previous analysis that took into consideration only total revenue, indirect taxation, direct taxation and social contributions (Lazar, 2012). One similar feature between the latest and Slovenia is that all three countries rely mainly on social contributions as resource for budget revenue.

Cluster 2 is specific for high fiscal burden countries and is formed of Italy (8), Austria (13), Belgium (1), Finland (17) and France (7). Taking into consideration the division of tax revenue into direct and indirect taxation, it cannot be concluded on a common structure for this cluster, as the fiscal structures are different among the participating cases. However, except indirect taxation revenue, all countries rely mainly on taxes on individuals' and households' income and on employers' actual contributions.
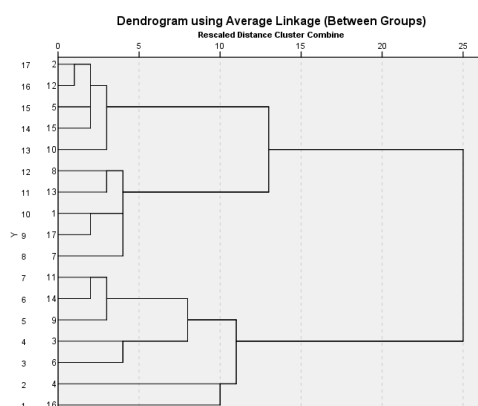
Figure 4: Dendogram output of cluster analysis
Source: Authors' calculations

Cluster 3 if formed by Malta (11), Portugal (14) and Cyprus (9). All three countries have fiscal revenue of about 35% GDP and total revenue very close to 40% GDP.

Estonia (3) and Spain (6) form the forth cluster. These are countries with fiscal burden below Euro Area average (38.1% GDP). In 2012 both countries registered fiscal revenues near 33% GDP: Estonia (32.4% GDP) and Spain (33.3% GDP).

The last two clusters consist of only one country that has features that differentiate it from the other groups. Cluster 5 consists only of Ireland (4) that has the lowest share of actual social contributions among all Euro Area member states. Cluster 6 is represented by Slovakia (6) that has the lowest fiscal burden in Euro Area, of less than 30% GDP. Slovakia registered in 2012 the lowest revenue from direct and indirect taxation, but was above Euro Area average on actual social contributions (12.6% GDP). Cluster composition obtained through hierarchical cluster analysis was similar by running k-means cluster analysis, for a number of 6 clusters, as underlined by the hierarchical analysis.

4. Conclusions

Euro Area is formed of countries with different fiscal structures that nevertheless register many similarities in terms of tax revenue. As a general trend, most countries rely mainly on VAT type taxes, rather than on other type of indirect tax.

The main direct taxes revenue is covered, in most Euro Area member states, by individuals and households as direct taxes on their income. However, employers are the main contributors to social contribution revenue, as employers pay more taxes as social contributions than their employees in most Euro Area countries.

The cluster analysis classified Euro Area member states in six subgroups, taking into consideration total revenue, indirect taxation, division of direct taxes into taxes payable by corporations on their income and taxes on individuals and households income, and division of actual social contributions into employers' social contributions, employees' social contributions and social contribution payable by self-employed and non-employed. Analyzing the clusters obtained, it can be easily noticed that the level of total revenue (%GDP) can easily explain the composition of some clusters, while in others fiscal revenue can be a common variable for the countries that form a specific cluster. While social contributions payable by employees can explain joining part of the composition of the cluster, the division into income taxes payable by corporations and taxes payable by individuals did not play an obvious role in grouping countries based in a higher extend on this criteria.

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TRANSNATIONAL PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT IN THE SOUTH-EAST OF THE EUROPEAN UNION

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Abstract: *Sustainable development has become the development paradigm of our new era. The present paper aims to offer some considerations regarding transnational partnerships for sustainable development, focusing on the European Union countries from the South-Eastern area. The research methodology is based on the literature review of the topic, as well as a quantitative and qualitative analysis. Working in transnational partnerships has been seen as a way of adrressing complex issues, such as sustainable development. These kind of partnerships are voluntary, multi-stakeholder initiatives specifically linked to the implementation of globally agreed commitments, facilitating and strengthening the process towards sustainable development. The investigated EU countries from the South-East Europe demonstrate strong commitment for being part in transnational partnerships for sustainable development from different perspectives: the significant number of transnational partnerships and the great number of partners in each partnership coming from widespread areas, the wide variety of the approached topics directly connected to sustainable development and the types of organizations involved as partners. The merit of this paper, in spite of some limitations, is to contribute with an original research regarding transnational partnership for sustainable development, setting a focus point on the way to further research.*

1. Introduction

Sustainable development is a landmark in the changing world we live in. The concept has evolved into a multi-dimensional comprehensive one, a subject of interest at all levels. Sustainable development is today more than a supreme and generalized objective, it is a global strategy, a principle of living. Worldwide, organizations, countries and institutions are striving to think and act accordingly.

Within this context, the paper aims to to offer some considerations regarding transnational partnerships for sustainable development, focusing on the European Union countries from the South-East area. The research methodology is based on literature review, using bibliographic resources (e.g. books, studies and articles, official documents - strategies and reports), as well as on a quantitative and qualitative analysis relevant for the topic.

2. Sustainable Development Approaches from the Perspective of Transnational Partnerships

Researchers and policy makers show great interest for the study of sustainable development, which has been the subject of worldwide debates since the concept of sustainable development appeared in the '70, first interpreted by the members of The

Club of Rome (Meadows et al., 1972). Society makes a common effort to find, offer and implement the right solutions for that kind of development "that meets the needs of the present without compromising the ability of future generations to meet their own needs", as stated by the definition given by the Brundtland Commission (WCSD, 1987).

Besides economic development and environmental protection, sustainable development also focuses on the commitment to advancing human well-being and life quality in a society socially acceptable, economically viable and environmentally sustainable. This kind of development is constrained by the fact that it should take place within the ecological limits of the planet.

Sustainable development has received a global political dimension, starting with Agenda 21 in 1992, an action plan for sustainable development, followed by other initiatives such as UN Millennium Development Goals, adopted in 2002 and revised in 2012 at the Earth Summits.

Current debates speak about the importance of interconnections and interdependences, about an integrated approach and coordination between institutions and organizations at different levels. Within this context, cooperation is crucial for improving sustainable development outcomes, therefore working in partnership has become commonplace as a way of addressing such complex issues.

Partnership has been defined in many different ways in different contexts. According to Syed et. al. (2012), partners look for mutual benefits, including two-way flow of energies, expertise and knowledge to justify investment. Partnerships involve organisations making a commitment to work together on something that concerns both, developing a common sense of purpose and agenda and generating joint action towards agreed targets (The Health Education Board for Scotland, 2001).

Mostly, we are interested in partnerships for development. Picciotto (2004) speaks about the key features of a partnership for international development: "Partnership is a means to an end – a collaborative relationship toward mutually agreed objectives involving shared responsibility for outcomes, distinct accountabilities andreciprocal obligations. Where there is no common vision of what the partnership is about, no mutual stake in the outcome, lack of clarity in task allocations, or imbalance in influence and unfairness in allocation of costs and benefits, the partnership is hollow." Partnership can be considered a collaborative relationship between entities to work toward shared objectives through a mutually agreed division of labor, aims to take advantage of what the recipient, as well as the donor can bring (Axelrod, 2004). Partnerships can be found under different forms of collaborative arrangements, such as consortia, alliances, joint ventures, roundtable, networks and associations (Lawrence et al., 2002); however, no matter of their form, partnerships mean inter-organizational structures where resources, power, and authority are shared and where people are brought together to achieve common goals that could not be accomplished by a single individual or organization independently (Kitzi, 2002). Mattessich et al. (2001) state that "collaboration is a mutually beneficial and well-defined relationship entered into by two or more organizations to achieve common goals. The relationship includes a commitment to mutual relationships and goals; a jointly developed structure and shared responsibility; mutual authority and accountability for success; and sharing of resources and rewards."

In terms of sustainable development issues, partnerships are considered one of the most participatory and effective mechanisms to implement sustainable development and enhance international cooperation. They have a special character as they are voluntary, multi-stakeholder initiatives specifically linked to the implementation of globally agreed commitments. These partnerships are not a substitute for government responsibilities and commitments; they rather intend to facilitate, strengthen and expedite implementation by involving those relevant stakeholders that can make a contribution to sustainable development.

The European Union, one of the world key players, has become preoccupied with sustainable development issues and adopted in 2001 its first Strategy of Sustainable Development (European Commission), stating that sustainable development is one of its major political objectives. The strategy was revised in 2005 and 2009 for a unitary and coherent strategic vision, completing The Lisbon Strategy and aiming to become a catalyst for changing the behaviour of the European society towards sustainability. The EU has made a good start in applying the principles of sustainable development, but increased efforts are needed to put Europe on a sustainable path. This requires a strategy with a stronger focus, a clearer division of responsibilities, wider ownership and broader support, a stronger integration of the international dimension and more effective implementation and monitoring. As sustainable development is a purpose overlapping national dimentions, all member states, governments, businesses, NGOs and citizens are called to become more involved and to participate together through different forms of collaboration to attain sustainable development objectives. (European Comision, 2006). Therefore, partnership is seen as the key to success. Transnational partnerships for sustainable development aim to improve the territorial, economic and social integration process and to contribute to cohesion, stability and competitiveness.

3. Transnational Partnerships for Sustainable Development: Empirical Evidence from South-Eastern European Countries

3.1. Research Methodology
In order to establish the research group, we refer to South East Europe Transnational Cooperation Programme, which is part of the European Territorial Cooperation objective of EU Regional Policy and has as main objective the sustainable and balanced development of the European territory. We conduct our research on a selected group of countries which are considered eligible within this programme, establishing two criteria: to be an EU member state and to participate in the programme with the whole territory. Hence, our research group includes eight countries: Austria, Bulgaria, Croatia, Greece, Hungary, Romania, Slovakia and Slovenia.

All these countries, as member states, have the obligation to adhere to and to respect EU commitments for sustainable development. Moreover, for each investigated country sustainable development is a perspective of the national becoming and each country has its own strategy of sustainable development. In order to get a general imagine of the selected countries' performance in terms of sustainable development, we present in Table no.1 the counties' EU ranking according to Human Development Index (UNDP, 2013), Environmental Performance Index (Yale University and Columbia University, 2012) and Sustainable Society Index (Sustainable Society Foundation, 2012), three indexes considered among the most relevant in terms of measuring sustainable development.

Table 1: Selected Countries Ranking in EU according to HDI, EPI and SSI

Country	HDI 2013 / score/ EU ranking	EPI 2012/ score/ EU ranking	SSI 2012/ score/ EU ranking
Austria (AU)	0.895 / 7th	68.92 / 4th	6.56/ 2nd
Bulgaria (BG)	0.782 / 28th	56.28 / 25th	5.13 / 21st
Croatia (CR)	0.805 / 26th	64.16 / 14th	5.55 / 11th
Greece (GR)	0.860 / 16th	60.04 / 20th	4.32 / 26th
Hungary (HU)	0.831 / 21st	57.12 / 24th	5.29 / 18th
Romania (RO)	0.786/ 27th	48.34 / 28th	5.48 / 15th
Slovakia (SK)	0.840 / 20th	66.62 / 9th	6.01 / 6th
Slovenia (SL)	0.892 / 10th	62.65 / 18th	6.12 / 4th

We note that none of the countries has the same position in each of the 3 rankings, moreover, the position of each country in the rankings differs substantially; this fact may be considered quite interesting taking into consideration that each index aims to measure the same phenomenon, that of sustainable development. From the selected countries, we could appreciate that best performers are Austria and Slovenia, while the last positions are occupied by Romania and Bulgaria. A possible explanation could be related to the fact that countries better performing have a longer experience and have been preoccupied with sustainable development issues for a longer time, whereas the others are rather new in the field.

In terms of each country's involvement in transnational partnerships for sustainable development, we start with a quantitative analysis, considering the number of transnational projects for sustainable development that each country is part, followed by a qualitative analysis of the projects.

For our analysis we use two databases of transnational partnerships for sustainable development: one of the South East Europe Transnational Cooperation Programme (SEETCP) and one provided by CORDIS referring to R&D projects within FP7. The analysis period is set for a 7-year interval, between 2007 and 2013. From the database of SEETCP we refer to the transnational partnerships from two of the four priority axis, namely Protection and improvement of the environment and development of transnational synergies for sustainable growth areas, as they both approach issues concerning sustainable development. From the CORDIS database of transnational projects financed within FP7 we refer to those having as subject sustainable development. We have to take into consideration a limitation of our research determined by the fact there here might also be other transnational projects for sustainable development we did not consider due to lack of a integrated coherent database including all EU partnership projects in the field of sustainable development or because their subject does not does not explicitly refer to sustainable development, but they refer to topics connected to sustainable development.

3. 2. Research results

We present as follows in Table no. 2 the number of transnational partnerships for sustainable development in which each of the selected countries is a partner, whether it is the lead partner or a project partner.

Table no. 2 Number of transnational partnerships for sustainable development in the selected countries

Programme	AU	BG	CR	GR	HU	RO	SK	SL
SEE – Transnational Cooperation Programme Development of transnational synergies for sustainable growth areas	16	25	15	25	25	28	12	22
SEE – Transnational Cooperation Programme Protection and Improvement of the Environment	25	27	24	24	27	31	12	21
FP7 - Sustainable Development	17	8	3	12	14	4	5	10
Total	58	60	42	61	66	63	29	53

The total number of transnational partnerships for sustainable development of the selected countries range from Slovakia (29) to Hungary (66): Romania, Greece, Bulgaria, Austria and even Slovenia are close to the highest value, while Cratioa is closer to the lowest value. Overall, we can consider that these figures prove a strong commitment to be part of a transnational partnerships.

These partnerships cover a wide range of topics, presented as follows in an aleatory order: management of natural assets and protected areas, biodiversity, integrated water ecosystems, flood risk prevention, prevention of environmental risks, energy and resources efficiency, promoting a balanced pattern of attractive and accessible growth areas, promoting the use of cultural values for development, tackling crucial problems affecting metropolitan areas and regional systems of settlements, sustainable transport, sustainable production and consumption, sustainable agriculture, civil society for sustainability. This variety of topics shows that sustainable development is a very complex issue, which must be addressed from different perspectives.

Another interesting aspect of our analysis refers to the types of organizations from the selected countries which got involved in these transnational partnerships. We note that, in the same way, many different types of organizations are present in these projects, such as: ministries, other governmental institutions, municipalities, universities, public or private companies, research institutes, NGOs, demonstrating that society, as a whole is preoccupies with sustainable development issues. We also note that each partnership includes at least 5 partners, sometimes reaching about 25 partners or even more, coming from different countries, not only from the analyses region, not only member states. This great diversity, regarding the topics, the number of partners, the types of organizations and the multitude of regions and countries they come from, is the premise of successful stories.

For exemplification, we choose to present as follows a couple of transnational partnerships randomly considered, so that each investigated country is the lead partner (Croatia is not present among lead partners in any of the investigated project databases.).

Table no. 3 Exemplification of transnational partnerships for sustainable development

Partnership Lead Partner/ Project partners	Area of interven- tion	Project tile	Project objective	Value (mill. Euro)
Austria/ Belgium Germany, France, Turkey, Ukraine	Sustainable transport	LOG4-GREEN	To boost the regional competitiveness and growth in six European regions; Logistics clusters of these regions have joined forces to elaborate and to start the implementation of a Joint Action Plan.	2,8
Bulgaria/ **Croatia, Greece**, Italy, **Romania, Slovenia**	Energy and resources efficiency	Envision 2020	To analyze the energy sector and the consumption of energy resources in partner countries; To identify the technologies to be used to promote energy efficiency, To identify and develop	1,4

			new innovative financial instruments, To identify road maps and strategies shared by all the City partners involved.	
Greece/ **Bulgaria, Croatia, Hungary**, Italy, Rep. of Moldova, **Romania, Slovenia**	Promote the use of cultural values for development	SAGITTA -RIUS	To manage heritage assets and safeguard cultural diversity; to mitigate the protection/use conflict; to develop and transfer a practise-validated toolkit to unlock and communicate cultural values; and to improve access to heritage for all.	2,49
Hungary/ Albania, **Austria**, Bosnia and Herzegovin, **Bulgaria, Croatia, Romania,** Serbia, **Slovakia, Slovenia**	Prevention of environment al risks	SEERISK	To develop a common methodology for the assessment of climate change related natural hazards and risks; it enhances the awareness of local populations and the efficiency of disaster preparedness.	1.97
Romania/ Austria, Czech Rep., **Hungary,** Italy, Poland, Serbia, **Slovakia**, Ukraine	Cooperation in management of natural assets and protected areas	BIOREGIO Carpathia ns	To contribute to the sustainable development and improved environmental quality in the SEE area by developing a SEE marine and river integrated real-time system for monitoring the transportation of dangerous goods, focused on improving maritime and river safety.	2,19
Slovakia/ **Bulgaria, Croatia, Hungary,** Republic of Moldova, **Romania,** Serbia, Ukraine	Prevention of environment al risks	Donaureg ionen+	To describe the potential of the middle a lower part of the Danube and its importance for the Europe as important development corridor, to elaborate the Joint Donauregionen Development Strategy, considering the scenarios of the ESDP for this part of Europe.	2,08
Slovenia/ Romania, Slovacia,	Tackle problems affecting	ViTo	To promote transnational urban governance structures and	2,3

Hungary, Italy, Greece, Rep. Of Moldavia	metropolitan areas and regional systems of settlements		implementing pilot measures to have visible results that improve the attractiveness of towns to foster their economic development in SEE.	

4. Conclusion

Transnational partnerships are considered one of the most participatory and effective mechanisms to implement sustainable development and enhance international cooperation offering a stronger focus, a clearer division of responsibilities, a wider and broader support, a stronger integration of the international dimension and more effective implementation and monitoring procedures.

Our research on a group of eight EU member states from the South-East Europe highlights their strong comittment to be partners in transnational partnerships for sustainable development. Different kind of organizations (e.g. ministries, other governmental institutions, municipalities, universities, public or private companies, research institutes, NGOs) are involved a significant number of transnational projects (partnerships) covering a wide range of topics directly related to sustainable development, such as: management of natural assets and protected areas, biodiversity, prevention of environmental risks, energy and resources efficiency, promoting a balanced pattern of attractive and accessible growth areas, promoting the use of cultural values for development, tackling crucial problems affecting metropolitan areas and regional systems of settlements, sustainable transport, sustainable production and consumption, sustainable agriculture, civil society for sustainability. Each partnership includes at least 5 partners, sometimes reaching about 25 partners or even more, coming from different regions, countries and areas. This great diversity in terms of approached topics, number of partners and types of organizations (partners) is the premise of successful stories.

The merit of this paper, in spite of some limitations previously mentioned, is to contribute with an original research regarding transnational partnership for sustainable development, setting a focus point on the way to further research.

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THE COMPETITIVENESS FACTORS OF INDUSTRIAL PARKS

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Abstract:
2013 Romania shows the bigger economic development than in the last years and increases the GDP by 3,5%, that was the most significant growth in the EU. The biggest contributing sector to this expansion is the industry. This sector contributed the most with 2,3% to this growth. The importance of the industry in a country's development not only the Romania`s case, but for other economies too. More and more authors emphasise the importance of Industrial parks, they act as pull factors. The effects of the industrial placements like the industrial parks are multiple regarding a region's development and competitiveness. The most of these benefits are well known already, but the competitiveness of the industrial parks is not a frequent theme, tough this will contribute to the competitiveness of the region. What are the basic and decisive factors that influence the final decision of the companies to choose a particular industrial park? While analysing the competitiveness factors of industrial parks I intend to emphasize the reasons and factors that influences companies in their decision to appear in the industrial parks that they are resident in. The purpose of this paper is to present all the important factors in the same place that make an industrial park competitive. First I want to present the factors that were identified by now based on theoretical, and practical experiences starting from some second hand information. The caracteristics of the successful parks will br presented with the well-kown examples, and also with caese not known to everybody. Some of the reasons why industrial companies chooses a park are well kown, for example the placement, the good accesibility, for which is essential a good infrastructure. Another decisive factor is the suport of the state and the local autorities, the most important factors are tax and other costs relief. There are more things that influance companies in choosing their sites.

Keywords: industrial park; competitiveness; competitiveness factor; industrial parks competitiveness

JEL classification:

1. Introduction
In 2013 Romania shows the biggest economic development in the last years and increases the GDP by 3,5%, achieving the most significant growth in the EU. The biggest contributing sector to this expansion is the industry. This sector contributed the most with 2,3% to this growth. The industrial sectors share in the GDP increases constantly in the last 5 years untill it reaches 30% in 2013. The growth in this sector was 8,1% in the last year, after the 3,1% expand in 2012.
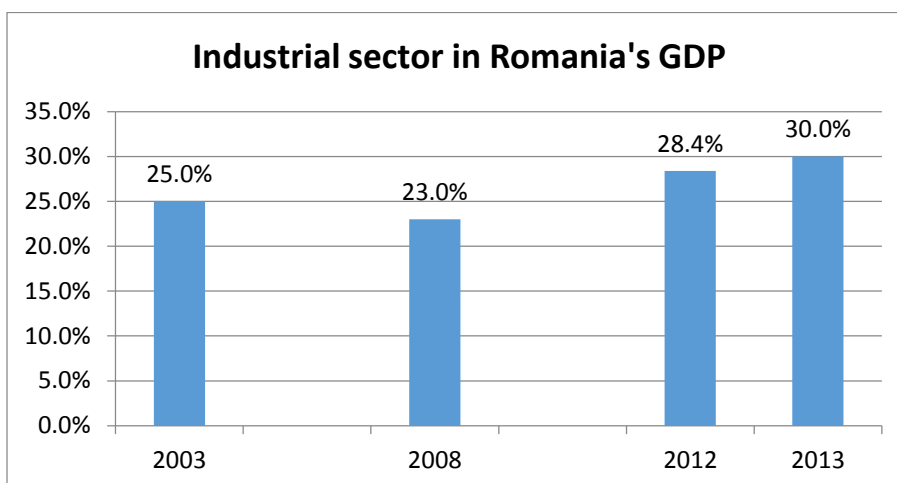
Figure 1: The share of the Industrial sector in the Romanian total GDP
Source: INS, National Statistic institute

Because the significant contribution of the industry in the Romanian and other countries economy, we can't neglect this sector and the role of the industrial parks.

More and more authors emphasise the importance of Industrial parks, they act as pull factor. The effects of the industrial placements like industrial parks are multiple regarding a region's development and competitiveness. The most of these benefits are well known already starting from creating new jobs, trough increasing incomes with the development of the local economy and the attractiveness of the region due to a better business environment. Regions with an increased industrial activity will "feed" the national development too. The relationship between the industrial parks and the competitiveness of regions with such placements is evident today proven by many authors in several works. But the competitiveness of the industrial parks is not a frequent theme, although this will contribute to the competitiveness of the region. What are the factors and conditions that are influencing the number of the settled companies in these industrial estates? What are the basic and decisive characteristics that contributes to the final decision to choose a particular industrial park?

2. Industrial parks concept

In this paper I use the industrial park in a wide interpretation, as a concept that defines generally a zone that is marked out for the purpose of industrial activities. In some cases such areas can be scientific or technological parks with a more specific industrial activity and specific tenants. The objective of the paper is to identify the factors that make attractive a region or industrial park for an industrial investor.

At this point I consider that is important to make a note regarding the investors and their objectives for the establishment on industrial areas, because depending on their expectations can differ this objectives. An enterprise with R+D activities in the region has different needs and seeks other conditions than a company without this division in the industrial park. In many cases the R+D function remains at the parent company or headquarter. Exemplary for this can be the case of the Nokia in Cluj Napoca, where the Finnish company just explored the accorded tax reliefs and benefits and then they seek another region for other benefits. Nokia's plans were just for short term, therefore they came to Cluj Napoca with basic production activities. Companies with long term plans in a region will plant R+D divisions too on the new location and their decision factors are more complex.

3. Industrial parks competitiveness – the theory

To present the factors that make competitive a region or an industrial park I will present some theoretical aspects and then I complete these with other incentive factors presented trough examples and cases.

The settlement decisions according to Lengyel-Rechnitzer are the followings:

1. Transportation facilities
2. Raw materials
3. Markets
4. Workforce
5. Extern effects (a: urbanization advantages; b:local advantages)
6. Energy
7. Social infrastructure (a: social capital (in people, in social groups); b: fizical capital (roads, buildings)
8. capital (a: technical; b financial)
9. Land/buildings
10. Environment
11. Governance politics *(Lengyel-Rechnitzer, 2004)*

Another point of view regarding the most important characteristics of the industrial parks is the Cabral Dahab science park management paradigm.

A science park must:

1. Have access to qualified research and development personnel in the areas of knowledge in which the park has its identity.
2. Be able to a market its high valued products and services.
3. Have the capability to provide marketing expertise and managerial skills to firms, particularly SMEs, lacking such a resource.
4. Be inserted in a society that allows for the protection of product or process secrets, via patents, security or any other means.
5. Be able to select or reject which firms enter the park. The firm's business plan is expected to be coherent with the science park identity.
6. Have a clear identity, quite often expressed symbolically, as the park's name choice, its logo or the management discourse.
7. Have a management with established or recognised expertise in financial matters, and which has presented long term economic development plans.
8. Have the backing of powerful, dynamic and stable economic actors, such as a funding agency, political institution or local university.
9. Include in its management an active person of vision, with power of decision and with high and visible profile, who is perceived by relevant actors in society as embodying the interface between academia and industry, long-term plans and good management.

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10. Include a prominent percentage of consultancy firms, as well as technical service firms, including laboratories and quality control firms. (Cabral, 1998)

4. Industrial parks competitiveness – through cases

We can see that there are some common points in these two approaches, for example the market that is an important factor for a firm that seeks not just good location, tax relief and cheap labor force, but also new markets for their products. This is another competitiveness factor for China and their industrial parks.

Vápár in his 2011 paper uses a more structured approach regarding the factors that determine the companies site choosing decision. The factors are distributed in two categories: hard and soft factors. Hard factors are those characteristics, that are measurable usually the local economy, labour force, infrastructure – including traffic, telecommunication, and power-supply. The soft factors do not refer directly to economy, they are rather social, cultural factors, but they influence altogether the site choosing decision (and there are the corporate and the human factors). I will use this categorization. The importance of this method of distribution of the factors is used in the Western-European countries, because beside the hard factors (which are well known) the soft ones are getting more and more used, and in my opinion too these factors are important and largely define the industrial parks competitiveness.

4.1 Hard factors

Infrastructure is one of the key elements for the companies when they choose location for their new divisions. One of the most controversial example for the importance of this factor is the case of the Mercedes with Romania and Hungary. Mercedes was searching a site in 2008 and in the final phase remains two options Romania and Poland, but Romania was the probable winner. In the last moment the company decides to move with the investment to Hungary because of Romania`s bad infrastructural conditions. The Daimler planed another investment in Cugir, Romania in 2013 and the most important request to the Romanian authorities was again regarding the infrastructure (water and drain network and public road).

Good placement and access to transportation network. One of the Tetarom Cluj industrial park advantages is the access to European destinations trough the international airport. But for Mercedes the access to the Hungarian expressway and railway network was an important factor too.

Services in the phase of establishment and during the companies activity in the industrial park are essential.

Presence of multinational firms is important for those tenants that can be suppliers for these corporations.

The presence of potential suppliers is important for the big companies like Mercedes, who planed to work with local 130-150 suppliers. The half of the 400 ha of the Mercedes Benz Hungary's location is dedicated for their suppliers.

Costs like the energy or gas is an important hard factor. The Tetarom industrial park in Cluj owns license to energy and gas-supply, therefore they can offer a lower price, that means lower cost for the tenants.

Tax reliefs and other financial and investment discounts. This is one of the most important factors, in every case these incentives are a decisive factor. Probably that was the most important in the case of Nokia to choose Romania. The Richter- Gedeon pharmaceutical company's plant manager in Debrecen (Hungary) said in an interview for a case study, that beside other reasons this was an important motivation in choosing Debrecen as second Hungarian plant. (Szabó-Kóródi, 2013)

Free estate or reduced rent prices can help to make more competitive an industrial area, because this can be a significant part of the investment or cost during the activity.

Labor force market and the "price" of the labor force is another factor that weight much in the company's decisions. In the motivation of the Mercedes in 2008 to come to Romania, had a significant role the low salaries, but this is not the single characteristic that counts.

4.2 Soft Factors

The labor and its qualification level is very important when companies have high-tech based activity or want to build an R&D division. Regarding this approach for Richter-Gedeon was important to choose an industrial area, that is near a university that can provide specialists in their field and in the same time these institutions are knowledge centers. This is one of the condition for the tenants of scientific and tehnlogical parks. Another example to the need for qualified labor is the Oradea Industrial Park, who established new professional classes in cooperation with a high school to the requests of the Emerson. But Mercedes and Audi too chose Hungary because the good qualification of the labor.

Culture regarding the work and generally was important for the Audi, when it chose the industrial park in Győr, Hungary. The car company chose from 180 locations in 1993, and in their decision had a big influence the engineering work culture from the area. Audi's managers are satisfied with the cooperative and creative, problem solving orientation of the Hungarian people.

The support of the authorities can be more important then we think in many cases. Mercedes appreciated and was one of the decisive factors the support regarding the authority licences and permissions, the Kecskemét local authority established a separate team to help them procure all the papers. The confidential treatment and promptitude was important too.

Good communication was decisive too in the case of Mercedes, because thanks to the rapid and detailed answers and data retrieval, the company switches from Romania to Hungary in the last moment. (Vápár, 2011)

The flexibility of the board of industrial park and authorities is another appreciated and expected factor for the companies in the decision of placement.

The availability and the "quality" of authorities in many cases is more a barrier then an advantage for the tenants. Unfortunately corruption and bureaucracy in Romania is decisive in many cases for the companies who seek for industrial parks and they will choose those countries and business environments that are more transparent.

In this section we can mention another factor like the receptiveness of the town, social infrastructure or the prestige of the town or region, where the industrial park is, for example this was a reason to establish the Liberty Technology Park (a 25 million dollar private investment of the Fribourg Development) in Cluj industrial area.

5. In conclusion

Factors that are decisive in the decisions of companies to plant a new division are various. There are hard and soft characteristics, that make industrial parks competitive. Beside the hard factors, the soft ones are more and more important and can decide the battle between the different industrial areas. The paper give an overview on these factors, presents both with theoretical and empirical examples, that proves the importance of these competitiveness factors.

But we must not forget one thing, it is important to attract companies to industrial parks, but at least important is to keep them and satisfy them, because their satisfaction leads to the growths of these parks, and to the growths of the industry itself.

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REGIONAL INNOVATION POLICY AND SYSTEM - CASE OF LATVIA

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Abstract: *The increasing popularity of the concept of „regional innovation system" has been driven in part by greater international competition, lack of efficient traditional regional development models and policies in many regions around the world. The paper aims to describe situation on innovation policy and system of Latvia. The paper is organised as follows: Section 1 provides the theoretical background, summarising the understanding of the nature of regional innovation system. Then, Section 2 deals with regional innovation policy theoretical aspects. In Section 3 innovation policy of Latvia, key government players and European Regional Development Fund (ERDF) influence on innovation policy is discussed. Section 4 concludes innovation system and policy situation in Latvia. The methods used are: monographic, graphical method and case study.*

Key words: *innovation policy, regional innovation system.*

JEL classification: O2; R1.

1. Regional innovation system – different types and approaches

„Regional innovation system" is one of the most influential concepts in the development of the regional science (Cooke et al., 2000; Iammarino,2005). The concept is experiencing a rapid development since the 1990s, based on non-linear, social process, which is influenced by some of the system elements and factors (Edquist, 2005). RIS origins are found at NIS theoretical framework (Lundvall, 1992) and in principle, the RIS approach is naturally linked to a broader, more general literature on Systems of Innovation, which encompasses not only regional systems, but also national and sectoral ones (Edquist, 1997) Cooke and others (2000) define the regional innovation system as a system in which businesses and other organizations are systematically related to interactive learning in the social environment.Doloreux (2003) sets out four main elements of the RIS: companies, institutions, knowledge, infrastructure and regional innovation policies. Companies are economic agents, which are important for the innovation system, because they provide knowledge diffusion. He also concludes that the RIS approach encompasses various concepts of "industrial districts", „innovative milieu", and „learning regions" to the greatest extent. RIS can also be perceived as a transposition of a national system of innovation on the regional level.

Asheim (1998) distinguishes between three types of RIS: a) territorially embedded RIS; b) regionally networked RIS and regionalised national innovation system; c) regionalised national innovation system. He describes each of the RIS forms following: territorially embedded *IS* - firms base their innovation activity mainly on localised, inter-firm learning processes without much direct interaction with knowledge generating organisations (i.e. R&D institutes and universities). The best examples of *territorially embedded IS* are networks of SMEs in industrial districts. These territorially embedded systems provide bottom-up, network-based support through technology centres, innovation networks, or centres for real service providing market research and intelligence services. Another type of RIS is the *regionally networked IS.* The firms and organisations are also embedded in a specific region and characterised by localised, interactive learning. However, through the intentional strengthening of the region's institutional infrastructure, for example,

through a stronger, more developed role for regionally based R&D institutes, vocational training organisations and other local organisations involved in firms' innovation processes these systems have a more planned character involving public–private co-operation. The networked system is commonly regarded as the ideal-type of RIS: a regional cluster of firms surrounded by a regional 'supporting' institutional infrastructure. Cooke (1998) also calls this type 'network RIS'. The regionally networked innovation system is a result of policy intervention to increase innovation capacity and collaboration. The third main type of RIS, the *regionalised national innovation system*, differs from the two preceding types. First, parts of industry and the institutional infrastructure are more functionally integrated into national or international innovation systems,- innovation activity takes place primarily in co-operation with actors outside the region. An innovation system incorporates mainly the R&D functions of universities, research institutes and corporations. Second, the collaboration between organisations within this type of RIS conforms more closely to the linear model, as the co-operation primarily involves specific projects. Within such systems, co-operation is most likely to arise between people with the same occupational or educational background. One special example of a *regionalised national innovation system* is the clustering of R&D laboratories of large firms and/or governmental research institutes in planned „science parks".

The systems of innovation approach (Edquist, 1997, 2001) argue that innovation should be seen as an evolutionary, non-linear and interactive process, requiring intensive communication and collaboration between different actors. Interaction between agents is a necessary condition for an RIS efficient functioning. Interaction and communication has to be a process within companies as well as between firms and other organisations such as universities, innovation centres, and educational institutions, financing institutions, standard setting bodies, industry associations and government agencies. The aim of this interaction and communication is concerned with the flow of economically useful knowledge among those organisation, taking the form of learning processes that support the generation and diffusion of innovation. The „knowledge infrastructure" is mentioned organizational infrastructure that is needed to support innovation. „Knowledge infrastructure" applies for both the public and private organizations, such as knowledge parks, technology parks, technology incubators in particular industries, laboratories and similar facilities, which include innovation infrastructure. RIS is dependent not only on the amount of knowledge generated by businesses and institutions, but also on how these organizations interact with each other. Elements constitute the essence of the interaction, guiding the process of developing their own RIS system. Three important things to be noted on the RIS are as follows: first, the RIS is a social system, and secondly, it involves more interaction between participants (private and public) that occur in a systematic manner, thirdly, a systematic approach is provided to enhance the region's capacity for learning.

Autio (1998) argues the RIS system consists of two interdependent subsystems. Subsystem consists of 2 branches: the companies, their customers, suppliers and competitors, and institutional subsystem, which consists of a number of institutions (public research institutes, technology transfer contact, universities) involved in knowledge creation and diffusion process. In the ideal case, there are intensive interactive relationships within and between these subsystems facilitating a continuous flow or exchange of knowledge, resources and human capital.Economically developed regions of these two subsystems have close interactions that provides long-lasting and continuous knowledge generation, diffusion and application. Inappropriate or missing interaction or links between the different actors and organisations involved in the innovation process may constitute a major RIS deficiency. Two types of problems are common within the system's network dimension: a poor innovative performance may result from a lack of communication and cooperation between the RIS elements leading to an insufficient flow

of knowledge and technology. Too strong ties between innovation relevant organisations can lead to serious lock-in effects undermining the innovation capabilities of regional economies. Hence important is distinguish that traditional RIS approach emphasizes local factors in promoting innovation, opposite researches points to the critical knowledge from outside (Bathelt et al. 2004; Boschma, Wal, 2007). Some local companies - often leading-ones in the region - acts as a „knowledge initiators" (Owen-Smith, Powell, 2004); searches for and absorb knowledge from outside the region and county in the other RIS. If external links are poorly developed, the region suffers from a limited access to international pools of resources and knowledge. This may be critical as in most cases they have to complement the local ones.Interactive learning between the actors of the system is emphasised especially in territorially based systems of innovation (Gregersen & Johnson 1997).

The RIS efficiency may vary based on characteristics of region. Innovation systems in metropolitan regions are most likely to be different from innovation systems in rural regions having less diversified and different economic sectors. Moreover, due to regional specificity, social and cultural context, and institutional and support organizations, the RIS will differ between regions with similar economic and industrial structures. Innovation capacity therefore, unevenly distributed between disparate spatial areas. In describing the relationship between innovation performance and regions, Malecki (1997) argued that large urban areas are expected to have higher rates of innovation, more rapid adoption of innovation, and higher proportions of skilled workers than smaller places.

2. Regional innovation policy – concept and development

Regions are considered to play a crucial role in the European Research Area, bring policy measures close to the citizen, bridge the EU level and the local level.Those are important bases of economic co-ordination at the meso-level, although the level of regional administration can differ quite a lot across various countries. In varying degrees, regional governance is expressed in both private representative organisations, such as branches of industry associations and chambers of commerce, and public organisations, such as regional agencies with powers devolved from the national (or, within the European Union, supra-national) level to promote enterprise and innovation support (Asheim et al., 2003a; Cooke et al., 2000).

It makes sense to regionalize innovation policy for the following four reasons (Fritsch/Stephan, 2005): First of all, innovation processes are taking place unevenly in geographic space. This is partly due to the variety in endowment with production factors and with industrial sectors. Second, innovation networks function differently in various regions. Third, innovation activity is crucial for economic development and growth on the regional as well as on the national level. It is important to realise that economic development and growth on the two different levels might conflict. Fourth, using various policy approaches in different regions enables countries to gain much more varied experiences, thereby enabling regions to learn from one another. The identification and the localisation of relevant supporting points for leveraging the effects of public policies require an in-depth knowledge of the actors that are committed, of their history within the space considered, and of their impact in the innovation process that is at stake (Hamdouch, 2008).

In the 1990s, the concept of innovation policy has changed from a research and technology policy to a more holistic innovation policy that integrates other political sectors, such as education and competition and regulatory, regional, agricultural and foreign policies. This results from a new understanding of R&D infrastructures, changes in economy (i.e. globalisation), increasing co-operation between different sectors of the

economy, increasing role of ICT and knowledge transfer and new paradigms in economic theories (Lundvall & Borrás 1997; Biegelbauer & Borrás 2003). When knowledge creation and transfer are considered the most important devices for economic growth and well-being, creating and sustaining innovations are regarded as the keys to improved global competitiveness (Cooke 2004; Corona et al. 2006). Therefore, the role of innovation policies and, especially, the tools used to promote companies' innovation activities are emphasised. Recent theories also emphasise that companies' ability to innovate does not solely depend on the entrepreneurs, as also communities, and especially regions, have an effect on innovation processes (Corona et al. 2006). This is why the focus of innovation policies in the 1990s lay on institutions, especially on creating bridging institutions, and networks.

Lundvall and Borrás (1997: 37) define innovation policies as „elements of science, technology and industrial policy that explicitly aim at promoting the development, spread and efficient use of new products, services and processes in markets or inside private and public organisations. The main focus is on the impact on economic performance and social cohesion". The major objective of an innovation policy is to enhance the learning ability of firms, knowledge institutions and people. An innovation policy should also cope with the possible negative effects of the learning economy, such as social and regional polarisation (Lundvall & Borrás 1997: 38). However, Tödtling and Trippl (2005: 1204) state that innovation and regional policies emphasising high-tech and knowledge-based or „creative" industries are targeted at successful regions.

3. Innovation system, policy and key institutions in Latvia

3.1. National and regional innovation policy development in Latvia

Innovation policy development in Latvia started relatively late – comparing to other EU countries. In 2001 National Innovation Concept was the key original background document for innovation policy in Latvia. It defines the core concepts of „innovation", „innovation policy", national innovation system''. The need to support an innovation-friendly environment, to develop modern infrastructure across the whole country, to develop national science and research policy, technology transfer, and the necessity to develop all this within a supportive legal environment was discovered. The process of policy design in Latvia in general is becoming more structured and in line with established practices of policy making, yet proper and efficient application of the introduced tools is sometimes still questionable.

Since then innovation policy has been developed and implemented in a variety of documents and action plans with the „Entrepreneurship, Competitiveness and Innovation Promotion Programme for 2007-2013" (program). The aim of program is to promote the capacity and efficiency of the national innovation system with the main directions of activity for innovation development envisaging facilitation of knowledge and technology transfer, establishing favourable institutional environments for innovative activity, and promoting cooperation of science, education and the private sector, as well as supporting development of new products and technologies.

Since Latvia as a whole corresponds to a single NUTS 2 region there is no formal regional innovation policy in terms of the EU definition. Moreover, although there are 5 NUTS 3 regions these are statistical and not administrative entities. Accordingly, Latvia's national Innovation Strategy does not specifically separate activities into regions rather it targets the national science and research institutions, which are located in larger cities. Policy takes the form of demand-driven support to state, municipal and private businesses (wherever they are located), support measures for science research address existing

universities and science institutes. Thus there is no regional administration and no separate strategy at the regional level. One exception to this is the activity „Co-financing to the investments in micro, small and medium-sized enterprises operating in the specially assisted areas". However, this is not primarily an innovation promotion activity.

Latvian policy-making process needs significant reforms in order to promote the recovery and development of the existing innovation system due to weak results of national innovation capacity. In many cases the needed changes focus on governance or interventions that are not very expensive but that support the development of capacities and institutions needed for the future. Larger investments can initially be financed from the Structural Funds (SF) and then gradually transferred to the state budget. The primary challenge for the funding of innovation policy in Latvia is the availability of the funds. Due to the sharp decline in government funding for research and innovation in the past few years the funding of innovation has been mainly supported from the EU SF. Therefore it is highly likely that a discontinuity in funding may arise in 2014-1015 as experience shows that in Latvia each funding cycle starts with a time lag of several years.

One of the main challenges being reported during the past few years is the development of close collaboration between research and business sectors still persists since beginnings of 2000.

The innovation policy trends and cycle have been closely bound to the EU Structural Funds (SF) programming period, specifically the national innovation strategy prepared for the years 2007-2013. The action plan for the implementation of the above programme contains measures that can be described as being directed towards strengthening and generating knowledge flows among actors in the national innovation system.

In recent years, there have not been any national innovation policy discussions, though innovation policy issues have been informally discussed. Overall, the existing situation is somewhat alarming because the majority of research and innovation support measures mostly rely on available funding from the Structural Funds, which will end when the current programming round will finish at the end of 2013.

3.2. Key policy formation institutions in Latvia

According to Innovation Policy Progress report (2009) ''External assessments point to the fragmented nature of policy formulation'' and the fact that there is room for improved inter-ministerial coordination in Latvia as well as the need for a closer integration of R&D and innovation policy. While in numerical terms the number of organizations involved in the innovation governance system of Latvia seems sufficient, there is a continuous lack of a high level coordinating body in this domain.There are key governmental bodies coordinating Innovation policy development: those are 2 ministries: Ministry of Education and Science and Ministry of Economics.

The Ministry of Economics, according to author's view, plays key governance role in innovation policy process development at national level. The Ministry develops policy documents for further submission to the Cabinet of Ministers.The main implementing bodies of innovation policy in Latvia are the Latvian Investment and Development Agency, the Latvian Guarantee Agency and the Mortgage Bank of Latvia. The Latvian Guarantee Agency under the Ministry of Economics is charged with implementation of the tasks defined in the national economic policy with regard to aid provision to SMEs to help them attract new investments. The mechanisms include direct financial aid for implementation of innovative business ideas as well as credit and loan guarantees (including export promotion). In its turn, the public holding company Mortgage Bank of Latvia provides credit resources for business companies on favourable terms and various public funding schemes for start-ups. The Ministry of Economics has the Department of Business Competitiveness that includes the Division of Industry and Innovation.

The Ministry of Education and Science implement innovation policy through the national research programs and specific EU SF and other donor programs. The Ministry covers those support measures involving an R&D component, with public research organisations as the primary target group. The Ministry discharges its responsibilities and duties in the field of research and innovation through its Department of Science, Technologies and Innovation.

The Latvian Council of Science, an institution under supervision of the Ministry of Education and Science, is mandated, among other things, to enhance implementation and coordination of R&D and innovation policy.

At the parliamentary level, the main body dealing with innovation policy is the Commission on Education, Culture and Science with a sub-commission on the Steering of the National Development Plan (NDP). On the political level, the Prime Minister's Cross-departmental Coordination centre coordinates the national development planning, starting from January 2012. Several advisory bodies, such as the Latvian Academy of Sciences, the Commission of Strategic Analysis (under the supervision of the President of Latvia), the Employers' Confederation of Latvia and the Latvian Chamber of Commerce and Industry, exert an influence on policy-making by means of both proactively approaching the policymakers and providing their input on the process of public consultation. No new committees or advisory bodies have been set up during the reporting period specifically to monitor and advise policy-makers on innovation.

The role of State Regional Development Agency (STDA) in innovation process fostering formally is active, but as far agency executes activities of Ministry of Environmental Protection and Regional Development than there are usually other priorities; agency concentrates mainly on development and coordination of work of municipalities with less attention on regional innovation fostering. Some changes are in process at the moment (2012) within Ministry, as for next programming period it works on new policy guidelines with development of approach and concentrating efforts to boost regional innovation.

Parliamanet (Commision of Education, Science and Culture)

Advisory bodies

Cabinet of Ministers

Cross-departamental Coordination CEnter

Ministry of Science and Education

Ministry of Economics

Ministry of Environmental Protection and Regional Development

Other ministries

State Education Development Agency

State Investement and Development Agency

Guarantee Agency

State Regional Development Agency

Figure 1. The institutional framework for innovation policy.

Source: Authors' own interpretation.

To summarize, innovation policy formation model - the missing point is the close cooperation in between Ministries and coherent actions.

3.3 Role of ERDF at innovation policy support

The ERDF is pivotal to the implementation of innovation policy in Latvia as it focuses on support in Latvia innovation and its commercialisation. The Operational Programme 'Entrepreneurship and Innovation' (OP2) contains most of the innovation support measures co-financed by the structural funds in Latvia (71%) with OP3 'Infrastructure and services' providing another 17%, so that ERDF funding accounts for about 88% of the funding of innovation support measures. OP2 has three priorities within which the key broad measures that include innovation activities are: measure 2.1.1 „Science, research and development", measure 2.1.2 „Innovations", measure 2.2.1 „Accessibility of financial resources", measure 2.3.1 „Business support activities" and measure 2.3.2 „Business infrastructure and improvements to equipment". The first is aimed at research institutions and the biggest funding goes towards development and improvement of research infrastructure (EUR 146 million). Direct measures take two forms: grants aimed at supporting new businesses, product development and promotion of high value added activities and financial instruments such as loans, guarantees and equity support for the

development of enterprise competitiveness and higher risk activities. Financial instruments for enterprises seeking to improve their competitiveness have been allocated about 33% of OP2 innovation intervention funding (EUR 217 million); improving science research infrastructure and quality 25% (EUR 168 million) and support to enterprises for the creation, production, and sales of innovative technologies and products 22% (EUR 146 million); the formation of business incubators and technology competence centres and financing for SMEs in under-developed regions 13% (EUR 86 million). Some of these measures, e.g. risk capital and support for new products, are successors to 2004-2006 programmes.

Boosting applied research capacity and innovation capability with EUR 550 million or 67% of the allocated funding from a total of EUR 821 million, is the policy area that receives the largest funding. The idea is to enhance the capability of research institutions to generate new science and new technologies. Research institutions will receive ERDF support for their physical infrastructure, such as buildings, laboratories and equipment, and also for Expert Evaluation Network. The aim is to increase the commercialisation of the research output of both the public and private sector actors. Within this broad policy area a second focus is on supporting investment in technology-intensive firms which demonstrate innovation in the commercialisation of new technologies. Innovative SMEs and entrepreneurs will be able to access selected measures of support. This is expected to encourage further innovation and technology commercialisation, in anticipation of broadening the base of home-grown technology-intensive firms in Latvia in the long run.ERDF support will also be applied to creating an innovation-friendly environment, with EUR 161 million (20%) of the total budget. Key policy measures include upgrading broadband infrastructure throughout Latvia to access the latest information and communication technologies such as broadband internet, 3G/4G wireless networks and public access to networked computers and public databases. In addition to physical ICT infrastructure, a variety of value-adding services will be developed further such as e-health, e-government, e-learning and e-inclusion. The third focus of ERDF support is to improve knowledge transfer related to innovation nationally and internationally. EUR 110 million (13%) has been allocated for the process. These measures are intended to help develop effective technology transfer centres and cooperation networks operating to improve the commercialisation of research. Technology transfer will be implemented together with research institutions and existing local or foreign technology firms as partners, or in new SMEs as high-growth businesses for commercialising new technologies.

Conclusions

1. Regional innovation concept has significant role in regional science and different classification approach exists. Besides that it is argued that RIS efficiency vary based on characteristics of region and is affected not only by economical, by also by social and cultural context.

2. European Research Area puts efforts to develop meso-level or in other words - „region".

3. In Latvia, institutional framework of innovation support system is concentrated on 2 directions, based on approaches of Ministry of Economics and Ministry of Education and Science. Even there are efforts to create sustainable innovation support infrastructure, lack of cooperation between ministries indicates on critical need initiate programs and tools to support industry and academia research.

4. There is lack of coordinated regional innovation policy and Ministry of Environmental protection and regional development concentrates on municipalities' development, but so far had no interest in forming regional innovation support policy.

5. Latvian policy making process needs significant improvements in order to promote the recovery and development of existing innovation system.

6. The funding of innovation system in Latvia, mainly supported by EU funds, which is recognised as main risk factor for long term innovation policy and system formation.

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SIGNIFICANT ASPECTS RELATED TO FINANCIAL INSTABILITY IN ROMANIA, UNDER THE CONSTRAINTS IMPOSED BY THE EUROPEAN INTEGRATION

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Abstract: *This article pertains to the series of articles related to European integration and is addressed to all who are interested in this field, particularly to those who work within public or non-governmental sectors, and who have to gain a true vision of the macroeconomic situation in its entirety. My research includes both quantitative and qualitative aspects, which are based on my own opinions. I believe the added value of my work derives from summing up the components: raising awareness on the importance of the theory of financial fragility in Romania's case, the constraints imposed by reaching the indicators related to the quantification of our country's degree of economic convergence to the Euro Zone, clearly defining the main areas of systemic risk in Romania, and the conclusions. The article begins by drawing clear delimitations on the theory of financial fragility and by understanding the definite European constraints related to entering the Euro Zone, and it continues with some elements specific to Romania. The final conclusion takes note of a significant macro systemic weakening of our country, which should be taken into account when projecting different types of national strategies.*

Keywords: *European integration, financial fragility, Romanian instability*

JEL classification: *F36, F62, G01*

1. Introduction

After World War II, the financial services sector has been developing all over the world, in parallel with the real economy (which includes material output and non-financial services). The growth of the financial sector was meant to support the general dynamics of real economy. The macroeconomic flow aimed at stimulating savings, collecting money from economic units and from the population, on one hand, and on the other hand, channeling the money for financing the economy and satisfying social needs, by ensuring the necessary cash flow and investments.

However, the growing complexity of the financial system's structure, and the multiple liberalizations that occurred after 1990, have generated multiple problems over time, especially functional ones. Left without a solution, or only partially or belatedly solved, all these issues have contributed to the growing fragility of the financial system.

On EU and, mostly, on EMU level, the financial crisis of 2008-2013 has shown serious institutional anomalies. These arise from the following well-known situation that remains still unsolved: once they joined the EMU, i.e. once they gave up on their national currency and adopted the euro, the 17 member countries *have relinquished their national sovereignty on monetary polic*y. Their monetary policy has been taken over by the European Central Bank. Yet, *as regards taxation and budgeting, each country has kept its sovereignty, by applying their own policies*. This duality creates systemic fragilities, by depriving both national governments and the European Commission of their financial and economic instruments that they need in order to control macroeconomic and financial balances (Iancu 2013). This new construction did not go all the way in adapting the financial mechanisms to the new requirements and in passing desirable regulations. In other words, there is still a fundamental contradiction, represented by the traditional segregation between the financial system (which is insufficiently regulated as regards the

control of speculative capital flow) and the fiscal and budgetary system. This deepens the disequilibria and the financial instability/fragility.

2. The constraints of the European integration of emerging countries and the related indicators

Right now, European integration means economic convergence, which is quantified by certain relevant macroeconomic indicators.

After the evolutions determined by the financial crisis, there was powerful criticism against the cognitive value of the five compulsory convergence criteria set by the Maastricht Treaty. The criticism was also aimed at their economic predictability for monitoring and fixing possible EU macroeconomic disequilibria. Managing concrete aspects taking place within the EU, has shown the complexity of applying the convergence criteria on specific, local cases, which occured amid an economic foundation that was weakened by the crisis.

Upon the accumulation of practical local or regional experiences during 2004-2011, within EU and EMU member states, a conclusion was reached – that the Maastricht Treaty criteria were no longer sufficient for a thorough analysis and a correct evaluation of EU macroeconomic evolutions.

Without excluding these criteria, as they are still valid, the new EU regulations on economic governance were added (the set of six regulations), on two components: fiscal and macroeconomic supervision. The *Macroeconomic Imbalance Procedure* is an instrument that helps detect and correct risky economic trends, since it is only through thorough analysis that it can be established whether there are disequilibria and whether they are harmful or not. Today, the scoreboard of the Macroeconomic imbalance procedure contains 11 real and nominal indicators: current account balance, international investment position, real effective exchange rate, shares of world export, nominal unit labour costs, deflated house prices, private sector credit flow, private sector debt, government debt, unemployment rate, financial sector liabilities.

Reaching the values set by the EU is an issue that still evolves differently from one country to another, according to multiple local asymmetries.

3. Romania and the financial fragility
The fragility of a system refers to the lack of stability of its internal components (both within their interaction, and as regards each of them taken separately), as well as the lack of general sustainability within a certain time frame, under the influence of some external factors or of some internal tensions, which determine the occurrence of vulnerabilities or disequilibria. Within this internal dynamics, we define *financial sustainability* as that distinct part of the general sustainability, which refers to the degree in which the economy can have at its disposal sufficiently diversified resources in order to ensure that all its activities are being carried on. Derived from this, *financial instability* occurs when the financial system becomes incapable of mobilizing and allocating money efficiently, thus weakening its resistance to shock, which may eventually lead to damages for the real economy.

3.1. Relevant aspects in building the theory of financial instability

G.W. Friedrich Hegel considered the premise that ideas develop within their contraries, by claiming that the entire progressive dialectical process is characterized by *instability;* it encompasses imperceptible gradual quantitative accumulations and discontinuous qualitative leaps or violent changes. K. Marx kept a part of Hegel's way of thinking, by changing idealism into dialectical materialism. A. J. Schumpeter's endeavour was based

on the model of *general equilibrium* of Leon Walras, which analyzes, through antithesis, the "circuit" and "evolution, by considering that the fundamental difference between these two notions relates to "innovation". The neoclassical economic theory meant deepening the analysis of the way the economic system functions and of the factors that influence economic adjustment, as well as researching the *sate of equilibrium* from within the economic system. Due to *the theory of economic exchange and economic balance*, A. Marshall's doctrine has developed within a presumably perfect competition environment, although he was aware of the fact that competition is frequently imperfect within real economies; without having built a fully original concept, he considered that equilibrium can be "stable". K. Wicksell's work is an important part of building the theory of financial fragility, due to the following important aspects arising from it: the active role of banks in the functioning of any economy (an idea which was later developed by J.M. Keynes and H. P. Minsky) and the idea of "cumulative" processes, of expansion and recession, which will later be the fundament for the notion of "spiral" evolution.

Since J.M. Keynes defines capitalism as "an economy of monetary production", his intuition is that the economy is dynamic because of banking, by analyzing the two courses of action on the interest rate: direct monetary creation and free capital flow.

In the postwar period, H.P. Minsky has associated *instability* with the result of modern financial capitalism – speculation: there is an intrinsic fundamental instability within the capitalist economy that is characterized by massive financial speculation. Thus, according to Minsky, the source of disturbance may be an increase in interest rates, discontinuance in financing, not fulfilling some obligations, a natural disaster, or other "shocks" that influence the cash inflows or outflows (global financial commitments) of an economy. Studying the hypothesis of H.P. Minsky's financial instability benefits from an essential observation: there are investment assets within any economy, whose main attraction to their holder derives from their ability to generate profit in the future. The demand for such goods will thus depend on the psychological expectations regarding this potential future income, and, obviously, these expectations may rapidly change. Consequently, when there are optimistic expectations regarding future profits, the price of investment assets will tend to increase. Investors may interpret this as a confirmation of the psychological anticipation regarding future income. This will further lead to a new increase in prices, in a continuous spiral. Minsky's theory introduces an essential element which generates instability: *financial intermediation done by banks,* the first step towards a financialization process, which has become more and more complex and ramified during the last 20 years. This complexity has lead to an increase in interconnectivity and in the risk of multiple contaminations, amid systems weakened by the crisis.

3.2. Instability characteristics of the current Romanian economy

Through a multifactor accumulation during 2007-2013, Romania confirms three hypotheses of financial fragility:

3.2.1. Systematic indebtedness, the most risky type of financing for the real sector. This was the general characteristic of the evolution of the Romanian economic macrosystem, especially during 2007-2011. Considering the continuous increase in in the loans granted to the private sector, the economy has gone through a continuous phase (ascending trend) of accumulating debt (indebtedness) (figure 1).

Evolution of total loans volume for Romanian economy (thousands lei)

$$y = 50270x - 2E+09$$
$$R^2 = 0.7167$$
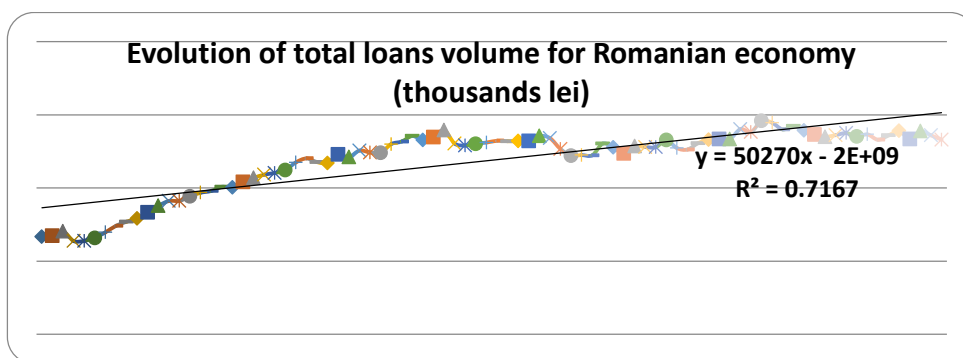
Figure 1

Author's processing after Romanian National Bank data, extracted on February 2014, online

http://www.bnro.ro/Raport-statistic-606.aspx

Of course, not any type of loan produces distrurbances; a thorough analysis is essential for determining the depth of the minskyian process. In Romania, considering each component, the internal lending has evolved as follows:

3.2.1.1. Lending to householders. Over-indebtedness of the population has reached alarming numbers: in 2013, 4.5 million individuals (around 50% of Romania's active population) had taken out around 6 million loans (figure 2). Loans in foreign currency was consistently higher than loans in lei, which is an important fragilizing systemic risk, due to exchange rate risk.

Legend:
- Loans granted to the householders in other currencies
- Loans granted to the householders in EURO
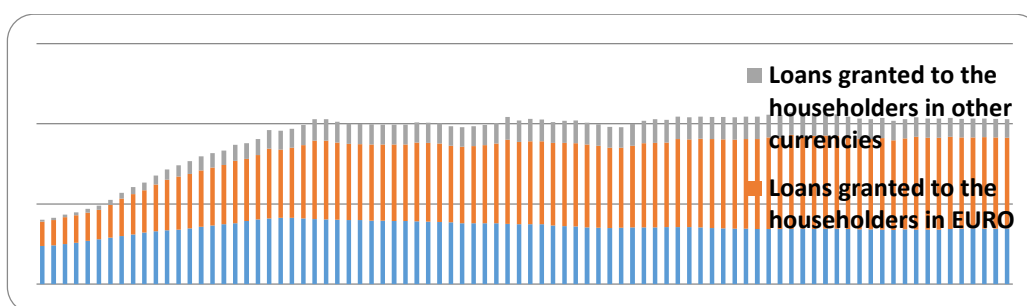
Figure 2
Author's processing after Romanian National Bank data, extracted on February 2014, online
http://www.bnro.ro/Raport-statistic-606.aspx

The volume of loans granted to the population for buying homes has increased by 85% between February 2009 and September 2013. Apart from that, since such loans are granted for long term (20-30 years), they attract additional systemic risks, related to finalizing the loan contracts in good order, without any reimbursement incidents during all those years of being carried out. On the other hand, consumption loans have decreased in volume by 29,6% in December 2013, as opposed to February 2009 (figure 3).
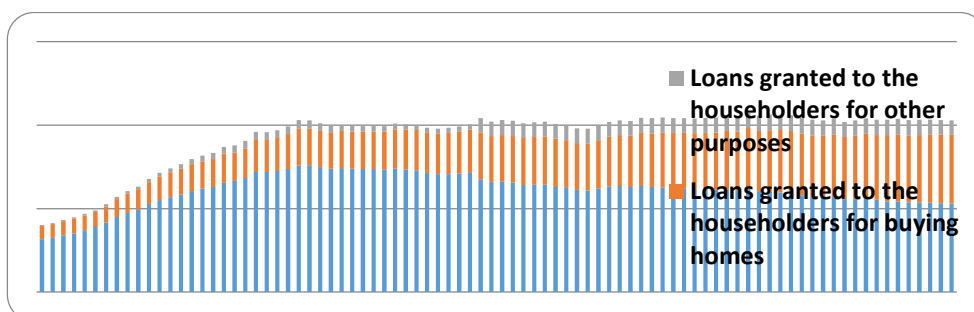
Figure 3
Author's processing after Romanian National Bank data, extracted on February 2014, online
http://www.bnro.ro/Raport-statistic-606.aspx

3.2.1.2. *Lending to non-financial companies* confirms continuous indebtedness on this segment as well, mostly in foreign currency: an accelerated growth of loans in euros – 131% during 25 months (January 2007 – February 2009). The associated risk is the currency risk, which makes future reimbursements more difficult (figure 4).
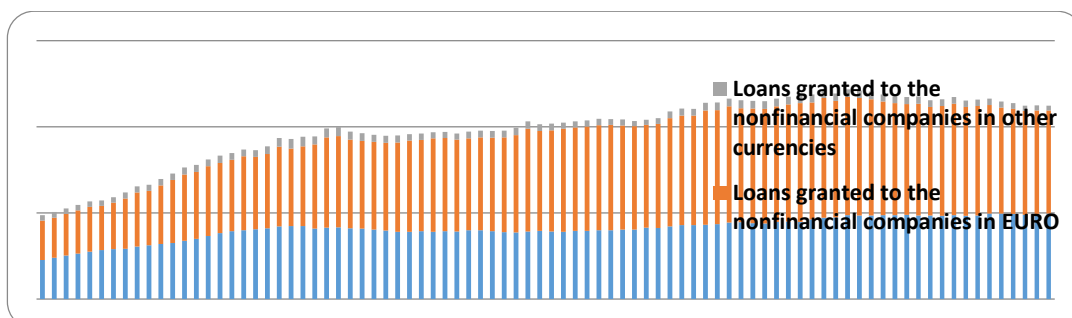
Figure 4
Author's processing after Romanian National Bank data, extracted on February 2014, online
http://www.bnro.ro/Raport-statistic-606.aspx

3.2.1.3. *Lending to non-monetary financial companies, to the public administration and to nonresidents* have taken a significant toll on economic indebtedness. Lending to nonresidents represents a risky situation, which has had an oscillating evolution during 2009-2013 (figure 5).
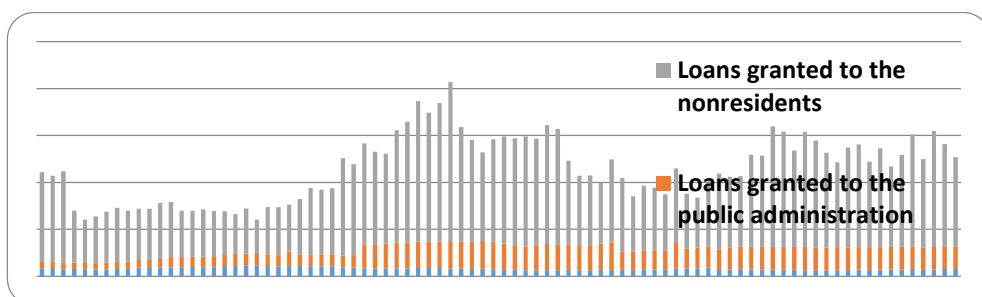
Figure 5
Author's processing after Romanian National Bank data, extracted on February 2014, online
http://www.bnro.ro/Raport-statistic-606.aspx

3.2.1.4. We take note of an additional component compared to the minskyan classic perspective on indebtedness: the Romanian banking system is currently facing the issue of *outstanding loans;* the rate of unperforming loans as of September 30, 2013 is 21,6 % of the total loans granted (figure 6 until 31.12.2012).
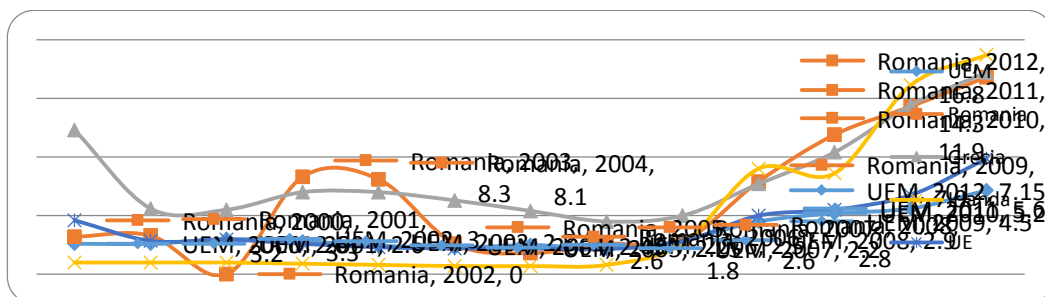
Figure 6
Author's processing after data The World Bank, extracted February 2014, online on
http://data.worldbank.org/indicator/FB.AST.NPER.ZS/countries?display=default

Romania has the third highest rate of unperforming loans in Europe (outstanding for more than 90 days), which is the dominant risk threatening financial stability, after Greece and Ireland, and 135% higher than the EMU average rate. The steep growth occured between 2008-2009, from 2.9% to 7.9%, and it reached 16.8% between 2009-2012. NBR statistics confirm a further increase of 5.1% between December 2012 and December 2013.
For the purpose of this study, the exogenous causes of the increased volume of loans are less relevant; they are related to the nature of the monetary offer, i.e. the availability of long-term financing in foreign currency, which were mainly resources attracted from the parent banks, as well as the difference in interest rates between foreign currency loans and loans in lei.
The financial fragility occurs as a result of the deterioration of the fundamental economic variables; this situation can be worsened by some factors that influence the population's trust, information asymetry and some institutional factors. (International Monetary Fund, 2000). Figure 7 shows the specific case of Romania, by comparing the evolution of the weight of unperforming loans within the total loans.
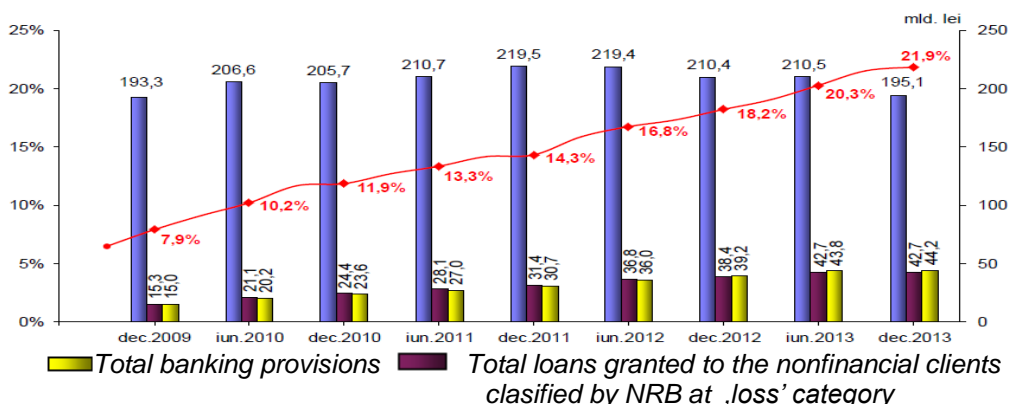
Figure7
Author's processing after National Romanian Bank data, extracted February 2014

The issue must be approached from two opposite points of view: the risk associated to over-indebtedness, as well as increased possibility of systemic paralysis due to the lack of financing. Local banks currently have outstanding loans in their portfolios of over 10 billion Euros (at 31.12.2013, according to Central Credit Register of Romania), which is a potentially high risk situation. From the other point of view, if banks do not recover their loans and they end up in a difficult situation, lending operations could potentially be massivly diminished, and so the entire economic activity will be slowed down. We take note of the fact that, in Romania, financial intermediation has been disconnected for years (2005-2011) from the internal savings, which was a weakening factor for the economy. The advancement, and also the recoil of the degree of financial intermediation was mainly lead by the evolution of lending to householders.

4. Conclusions

Without clear knowledge of the systemic imperfections of Romanian economy, one cannot build a correct economic development strategy. Neglecting financial fragility aspects, added to the lack of consistency in applying economic principles, may create important damages and disequilibria, that would generate a prolongued lack of sustainability, considering the fact that it is compulsory to meet strict crietria in view of European integration. Yet, today, Romania is a country that has a fragile economy, susceptible to react to temporary exogenous and edogenous factors. Should foreign banks and investment capital undergo an uncontrolled process of exiting the market, that would lead to a severe shortage of liquidity or credit, to pressure on the balance of payments and loss of reserves, a significant depreciation of the currency exchange rate, i.e. to general negative effects on the economy. The financial crisis that started in 2007-2008 was a reminder of the risk represented by the economies whose development models are based on accumjulating debt, over their limits of sustainability. From this point of view, it is important that Romania can prove that once it will enter the Euro Zone, it will not create a risk for the stability of the prices in this zone, as a result of the convergence of the prices in Romania to the ones in the Euro Zone.

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Financialisation is a complex and dynamic process of enlarging the monetary and financial relations in economy and society. Acad. Aurel Iancu analysed the financial market structure and explains the ways and modalities to develop financialisation by growing the public and private indebtedness; considered endogenous factors, they all increase the fragility of the financial system.

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SUSTAINABLE GROWTH: RECENT TRENDS ACROSS CENTRAL AND EASTERN EUROPEAN ECONOMIES

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Abstract: *What is economic growth? Although the answer to this question may seems of real simplicity, developing an accurate definition of this concept may constitute a real challenge both from a theoretical but also empirical point of view. This constant debate upon the concept of economic growth as well as indentifying the optimum set of instruments for quantifying it, constituted the starting point of the current article. The concept of economic growth is used nowadays complementary to terms like economic development, economic welfare or economic progress with reference to this complex process that implies macro-scale structures. Moreover indentifying the main factors that generate a significant impact upon the dynamics of the economic growth process, constitute a useful approach taking into consideration the high degree of heterogeneity that characterize the architecture of the economies around the world. If we develop this analysis across the European Union member states this debate became even more challenging due to the high degree of diversity that characterize these economies. Moreover, the Central and Eastern European countries and especially the ones that joined EU in 2004 and 2007 embody a set of particularities that make them extremely different from the rest of the European Union member states, features related to the historical background, economic policies and common efforts to intensify the convergence process with the more developed EU members. This paper studies the impact of two main factors upon the economic growth process namely an endogenous-exogenous factor like the degree of openness and an endogenous factor like the human capital using a complex dynamic panel method. The arguments that were in favour of choosing this two factors are on one hand the multitude of theoretical studies that argued the importance of them in modelling the economic growth process and on the other hand the small number of studies that use panel methods in assessing this impact. The obtained results point towards a positive correlation between degree of openness, human capital and economic growth across Central and Eastern European countries. These results may be used by the responsible authorities as a basis for the development of the future strategies concerning economic growth. The ability of the new member states to adapt to the macroeconomic changes will prove to be vital in the context of the global architecture and will constitute a vital indicator of the economic growth and performance level of these economies.*

1. Introduction

The primary objective of each worldwide economy is assuring stability in what concerns the economic field that due to the multiple interconnections with the other components of the global system determines performance. The performance, whether we refer to the economic, financial or institutional one is an absolute indicator of the capacity to adapt to the frequent macroeconomic evolutions, and once this indicator is achieved the next step is economic growth and convergence between states.

The economic growth process is considered to be an extremely complex one, being influenced by a variety of financial, political, institutional, cultural and social factors. The literature in the field identifies a vast dichotomy in respect to these factors, the contribution of each one being supported by strong arguments. Highlighting the factors that have a significant impact upon the dynamics of the economic growth process constitute a real challenge due to the multitude of existing classifications and also due to the individual characteristics of each economy that determines a different componence from country to country. Furthermore, the recent economic crisis determined a reconfiguration of these factors that have nowadays to take into account the effects that were felt globally. Moreover developing such an analysis proves to be extremely difficult due to the multitude of factors this process embodies. In the studies that concentrated their research upon of the main aspects related to the economic growth process and its main triggering factors we identified two main approaches. The first one is the quantitative approach that takes into consideration quantitative variables such as natural resources, capital, foreign direct investments or degree of openness of the economy. The second one and namely the qualitative one embodies a series of variables more linked to the political and cultural framework. Taking into consideration the fact that a complex classification of the entire system of factors that determine the economic growth process requires a more vast work space, this article concentrates upon analyzing the impact of one endogenous factor namely the human capital and one endogenous-exogenous factor namely the degree of openness.

Probably the most debated aspect related to the economic growth process and its determinants is the one referring to its evolution across Central and Eastern European countries. A series of authors concluded the fact that the economic integration of Europe constitutes a continuous support in favour of achieving a sustainable economic growth. Sustainability seems to be the key concept that the supranational authorities refer to when developing the new growth strategies across European Union member states. What actually triggers the interest of econometricians and macroeconomist towards these economies may have multiple causes. The evaluation on both theoretical and empirical level of trade barriers and productivity factors, capital, services and individuals had a decisive role upon the development of the conceptual and methodological framework considering economic growth.

The accession waves from 2004 with 10 new member states and 2007 with two new ones represented just the first step in assuring a sustainable economic growth across these economies. On the path towards achieving this goal, the new member states have to face a series of challenges. On one hand these economies unlike their predecessors have to cope with the effects of the recent economic crisis that determined the reorganization of the economies across the world. On the other hand, in order to assure a sustainable economic growth it is necessary to orientate the economic growth strategies towards innovation and competiveness whose benefits will be better evaluate within the Economic and Monetary Union, the next step for the new member states. The remainder of the paper is organized as follows: section 2 presents a short review of the most relevant studies that assessed the impact of human capital and degree of openness upon

economic growth, section 3 presents the used data and the methodology for testing this interconnection, section 4 reveals the empirical results and at the end we presented some general conclusions and policy implications.

2. Literature review – State of the arte

The degree of openness is a debated factor in relation to the economic growth process. This indicator influence the economic growth process through a variety of channels such as: exploring competitive advantage, technological transfer, scale economies increase and also increased competitive exposure (Chang, R.,Kaltani, L., Loayza, N., 2009). The literature in the field suggest an extremely complex and ambiguous interconnection between economic growth and degree of openness. An important issue concerning economic growth-degree of openness links to the measurement instrument used. Most of the studies point in favour of using trade volume, namely the sum of import and export to GDP in quantifying the degree of openness of each economy.

A number of studies had as starting point the relation between economic growth and the degree of openness. On one hand there are studies that argue the fact that economies that have a high degree of openness have a high rate of GDP/capita and develop faster than other economies (Dollar 1992, Edwrads, 1992), Romer (1993), Grossman and Helpman (1991). Complementary to the analysis of these correlations at theoretical level, a series of empirical studies concentrate upon analyzing this interdependence using different econometric instruments. In testing the correlation between economic growth and the degree of openness the literature identified a variety of measuring instruments such as: the average rates of trade tariffs; quantitative restrictions, non-tariff barriers. If we take into consideration the empirical studies we may distinguish between the following categories:
- Studies that use simple and multiple regressions;
- Studies that use Granger causality tests (used in order to validate the hypothesis according to which a time series may be used to predict another one);
- Studies that used the panel methodology.

In what concerns the first category the studies developed by Dollar and Kraay (2002) or Tervio (2000) provide positive results concerning this correlation. Dollar and Kraay (2000) used a set of important data including a number of 953 observations from 137 countries for a time horizon between 1950 and 1999. The volume of trade is associated positively to the economic growth process; although the significance coefficient has not a high value.

The second category of studies, the one that use the Granger methodology, provide mixed results referring to the economic growth-degree of openness link. Singh (2011) obtain negative results concerning the effects of imports upon economic growth and Shahbaz (2012) argues in favour of a positive impact of trade upon economic growth. An increase of trade by 1% triggers an increase in economic growth by 0,0707%. Ahmad and Kwan (1991) using the same methodology upon a 47 African sample do not identify a causality results between trade and economic growth.

The third category that concentrates upon the use of panel methodology is an extremely vast one. Relevant are the articles developed by Islam (1998), Economidou and Murshid (2008), Redlin (2010), Das and Paul (2011).

Economidou and Murshid (2008) based on a sample of 12 OECD states and a time horizon between 1978 and 1997 identified a positive correlation between trade and productivity growth. Redlin (2010) using the panel GMM methodology upon 158 economies between 1970 and 2009 identifies a long term positive impact upon economic growth. Das and Paul (2011) using the same methodology upon 12 emerging countries

from Asia (Bangladesh, China, India, Indonesia, Korea, Malaysia, Nepal, Pakistan, Philippine, Singapore, Thailand and Sri Lanka) obtained results that confirm the positive interdependence between trade and economic growth.

On the other hand studies like the one developed by Levine and Renelt in 1992 confirm the fact that the policies related to growth (degree of openness, macroeconomic stability) are firstly inter-correlated. Within this study was aimed the analysis of the interconnection between economic growth and a series of import, total trade and trade policy indicators. Furthermore the endogenous growth literature provides a series of models that test the hypothesis according to which trade restrictions influence in a positive or negative manner economic growth. For example Riviera Batiz and Romer (1991) concentrate upon the way in which trade restrictions influence in a positive or negative manner the growth rates using the consumer behaviour analogy. The authors develop a classification of the changes within the worldwide growth rates taking into consideration two effects (integration and surplus) that ambiguous determine the decrease of the growth rate and a third effect (allocation) that may be influenced whether in the sense of growth or of decline of the rates. In order to explain this classification there are used two categories of restrictions. The first one relates to national restrictions regarding tradable goods and the second one refers to restrictions that aim to protect intellectual rights. In both cases the authors argue the fact that in the case of trade between similar regions like Europe or North America the first two effects dominate.

The second factor taken into consideration is the human capital. The concept concerning human capital is an extremely vast one that includes a series of variables that each influences the economic growth process. Human development is certainly connected to human capital development, as main determinant of it. The" *human capital*" concept was firstly introduced in the economy by the Nobel prize winner Theodore Schultz that argues in favour of the necessity of investing in education for increasing agricultural productivity in USA. Schultz, T.,(1963).

Human capital may be defined as:"*a real or non-real active, whose value is determined by the fact that it is a present or future source of goods and service, so of income*" (Jessua, C., Labrousse, C., Vitry, D., Gaumont, D., 2006).

Gary Becker (1964) considers human capital to be the sum of all monetary and non-monetary activities that influence the future monetary incomes of the individuals. Becker and Schultz argue that the improvement of the human capital component may be generated by superior investments in education.

The interconnection between human capital and economic growth is in our opinion one of the most important determinants of the level of progress and performance of each economy. The level of the education of the population constitutes a triggering factor in respect to the economic growth rate of each country. The interconnection between human development and economic growth is one that works both ways. Firstly, economic growth provides the necessary resources that allow visible developments of the human capital. On the other hand, the improvement of the quality of the working force constitutes a decisive indicator of economic growth. Economic growth may not be supported unless is preceded or accompanied by the improvement of human capital quality.

Human capital along with physical capital may generate a constant marginal physical capital due to the fact that human and physical capital becomes complementary. The economies with large stocks of human capital and physical capital register a more accelerate growth that the economies where these resources are limited. Despite all that we have to take into consideration the case of some particular economies, like the ones from Africa that benefit from a consistent stock of human capital and resources, but the lack of some efficient development strategies and a high degree of openness determine these economies to stagnate.

Evidence on the role of human capital upon economic growth may be found in the works of Adam Smith and Alfred Marshal that argued the fact that improving skills level is a triggering factor for progress, but the development of a solid theory concerning human capital was only at the mid of XX century with the work of Gary Becker. This theory according to which the level of education and experience of each individual determines is income level was initially tested at microeconomic level, but was immediately transferred to macroeconomic level also. Authors like Jorgenson/Griliches (1967) examined the manner in which changes in the level of working force quality explain total productivity factor.

Despite all that, the development of the new growth theory and the contribution of R. Lucas model raised the awareness upon the analysis of the connection between human capital and economic growth. The author highlights the positive effects that the capital accumulation has upon production.

Starting from the Solow model, the easier method to highlight the human capital role is the one developed by Mankiw/Romer/Weil (1992). These authors present a simple extension of the Solow model by introducing human capital as a different input within a standard Cobb-Douglas function:

Yt= $Kt^{\alpha} Ht^{\beta} AtLt^{1-\alpha-\beta}$

(2.1)

where Y is the output, K is the capital, H is the human capital stock, A is the technological level and L is the labour factor. α, β and 1-α-β exponents measures the output elasticity concerning the input.

This model highlights the direct impact of human capital upon the level of output as well as the persistence of it at macroeconomic level.

Within the Lucas model the human capital is incorporated in the production function as well as the technological factor is incorporated in the Solow model. The following function is elaborated:

Yt=$AKt^{\beta}(uthtLt)^{1-\beta} h_{a,t}^{\gamma}$

(2.2)

where Y, A, K, L represents the level of output, technology, capital or labour, and u is the time fraction that an individual allocates to work, h is the level of training of the human capital and h_a is the average level of human capital that exists within an economy.

In this model the human capital accumulation is perceived as an endogenous source of the economic system that allows supporting a growth mechanism without resorting to external sources.

In the model developed by Romer, the economy is structured into three main sectors: final consumption sector, intermediate sector and research sector. The research sector use human capital in obtaining new intermediate goods that are incorporated into final goods along with human capital and labour to obtain the final output.

The production function according to Romer model is the following:

Y=$H_y^{\alpha} L^{\beta} \sum_{i=1}^{A} x_i^{1-\alpha-\beta}$

(2.3)

where Y and L are the level of output and labour, H_y is the level of capital incorporated into production, A is the stock of knowledge and x_u represents the quantity of intermediate goods incorporated in the production of final goods.

According to Romer, human capital is considered a primary source in the research process. The author makes a clear distinction between the stock of human capital that is

incorporated and the stock of knowledge that exists within every economy and is considered a public good.

A number of studies focused their research upon establishing the interdependence between human capital variable and economic growth. Barro (1991) within a study considering 98 economies during 1960-1985 highlights the positive correlation between the growth rate of GDP/capita and the initial level of human capital. The results are similar to the ones obtained by Sach and Warner (1997) or Gallup et al (1998) that argue the fact that an intense development of human capital leads to a rapid transnational growth. Xavier (1997), Levin and Renalt (1992) are also in favour of the fact that investments in human capital through investments in education constitute one of the main sources of economic growth. De la Fuente and Donenech (2000,2001) use a sample of 21 OECD countries during a time period between 1960 and 1990 and provide a series of strong arguments in favour of a positive correlation between human capital, quantified by the level of education and economic growth suggesting the fact that the previous studies that failed to highlight this correlation had major errors in what concerns the methods used to quantify human capital.

Middendorf (2005) investigated using panel methodology the contribution of human capital to economic growth based upon a sample of 29 OECD countries during a time horizon between 1965 and 2000. The model delivered positive results upon this correlation. Also Qadri (2013) that tested this correlation on a sample of 106 worldwide economies between 2002 and 2008 provided results that confirm the existence of this interdependence.

Table 1 present the evolution of the education expenditure across the states that joined EU in 2004 and 2007, revealing the fact that across all countries the expenditures from the education sector registered an increase from 1999 to 2010. The countries with the highest value associated to this indicator are Cyprus with an increase of 2,62% but also Romania (2,40), Malta (2,40) and Bulgaria (2,25). On the opposite pole are situated Lithuania (1,65) and Latvia (1,61). This general increase in the expenditures of the education sector are a strong argument in favour of the interest that the national authorities have in obtaining skilled labour force that would assure in the medium and long time horizon high growth rates.

Table 1: Evolutions of the education expenditures in 1999 and 2010 across member states that joined EU in 2004 and 2007

Total expenditures in the education sector (mill. Euro)			
Country	1999	2010	2010/1999 (%)
Bulgaria	1472	3309	2,25
Czech Republic	5066	8709,3	1,72
Estonia	644	:	-
Cyprus	590	1547,5	2,62
Latvia	876	1409,8	1,61
Lithuania	1511	2486,5	1,65
Hungary	4648	7751,9	1,67
Malta	246	590,7	2,40
Poland	15963	30471,8	1,91
Romania	3600	8622,5	2,40
Slovenia	:	2381,7	-
Slovakia	2077	4096,1	1,97

Source: Eurostat.

Despite all that the correlation between human capital and economic growth may be analyzed complementary by taking into consideration also the life expectancy of the individuals. Although there are less studies that use this indicator to quantify the interdependence between human capital and economic growth, most of the studies identify a positive correlation between these two variables (See table no.2).

Table 2: Evolution of life expectancy across states that joined EU in 2004 and 2007

Life expectancy	2004	2011
Bulgaria	:	65,9
Czech Republic	:	63,6
Estonia	53,8	57,9
Cyprus	:	61,4
Latvia	:	56,7
Lithuania	:	62,1
Hungary	:	59,1
Malta	:	70,7
Poland	:	59
Romania	:	57,1
Slovenia	:	53,8
Slovakia	:	52,3

Source: Eurostat

3. Used data and methodology

3.1 Used data

In order to assess the impact of human capital and degree of openness upon economic growth we used a data sample that comprises 12 Central and Eastern European countries namely: Czech Republic, Poland, Hungary, Slovenia, Slovakia, Malta, Cyprus, Estonia, Lithuania, Latvia, Romania and Bulgaria. The data sample covers the time horizon between 1992 and 2011. The definitions of the included variable are listed in the table below.

Table 3: Definition of the variables included in the model and their sources

Variable	Definition	Source
$y_{i,t}$ –**GDP/capita**	We used this indicator due to the fact that is more relevant in modelling the data in what concerns economic performance of different economies than the use of the absolute value or the growth rate.	Eurostat.
HC – human capital	The indicator used for human capital is the level of education. When is tested the conexion between the level of education and economic growth, most of the research are in favour of the use of the gross enrolment in the secondary	WorldBank

TO – degree of openess of the economy	education (See Barro 1991, Levine Ross & David Renelt 1992, Lucian Albu 2005). This variable is considered by many authors to be a necessary criterion to fulfil in order to assure real convergence between economies. The measure used to quantify the degree of openness was the volume of trade, namely the ratio of imports and exports to GDP.	WordBank

$$TO = \frac{I_{it} + E_{it}}{GDP_{IT}}$$

Source: Authors interpretation.

3.2 Methodology

In order to establish a correlation between economic growth, as the dependent variable and degree of openness and human capital as explanatory variables we used a dynamic panel methodology that allows a better evaluation of the dynamics of the variables included in the model. The dynamic panel methodology is not a completely new one and has been widely applied in different domains to obtain more accurate results and in order to provide solid arguments to sustain the economic theories.

The equation used to estimate the main parameters of the model has the following formula:

$\Delta(lny_{i,t}) = a_0 + \beta \ln y_{i,t-1} + a_1 HC_{i,t} + a_2 TO_{i,t} + a3u_i + \varepsilon_{it}.$

where *i* represents country index, iar *t* is the time index. The variables included in the model are the following ones:
- $(lny_{i,t})$ - natural logarithm of GDP/capita
- HC − human capital
- TO - degree of openess
- u_i − the fixed effect of the time variable
- ε_{it} – random distribution

A widely used technique regarding the GMM methodology is the one proposed by Arrelano and Bond (1992) that suggest the use of all valid lags of all regressors as instruments. The central point of this approach consists in the fact that the use of first differences allows the removal of the individual effects and also to include all previous information regarding $y_{i,t}$ as valid instruments. The advantages of this methodology may be summarized as:
- The systemic GMM is situated between the lower and upper limit represented by OLS and LSDV;
- The used instruments are valid;
- There are clear advantages in terms of overall efficiency.

4. Empirical results

Prior to the panel GMM tests we will investigate the main characteristics of the variables included in the model. Table no.4 presents some information regarding the minimum and maximum value of the variables, the standard deviation and the mean. We may notice the fact that there are significant differences between the variables. In what

concerns the GDP/capita variable the maximum value is of 27225,48 euro/capita for the case of Slovenia in 2008, on the opposite pole being situated Estonia with a value of 2739 in 1993. Also in what concerns the degree of openness the value fluctuate between 41, value registered by Poland in 1993 and 191 value registered by Malta in 2011.

Table 4: Descriptive statistics of the variables included in the model

Variable	Obs.	Mean	Std.Dev	Min.	Max.
PIBC_LOG	240	9.500363	.4429663	7.915348	10.21191
GDE	235	115.4383	35.05989	41	191
EDU	213	92.85446	6.220966	76	108

Source: Authors calculation based on Eurostat and Worldbank data.

The central element of the current research was the motivation to highlight the influence of the degree of openness and human capital upon economic growth process across the member states that joined EU in 2004 and 2007. That are at least two arguments in favour of the validity of this model both from a theoretical perspective but also considering the policies this countries adopted in order to improve their performance namely: the first one relates to highlighting different aspects related to the integration of the new member states into the European Union and the second one reflects the main channels through which technology is assimilated within an economy.

Table 5: Panel GMM results

```
------------------------------------------------------------------------
  pibc_log |    Coef.   Std. Err.    z    P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------
  pibc_log |
       L1. |  .7789498  .0168325   46.28  0.000    .7459587   .8119408
           |
       gde |  .0028211  .0002546   11.08  0.000    .002322   .0033202
       edu |  .0052613  .0009185    5.73  0.000    .003461   .0070616
     _cons |  1.319194  .1434986    9.19  0.000    1.037942   1.600446
------------------------------------------------------------------------
```

Source: Authors calculation based on Eurostat and Worldbank data.

If we consider the influence of the education upon economic growth, within recent studies that included this variable in the set of determinant factors of this process are the studies develop by Fukase in 2010 and Ibqal and Daly in 2013. In both cases the level of education has a positive influence upon economic growth, but the significance coefficient is different due to the analyzed time period, the set of complementary variables and the set of the countries analyzed. In our modelling the influence of this indicator upon economic growth is a positive one with a strong significance coefficient. Therefore the influence of human capital through the level of education constitute a remarkable endogenous resource that must be taken in consideration by the long term economic strategies and that may influence different domains like: productivity area, innovation area, the development and the implementation of strategies area and also the competiveness area.

The degree of openness of the economy has also a positive influence upon the economic growth especially for small countries that concentrate their economic activity on trade. Gries and Redlin (2012) starting from a sample of 158 countries and a time horizon

between 1970 and 2009 identified a significant correlation between the mentioned variables. The value of the coefficient obtained in our study is similar to the ones obtained by the previous ones. The degree of openness especially for the emerging markets like the ones from Central and Eastern Europe constitute a resource with multiple implications considering the fact that for these economies the intensification of the trade activities with the rest of the member states of the European Union allows the flows of information, products and capital that stimulate the trade interconnections between the participant states leading to the stimulation of the commercial transactions between states and in the long term perspective to economic growth.

The validity of the model is tested through a robustness test namely the Sargan test. The value of the coefficient confirms the validity of the results.

Sargan test of overidentifying restrictions
  H0: overidentifying restrictions are valid

  chi2(147)   = 263.6037
  Prob > chi2 =   0.0000

Concluding remarks

The harmonization of the interests of the new members states in the context of fulfilling the general standards imposed by the European Union constitute one important aspect taken into consideration by the national authorities in cooperation to the supra-national ones. The frequent changes within the global economic structures constitute a strong indicator in favour of the dynamics of the economies. Furthermore, the recession periods may be perceived as progress generators. This fact may be argued by the need to adapt that embodies the development of new policies and strategies in order to overcome the negative effects and to evolve.

The purpose of this article was to assess the impact of human capital through the level of education and degree of openness upon economic growth. This model may prove useful in what concerns the development of the future policies both at theoretical and empirical level. The infusion of technological progress whether by the degree of openness or by the investments in human capital constitutes one of the main sources in triggering economic growth, results that are confirmed by using the dynamic panel methodology. Concentrating on these sectors should be a prior objective of the national authorities. Long term sustainability is also important due to the fact that developing some compromise solutions that would generate short time results does not constitute a successful strategy and may trigger negative effects that could be felt by the states after a certain time period and that may produce massive economic imbalances.

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GLOBALIZATION AND IMPORT RISKS

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Abstract: *Delocalization of production and diversification of the sources of offer in the global market place the issue of protection of consumer rights in major consumption centres, namely the European Union in a new light. A review of policies for the protection of consumer rights in the EU, USA and China, reveals major differences regarding the protection of consumer rights and the existence of gaps, and in particular the implementation of effective legislation in this regard. As such, the risks associated with imports have become a major concern in the European Union.* The consumer has – one can say – a central role in the globalization process, which justifies the measures aimed at its protection. Although worldwide there are major differences in the degree of market regulation in matters of protection of consumer rights, the trend is the continuous adaptation of the offer to the requirements of global demand. However, one can still find significant gaps which translate into risks specific to the consumers in developed countries, namely in the EU. An important issue arises from this radical change of the localization of production centres in relation to the main consumption centres. While in the developed world, consumer rights protection has reached high levels both by creating an appropriate legislative framework and through consumer awareness and activism regarding their rights, in areas where much of the offer comes from the Western market (China, India, etc.) modern mentality on the protection of consumer rights is just emerging. A major requirement is therefore the provision of a status of the consumer compatible with the benefits and risks of globalization, a status defined by safety and protection of imports. *This paper confirms the thesis that, ultimately, the main factor counteracting the risks in matters of protection of consumer rights is the consumer, its awareness of its rights.*

Keywords: delocalization of production, global imports, consumption risks

JEL classification: K32, F16 , F60 , F13 , L24 , M55

Introduction

Globalization has different effects on the two drivers of the market: on the one hand, the delocalization of production leads to the expansion and diversification of the sources of offer, and on the other hand, the extension of the consumption model in developed countries requires the observance of certain conditions determined by the timeliness and quality of offer.

Within the general community policy on quality and reliability of imports in the global market, between countries there are differences in designing and implementing appropriate measures, a characteristic being the differences in matters of consumer protection in old and new Member States. The paper suggest, however, that these differences tend to decrease in terms of the regulation of consumer rights protection, but are still high in terms of knowledge and their practical exploitation by consumers.

1.Globalization between uniformity and diversity; EU - global imports

The thesis that we use in this paper is that the globalization process involves above all the extension / generalization of a certain core of basic principles and rules. This core is represented from an economic perspective by the principles of market economy, and culturally by the main characteristics of the business cultures induced by this socio-economic model. Nowadays, the prototype is, of course, the American socio-economic model. Secondly, and on another level, the communication between socio-economic systems and local cultures in a process theoretically and ideologically reflected by the multiculturalism thesis increases.

The key business processes that support the trend of globalization are manifested in the fields of production and services (mainly financial); and the fundamental driving force is the multinational company (Popa et al., 1999). The mechanisms of internationalization and globalization of production are: the productive capitalization of technology abroad through licensing or other forms of transfer of technology to joint ventures, branches or subsidiaries in third countries; delocalization of production by subcontracting and creating an international production system driven by a "centre"; the conclusion of strategic alliances and the achievement of international cooperation in matters of production; the achievement of global mergers and acquisitions established by large industrial groups.

Therefore, globalization is, on the one hand, the establishment of certain basic rules in the economic, political, social, cultural fields (rules that have a Western, and more specifically an American touch) and at the same time the integration of local systems through a process of adaptation / assertion on a global scale. Globalization is a process of standardization of local systems, and the reality of our days confirms the maintenance of major global or regional differences. (Dinopoulos et al. 2008)

Regarding to the problem addressed in this paper, namely the protection of consumer rights, we can find the existence of significant differences on a global or regional scale: 1) Differentiation on the North-South axis - they fall within the issue of international economic disparities, namely, the disparities in terms of economic development involve significant differences in terms of consumer protection; 2) Differentiations on the East- West axis - differentiation between advanced countries with a market economy and emerging economies, that integrated into the global system later. While in the first case, we are dealing with the impact of the development level (degree of prosperity) on the position of consumers, in the second case we are dealing with the impact of cultural differences on the position of consumers.

Therefore, globalization is primarily the dissemination of production in centres located mainly in areas (countries, regions) with a cost difference advantageous for the ordering companies. The main direction of this migration of production is from the North (developed countries) to the South (developing countries), from the West (developed countries with strengthened market economy) to the East (countries in transition or in the stage of

creating the structure of market economy). On the other hand, the consumption is concentrated in the developed world, and the new production units become more and more leading suppliers of goods. Illustrative in this respect is the increasing role of countries like China and India in international trade .

The diversification-uniformity Report in the globalization process translates from an economic perspective into changes occurring in the global value chain, changes caused by a number of economic, social and environmental factors. (Elms et. al., 2013). The economic factors that have led to the emergence of these changes are: the cost of labour - has resulted in a delocalization of companies from developed countries, the relatively low cost of land / constructions in developing countries - has spurred the relocation of companies from developed countries to less developed countries – and emerging economies (eg. China and India) - which had a major impact on the globalization process in terms of the production chain.

The concrete expression of this development is the increase of risks in the international trade process. Currently, the sources of risk (Lessard, 2013) associated with the global value chain include national factors (trade policy, fiscal policy), the consumer (purchasing power, cultural differences), natural factors (earthquakes, extreme weather events), delays caused by humans (armed conflicts, labour disputes) and innovation (technology, business model). Each source of risk has an impact on the following categories of actors: multinational companies, workers, companies involved in globalization, geographic regions, consumers.

Hence, a number of issues concerning the trust of Western consumers in the products coming from the new production areas. The issue is not new: the principle *caveat emptor* has been known ever since antiquity. The asymmetry of information between seller and buyer, which may prejudice the latter, must be countered by an active attitude of the buyer to protect the rights and promote its interests.

The above thesis is well illustrated by the experience of the EU. In 2012, on the whole, EU imports (1.7927 billion Euro) in BRIC countries accounted for around one third of total imports, half of that percentage being attributed to China. But while in case of India and Brazil, the EU trade balance is relatively balanced at relatively modest levels (38/39 billion Euro import / export), in the relations with China, the balance is heavily unbalanced (290 billion Euro imports as compared to 144 billion Euro), as in the case of Russia (213 billion Euro to 123 billion Euro).

A significant fact is that the imports from China and Russia, each of them separately, are ahead of those from the U.S., while regarding exports, U.S. is the main partner of the EU.
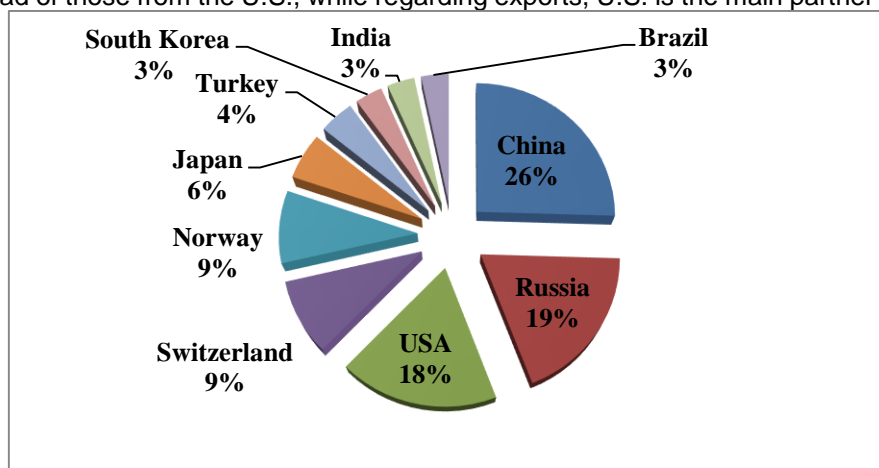
Figure 1: UE Imports (2012) - percentages trade partners
Source: Eurostat, Comext, 2013

Trade exchanges between the countries of the European Union and China have intensified in the past two decades, having to do with a second major global economic cooperation (after the EU-US). According to statistics published by Eurostat, the daily value of goods traded between the EU and China, amounts to 1 billion Euro, and the overall value of the goods traded in 2012 was 433.6 billion Euro. Exports of European Union countries on the Chinese market increased in 2012 by 5.6 %, reaching a record value of 143.9 billion Euro. Regarding imports, China is the main trading partner of the EU in terms of import, the total value of Chinese imports reached in 2012 EUR 289.7 billion Euro. (Figure 1). We're talking about a trade deficit in the EU- China relationship, a deficit caused mainly by imports of products from the fields of telecommunications, textiles, footwear, toys, metal.

We should note that the People's Republic of China is the biggest food producer, with an annual value of agricultural production of 536 billion U.S. dollars, being the largest exporter of agricultural products globally. (Flynn, 2010)

A special role is assigned to the bilateral trade exchanges EU-US, transactions that amount to a third of world trade. According to a European Commission study, the elimination of non-tariff barriers could lead to an increase in bilateral trade (EU -US) with 70-160 billion annually.

2.EU concerns about the risks related to imports
In an increasingly globalized market, and considering that a finished product is made with components manufactured in several countries (we are talking about a globalization of the value chain), a permanent concern of the government is to ensure the safety and quality of imported products. This consumer protection is achieved in the European Union by harmonizing standards on product quality in the Member States, but also through cooperation with non- EU countries.

At the first tripartite meeting (EU -US - China), held in 2008 in Brussels, on product safety, participants showed a great concern for the safe management of the supply chain. The globalization process favours trade exchanges, a fact which results in the establishment / application of high standards of quality / safety at every stage of the global supply chain, from producer to final consumer. Two years later, a second tripartite meeting (EU -US - China) on security / safety of products was held in Shangai; the main topics discussed were: traceability of products, convergence of requirements for product safety.

World Trade Organization is concerned with the security / safety of products. In this respect, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) was concluded. Under this agreement, the Member States may apply those sanitary and phytosanitary measures designed to protect the life / health of consumers and thus eliminating the risks related to foods containing additives, contaminants, toxins or disease-causing organisms.

Codex Alimentarius includes standards for all foods, whether prepared, cooked or raw and for the distribution to the consumer, provisions regarding food hygiene, food additives, pesticide residues, contaminants, labelling and presentation, methods of analysis and sampling.

Currently, the demand is considered to be the main driver in the food system, about 70 % of food is purchased from supermarkets, resulting in a transfer of power to distributors. These are the main link between consumers and production chain. In an increasingly competitive global environment, we are faced with a competitive environment, the emphasis is both on the quality of the products and on the price.

Regulations on safety / security of products traded on the EU market are very strict and most dangerous products are detected at the EU's borders during customs procedures.

There are two early warning systems for dangerous products, RAPEX system for non-food products and the RASFF system for food and feed.

According to RAPEX annual report, in 2012, 2,278 products considered dangerous were identified; they were withdrawn from the market. These alerts were issued by means of RAPEX system. Of all alerts, 34 % were issued for clothing, 19 % for toys (it is worth mentioning that 93 % of toys imported into the EU are made in China), 11% electronics.

In 2012, the number of alerts for products from China increased by 4 %, and these accounted for 58 % of the total alerts issued in 2012. According to RAPEX Report for 2012, 11% of products of unknown origin are considered dangerous.

Rapid Alert System for Food and Feed - RASFF plays an important role in terms of food safety throughout the supply chain (from producer to final consumer). The system is applied in European Union countries, and the EEA countries (Norway, Liechtenstein and Iceland) and allows rapid identification of risks and their elimination from European markets by issuing alerts to national authorities in EU countries in real time. The purpose of this system is to increase consumer's trust in products marketed on the EU markets. RASFF is an online platform, implemented for over 30 years, which mainly aims to facilitate cross-border flow of information between national authorities in the acceding countries, for food safety and consumer protection.

Security standards applicable to food are defined by a set of rules applied to EU member states, which are aimed at protecting consumers. There are a number of directives relating to nutritional labelling of products. Thus, the consumer is informed of the composition of the product, namely, the name of the agricultural product or food; the description of the production method, including the type, characteristics of raw materials and / or ingredients used, and / or the methods adopted for the production of the product; the description of the product or food characteristics, from a physical, chemical, microbiological perspective and / or organoleptic characteristics in terms of specificity; control procedures . We can say that the complete and accurate information of consumers can ensure the safety / security of products purchased.

Through the RASFF system they aim at increasing the safety of imports and thus the consumer protection. Authorities play an important role, through the proper application of customs procedures. When such a product is identified, RASFF informs the third country in order to take corrective action and to prevent recurrence of the problem. When a serious and persistent problem is detected, the Commission submits to the national authorities of the third country concerned a letter asking them to implement urgent measures to correct the situation, for example: remove units from the list of licensed companies, block exports or intensify control actions.

In 2012, under the RASFF annual report, the number of notifications through RASFF system has reached a total of 8797, representing a decrease by 3.9% as compared to 2011. Of these, 3516 were new notifications (40 %), 5281 were complementary notifications (60 %). These figures show a 7.8% decrease in new notifications and a decrease by 1.2% of complementary notifications. The total of 526 complementary notifications on serious risks identified in products on the market, increased by 14 % as compared with 2011.

Most alerts were issued for food products from China, followed by India and Turkey products (Figure 2).
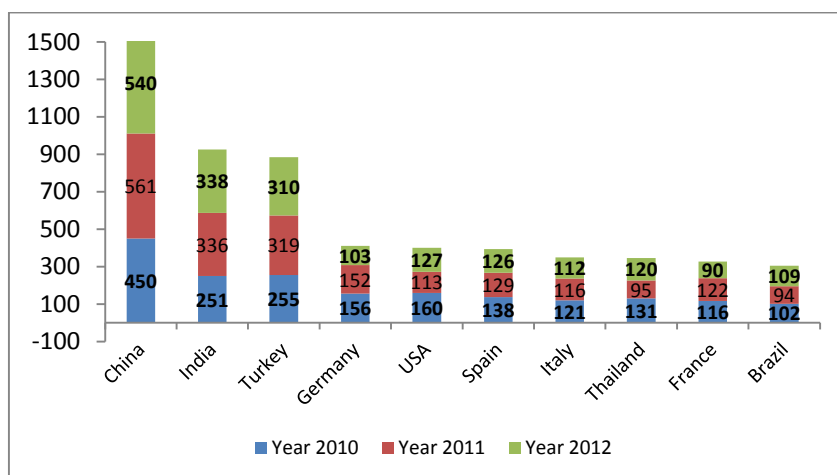
Figure 2: Evolution of RASFF notifications (depending on country of origin)
Source: RASFF annual report 2012

Regarding the types of products for which alerts have been issued, the first places are occupied by fruits and vegetables, followed by fish and fish products, nuts and seeds. (table . 1)

Table 1: Evolution of RASFF notifications (depending on product type)

Type of product	Alert	Rejected at customs	Notification for attention	Notification for follow-up	Total 2012	Year 2011	Year 2010
Fruit and vegetables	40	479	145	52	716	671	494
Fish and fish products	63	166	98	46	373	482	452
Nuts, seeds	15	272	23	19	329	522	537

Source: RASFF Annual Report 2012

China is the second largest exporter globally (with an export volume of 1594 billion Euro in 2012), the first trading partner in terms of import of European Union countries. Ever since 2006, the EU and the General Administration of Quality Control, Inspection and Quarantine of the People's Republic of China have established an agreement that provides for measures regarding the quality and safety of products imported from China. RAPEX alert system - China was implemented five years ago, following the identification of a large number of products originating in China, considered dangerous to consumers. This program allows the access of Chinese authorities to RAPEX system; they receive information about dangerous products from China identified at the boundaries of the European Union. In the first four years, product quality supervision authorities in China have investigated about 1,400 cases, applying restrictive measures in case of the export of investigated products for more than half of them. The goal of the RAPEX -China Program was to allow the export of safe products on the EU market.

3. Protection of consumer rights

Regulation of consumer rights already has a history of over a century; the first institutionalized form in this respect appeared in the U.S. in the shape of *The National Consumers League* (founded in 1891). The international consecration of this approach took place gradually, a fact which was transposed into significant differences between different regions and countries. A milestone in matters of regulation of consumer rights and interests was the adoption in 1985 by the United Nations of the Guidelines for Consumer Protection, a Guide which had a major role in shaping policies on the protection of consumers right nationwide.

European Union. In the last five decades, the protection of consumer rights has been an area of interest. Strategies that targeted protection of consumer rights were defined, and unfair trade practices, misleading advertising and the insertion of unfair contract terms discouraged.

EU Strategy for Consumer Protection Policy for 2007-2013 has three main objectives, namely: the improvement of the confidence of consumers living in the European Union; the increase of the welfare of consumers living in the EU (in terms of price, quality, range of products / services, accessibility and security); provision of effective protection to consumers against risks and threats.

An important stage in defining the consumer rights protection policy has been the adoption of the European consumer agenda (22/05/2012), a document which contains a number of measures destined to place the consumer at the centre of EU policies. The main objectives included in the agenda of European consumers are: assuring product, food and services safety; promoting sustainable consumption, ensuring the consumer rights under the conditions imposed by the digital revolution.

U.S. is the first area where consumer rights were legislated. Consumer Bill of Rights (1962) defined four fundamental consumer rights (right to safety, right to information, right to be heard and the right to choose products and services) and represents a milestone in the protection of consumer rights.

In the U.S. there are many organizations whose object of activity is the protection of consumer rights. Among these are: U.S. (Federal Trade Commission, established in 1914, whose main mission is to deter / prevent anticompetitive business practices or unfair to consumers; the purpose of the *US Consumer Product Saftey Comission* (CPSC) is to reduce cases of illness or death caused by the consumption / use of certain products. Also, they established safety standards for certain manufactured products. For products such as food, drugs, cosmetics, medical devices there is another regulatory body, namely, the U.S. Food and Drug Administration (FDA). A major initiative of recent date of the FDA is the regulations imposed on the tobacco industry in 2009. (We are talking about *Tobacco Control Act*).

In the case of China, we are talking about a relatively recent consumer rights protection expertise. The first law on consumer rights and interests was adopted on October 31, 1993 - the period in which China's economy has gone from the stage of planned economy to market economy. We are talking about CRIL - Consumer Rights and Interests Protection Law - framework law regulating protection of consumer rights, which contains the basic principles applicable to the consumer. We should note the important role played by the regulations in matters of protection of consumer rights existing in the 27 autonomous provinces of China. These regulations were, in fact, the basis of national regulations.

After 20 years of the first legislative act adopted in matters of consumer protection, Chinese authorities are considering a number of amendments to the legislation in the field. More specifically, they aim at clarifying the relationship consumer – economic agent (CRIL stipulates the obligations of economic operators / consumer rights without making a connection between the two).

Research literature has highlighted a number of shortcomings of the consumer protection system in China: a) the legal framework for protection is dispersed and fragmented – the existence of different legislative acts / special regulations leads to the overlapping of regulations and to possible conflicts of laws. This makes consumer protection difficult and the application and development of the CRIL law almost impossible to achieve. b) the method of settling disputes takes time and involves high costs;

India. In India a law regulating consumer rights protection was promulgated only 40 years after the achievement of country's independence, The Consumer Protection Act 1986 . This is considered one of the most progressive and comprehensive legislation in this area. Several aspects are important in terms of the specific characteristics of the regulatory framework in the country. Firstly, the fact that they tried to use local culture, including traditions in this area. In the Arthashaastra treaty, a document dating from the 4th century BC that addresses economic, political and military strategy issues in which one can find references both to consumer protection in trade and industry, as well as measures to sanction abuses in this area. Secondly, the legislative act was developed following a thorough study of the relevant legislation in the field in many countries, and in consultation with representatives of consumers, trade and industry in India. Thirdly, the main concern of legislators targeted both the elaboration of a legislative act appropriate for the Indian society in the context of globalization, and the establishment of framework in which this legislative act can be implemented in life. As with other emerging countries, the main problem has been the way in which the law can be applied in life and not simply the creation of a "perfect" legislative act.

Conclusions

The uniformity - diversity report (ie, global / local) is a defining characteristic of the process of globalization involving benefits and risks for the participants in the global economic cycle.

Regarding the protection of consumer rights, the benefits of the extension of the Western model are transposed, for example, in the process of uniform regulation of the main issues related to safety, quality and timeliness of offer. Symmetrically, risks are related to the different ways of implementing these regulations. On the other hand, the observance of the local specificity is a prerequisite for the efficiency and sustainability of regulatory activity; but excessive diversification makes the global consumer model frothy.

We only deal with an insurmountable contradiction in appearance. In reality, the global regulatory system – representing a defining core in the principles of market economy and democratic society – it is diversified not only by means of local , "horizontal" differences, but also by means of the multi-level structuring - global, regional , national, local, "vertical" - each with an own degree of integration. The consumer complex personality is defined and stated according to these coordinates. To paraphrase a saying attributed to Socrates, it is not "(only) Athenian or Greek, but a citizen of the world." The real challenge today is the full use of this status.

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SOCIAL PREMISES FOR A SUSTAINABLE LEATHER INDUSTRY

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Abstract: *Sustainability is not any more a new and un-known subject in the leather business world. There is a certain reorientation and implementation tendency of its requirements at organization level, in the last years. However, there are still some ambiguities and uncertainties related on the approach and practice of all principles included in the concept. That's why each organization tries to formulate winning strategies on long term, showing an equal importance for human resources, social balance and the environment. This work highlights the efficiency of the human resources in the leather industry's sustainability, a study created by seven national associations representing the leather industry from Italy, Spain, France, Germany, UK, Sweden and Romania. The analysis of social indicators demonstrates that tanneries in Europe are increasingly committed to the ethical and social aspects of their business, and that, through continuous investments, they have been able to ensure substantial improvements in process efficiency and in pollution prevention and control. All the efforts made by European tanneries over the years have resulted in improving the sustainability of their production. The excellent results achieved deserve to be valued more by stakeholders and better incentivised through measures encouraging new and future investments. The environmental and social values demonstrated by European leather help to keep European tanners ahead of international competition.*

Keywords: sustainability; leather industry; environment; social; economic.

JEL classification: Q01

1. Introduction

 Analyzed in the systemic context of the tannery activities can be considered a source offering a high added value for various value chain, starting with fashion and footwear industry and continuing with, clothing, leather goods, automotive, furnishing, and finishing with goods the lag the daily consumption of the utility.

Main input elements in the system are hides from animals slaughtered, tanning chemicals and water. More than 99% of hides and skins can be considered as a secundary product, beacause the animals are kept, primarily meat, milk, and various household activities, transportation and agriculture.

As part of the system, tanneries, making use of this secundary product, have an economic and environmentally friendly at the same time; absences tanneries in the system would generate a simple recycling process. Tanneries structure is differentiated by continents, geographical area, and even work on each area separately;in Europe tanneries activities combines traditionalism with innovation, in the sense that values traditional craft, from past history, are added innovative elements technological development and non-technological usage, in order to remain at the forefront of innovation for new products and new technologies; it is in fact a core strategic component of sustainability tanning processes. As the output of the system elements are multi-use patent leather. Economically, finished leather is a material with outstanding feature, hat the socially can

generate jobs in many areas, from tanning, continuing with other value chains such clothing industry, shoes industry, leather goods, furniture, automotive, consumer goods industry. Since tanneries in Europe can enter in the market continuously, new products, new applications for various end uses, they include in their bids the skins, intangible values, that reponding to global challenge of sustainable development in economic, social and environment, in accordance with the provisions of the 1987 Brundtland Report, entitled Our Common Future, WECD.(3) From the point of view of environmental protection in order to ensure sustainability of the leather tanning process this is achieved through processes increasingly clean, specific consumption of chemical, energy and dwindling water cut, and waste recycling processes more efficient; it is thus a constant and perpetual activity oriented environment; of course these actions have an effect on the increase in costs for the tanning of leather.

On the basis of the social dimension of sustainability leather tanning processes in Europe lies inclusive policy, that tannery workers are much better balanced compared to workers in other sectors; heir integration into the production process is much faster, regardless of nationality; his is because tanning technologies are less complex, have a high degree of repeatability, and specific production volumes or mass production of large series.

However, there are two issues that can jeopardize the existence tanneries in Europe

- Lack of competitiveness of tanneries in Europe, determined by the lack of adequate policies to encourage a level playing field in relation to the tanneries outside Europe.

- The phenomenon of commercial reciprocity, as part of fair competition; acording to this phenomenon requires the elimination of trade barriers of any kind (export tax, import duties for materials, hides and skins, chemicals for tanning leather). Their existence distort prices and encourage unfair competition on the world market of leathers. These days the leather industry should face some severe constraints mainly due to the decrease of the natural resources at regional level and to the apparition of some environmental problems at border, regional and global levels. Inevitably some measures are needed for a concentrated action in sustaining the sustainable politics and its monitoring, in conformity with the existing regulation for this industry. A special attention should be focused on using systematically of the scientific expertise in implementing the technical management, in correlation with the sustainability demand (5).European leather production historically positioned itself at the top end of the market, constantly seeking to improve quality and to innovate its offer to the market. All the efforts made by European tanneries over the years have resulted in improving the sustainability of their production. The excellent results achieved deserve to be valued more by stakeholders and better incentivized through measures encouraging new and future investments.

A statistical activity tanneries in Europe, shows that tanneries in Italy take and process more than 99.4% of the raw skins of calves, cattle, goats and sheep adult.

Production per animal type in the sample (Figure1) reflects perfectly the characteristic distribution of European production, where adult bovines, calves, sheep and goats, compose the largest share of raw materials. A residual share of production is based on other animal types (such as pig skins, deerskins and noble furs), which constitute significant shares of production in certain countries. (2)
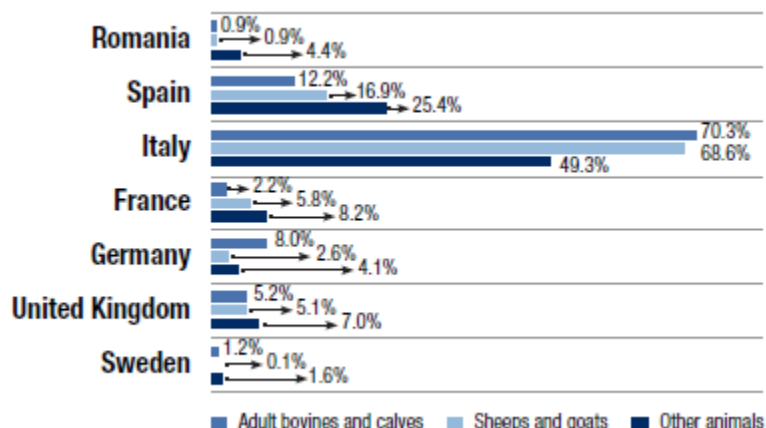
Figure 1: Sample characterization: production per animal typology
Source: www.euroleather.com

2. **Economic and social indicators from the leather industry**

Speaking about the development of the leather industry in Europe, it is specified that its essential component is the tanning sector. The final product of this sector, leather, can be considered an intermediate product, given that by inserting it in downstream sectors, due to the potential high added value, especially because it has competitive advantages, they contribute substantial value finished products in which it is incorporated.

As an intermediate product in the process of tanning, the skin has some essential features for various applications: skin is a hygienic, flexible, abrasion resistance while special color. Tanners designing production processes specific to each application, to give leather diversified characteristics required by numerous users.

For tanneries in Europe industrial users noticed two groups: of footwear and leather tanneries; in Europe they have a long tradition. European leather industry today encompasses a turnover of 30 million Euro annually performed by 24,000 companies and about 400,000 employees. Production achieved a market absorbed structure follows: about 35% of the market outside the Community, about 60% of intra Community-market, about 5% owned tanneries markets. It is clear that the European market is an important producer and consumer of this product.

Currently relocation strategy is relevant to certain sectors by the states outside the EU, developing economies, both in terms of markets, but especially in terms of the tanning process.

If we take account of all activities related to the manufacture of skin segments (upholstery furniture, clothing, car interiors, etc.) and related sectors (chemicals, machinery, logistics, etc..), the entire industry in Europe is estimated to be composed of more than 40,000 companies with over 500,000 employees, with a total turnover of 50 billion euros, which places it in a prominent place in the world ranking.(3)

Table 1: The European leather industry in 2013

Sector	Companies [no.]	Employees [nr.]	Turnover [md.euro]	Extra EU export [md.euro]
Tanning	1 783	34 504	7 750	2 307
Footwear	11 692	274 296	13 905	4 700
Leather goods	10 710	83 464	9 541	4 066
Total	24 185	392 264	31 196	11 073

Source: www.euroleather.com

Even if its share at global level has been declining in recent times due to the growth of the sector in certain emerging economies, the European tanning sector is still the global leader both in terms of:turnover, covering 26,7% of the world total (after China, accounting for 29,5%); overall quality level reached by the industry through product and process innovation; in particular with regard to technology (through a constant research on the processing cycle and product performance), environmental commitment (chemicals, water, solid waste and air emissions consequent to the tanning process are fully treated and recycled for more than 90%), social commitment (outstanding relationship with the workforce and a pioneering social dialogue with corresponding unions have improved the levels of education and training of human resources and led to a constant reduction of injuries), design and style innovation (very high importance is given to the study, the creation and the development of fashion trends).

Human capital is the important element in each tannery. Given the characteristics of the tanning process, it is preferred human capital capable of providing quality tanning process (primarily through experience); while human capital must be ensured in training for future periods. So competitiveness of the sector must be maintained at a level capable of ensuring the sustainability of tanning processes. Tanneries in Europe are increasingly employed in the development of ethical, social and environmental impact of their business by strengthening and improving relations with stakeholders: employers, workers, customers, the public, civil society. The social dimension developed in tanning processes is presented by the authors in the paper by means of relevant indicators: Types of contracts, Age brackets, Education, age, Seniority, Gender equality, Gender equality Accidents and Employee benefits.(1)

The structure of the workforce in tanneries sees the predominance of professional profiles with technical and production oriented skills (79% of the workforce).

As illustrated in Figure 2, low specialization production workers prevail in the shop floor (over 66% in 2010 and 2011), while highly skilled personnel tend to be higher in other departments or services. Indeed, Research and Development related jobs are increasing their importance both in the area of process technologies and fashion, design and style.
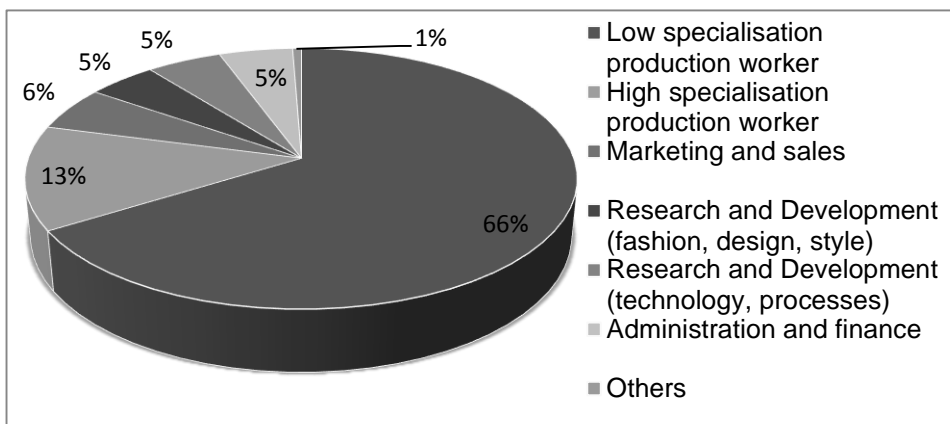
Figure 2: Job categories 2013 (%)

As shown in Figure 3, more than 87% of the workforce of European tanneries are employed with a permanent contract. Different forms of fixed-term employment contracts make up the balance.
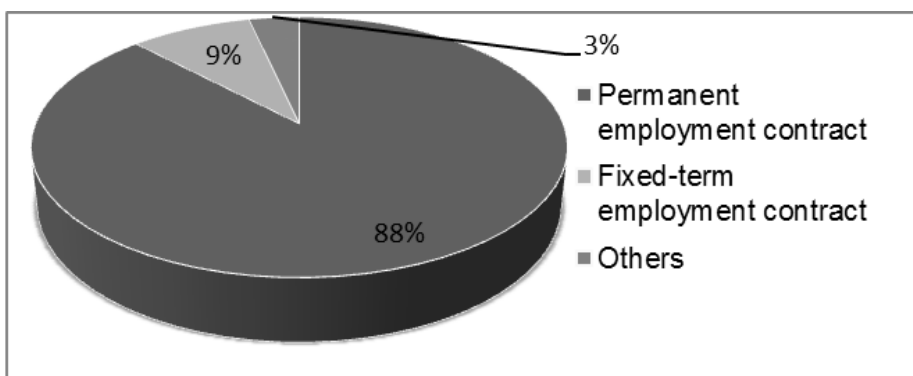
Figure 3: Contractual types 2013

Figure 4 shows a quite consistent distribution. Workers under 35 years of age represent almost 30% of the total in 2011. The age bracket of those employees aged between 35 and 55 displays the largest incidence in both years under consideration. Studies carried out at EU level show that one of the most relevant issues for Europe's tanneries is the low appeal of the sector among young people. Many initiatives involving schools and teachers are in place for reversing this trend. National associations and trade unions are generally their promoters, but results show that a more comprehensive effort at European level is necessary to renew the sector's workforce on a sustainable basis.
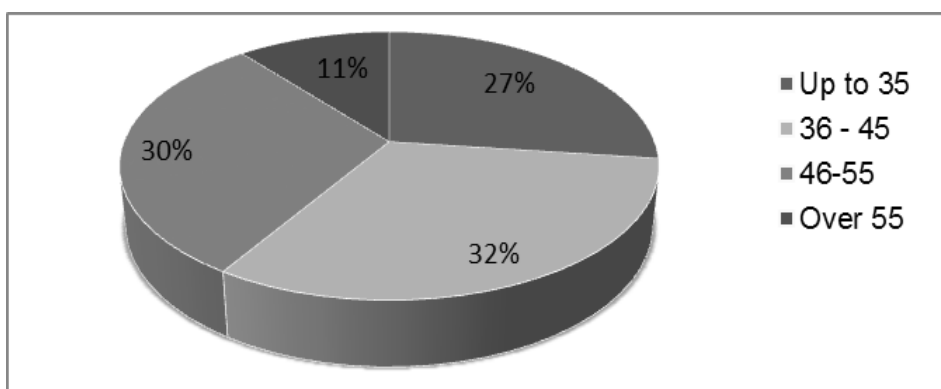
Figure 4: Age brackets 2013 (%)

Figure 5 illustrates the results of the survey in terms of Seniority. More than 50% of the workforce has been employed in the tanning sector for less than 10 years, while a significant share of the total remain in tannery jobs for a large portion of their working life.
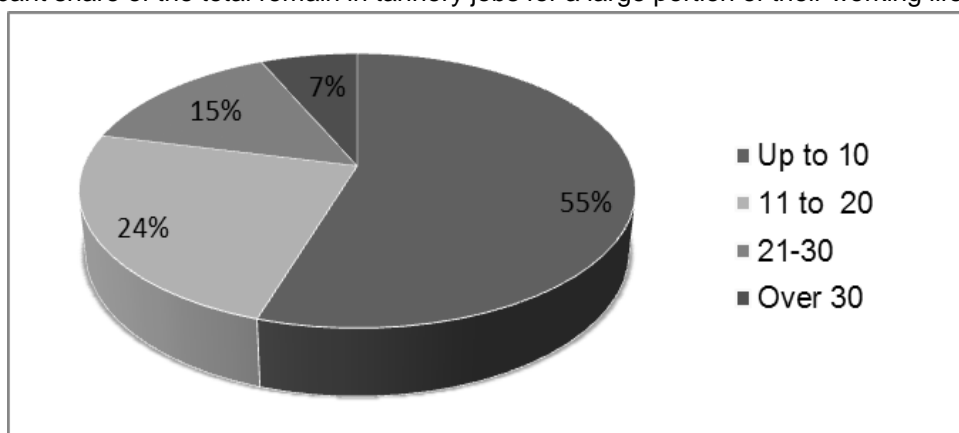
Figure 5: Seniority categories 2013 (%)

The job distribution depicted in Figure no 2 mirrors the analysis of the educational level, shown in Figure 6 ISCED levels 1 and 2, corresponding respectively to Primary education or first stage of basic education and to Lower secondary or second stage of basic education (see informative box), represent the same share of the total (almost 70%) as the low specialization production workers employed in tanneries (66.2% in 2011).
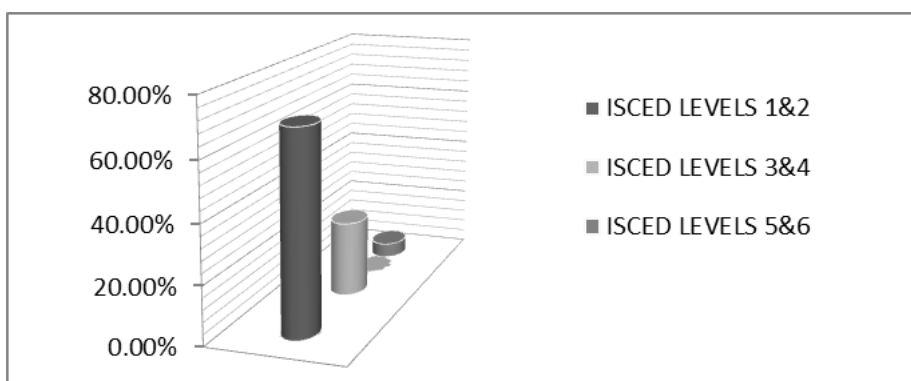
Figure 6: Education 2013 (%)

The tanning sector is traditionally closely and firmly rooted in its territory. Figure 7 shows that a very large share of the workers in European tanneries come from the same country of the tannery they work for. In some cases, hiring is performed predominantly in the very area (city or province) where the tanneries are based. Immigration and integration of foreign workers is nevertheless a noticeable feature. Another significant share of workers (9.2% in 2011) comes from foreign non-European countries. This exemplifies the positive interaction of Europe's tanneries with their local communities where leather often represents the main employment opportunity that also contributes to the integration of immigrants at local and regional level.
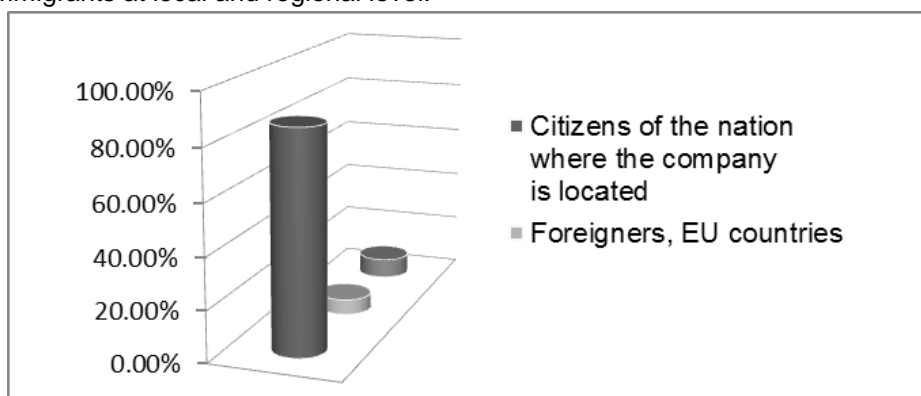
Figure 7: Territorial origin 2013 (%)

Human resources becoming so crucial for the sector's competitiveness, European tanneries have understood the importance of training their employees. To compete in the international market on quality, product consistency and performance, fashion and service to customers, skilled personnel is essential, notably in high-cost economies such as Europe. The combination of experience and youth, i.e. skilled workers and young applicants, represents the key asset on which the competitiveness of the sector is based. This can be enhanced at sector level by developing continuing vocational training and life-long learning. Despite a long tradition and the international reputation of Europe's tanning schools and dedicated university departments and chairs, leather specific education and

training in Europe is in distress. Critical mass for filling classrooms, geographical dispersion of tanneries and language barriers are some of the obstacles facing an effective reorganization of professional training in the European leather sector. Continuing Vocational Training and life-long learning are promising instruments. Skills can be transferred or up-graded in the tanneries themselves with courses adapted to the specific job and coaching or learning at the trainee's own speed. The environmental and social values demonstrated by European leather help to keep European tanners ahead of international competition. Although has made considerable progress on environmental aspects, the leather industry is still an aggressive source of pollution on all environmental factors: water, air and soil. Managers of specific tannery processes are advised to take into consideration the applied technologies but also the training level of their employees, their life outside the factory's gates, the effects of their production on the environment, approach that includes all the components: economic, social and environmental. Selection of the most adequate chemical products, processes and technologies to lead to the best performance from the production sustainability's point of view, when there is a wide offer from the chemical producers, is an activity that oblige to a careful and exhaustive documentation. Using a simplifying approach, a product of this research is the web site: http://sustainabilityintheleatherindustry.worldpress.com, whose architecture defines:

· Citation's order criterion and the data access;
· Selection option in each data citation order criterion.

Projection of the data basis has been made by considering the information should be grouped in tables on the subject's basis, to reduce the redundant data. Dividing the information's elements in entities or major subjects, respectively chemical processing products, conventional processes and the best practices for leather processing, is shown below. Subsequently each subject becomes a table.

Solution found in this work has been treated theoretically and practically by the initiation of the web site: http://sustainabletechnologiesinleather industry.word press .com and by developing process recipes for some demanded articles on the market, in conformity with the sustainable principles in leather industry.

This site synthetize the multitude of advantages in informing on the chemical authorized products, having as an access and ordering criteria the chemical producer company, the product denomination, its class, the application method, the chemical basis of the product, the active matter and the PH. The data basis also justifies the utility of its need by presentation of the chemical products used in the conventional processes of transforming the hides in finished leathers. This represents also a possibility in exploring the best practices in both, the management system of environment and ways of substitution of the chemical substances or working techniques, for each technological step aside, meaning the curing and stocking of the hides, soaking-liming, tanning, re-tanning, finishing, air emissions, all this justifying the motifs that makes these sustainability strategies needed to be implemented.

Table 2: Selection criteria of the date basis for sustainable technologies in leather industry

Citation order criterion	Chemical processing products	Chemical substances (conventional processes)	The best practices.
Selection's option	Producer	Salt	Environmental system's management
	Product	Sulfates	Substance's replacement
	Clasa de produşi chimici	Sulfides	Water consumption's reduction
	Application	Nitrogen	Curing and storage
	Major basis	Tanning agents	Beam house
	Active matter	Organic solvents	Tanning
	ph	Surfactants	Re-tanning
		Fat liquors	Finishing
		Other re-tanning agents	Air emissions
		Dyestuffs and dye auxiliaries	
		Finishing products	
		Biocides	
		Pesticides	

4.Conclusions

These data were obtained through social dialogue, implemented by the social partners of the European leather industry: industrial COTANCE and industry All-European Trade Union; no other sector involved in the leather value chain has ever prepared such a comprehensive analysis of the environmental and social factors that are involved in the economic growth of the industry at continental level.

The situation that emerges from the analysis of the information collected shows a leather sector is firmly rooted in the territory and deeply committed - in collaboration with partners and public authorities to combining industrial growth with the continuous improvement of working conditions, the generation of wealth in the territory and the enhancement of the quality of life in local communities.

The social situation within the tanneries is characterized, above all, by the fruitful cooperation between the social partners. Apart from the institutional role that the representative bodies of the social dialogue play during collective negotiations, both sides of the European tanning sector also provide the example of how a close cooperation contributes to reinforcing Europe's leather industry against global competition, and to promoting the social values linked to European leather on global markets.

All the efforts made by European tanneries over the years have resulted in improving the sustainability of their production. The excellent results achieved deserve to be valued

more by stakeholders and better incentivized through measures encouraging new and future investments. The environmental and social values demonstrated by European leather help to keep European tanners ahead of international competition.

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THE ABSORPTION OF EU STRUCTURAL AND COHESION FUNDS IN ROMANIA: INTERNATIONAL COMPARISONS AND MACROECONOMIC IMPACT

Zaman Gheorghe [10], Georgescu George [11]

Abstract: The Structural and Cohesion Funds (SCF) represent the most important financial instruments for sustaining the EU Cohesion Policy aimed at achieving the convergence objective by reducing the disparities between the Member Countries i.e. of development gaps, including at the regions level. The financial execution of EU allocations for the programming period 2007-2013 has shown a SCF absorption rate of only 27% in the case of Romania. The study has revealed that, compared to the selected EU Member States, most of them CEE countries, this represents the lowest level of absorption rate. The analysis of this last one position has revealed causes related to the system of European funds management and accessing, common or specific to different stages and levels, but also a series of outer factors, mainly the legislative barriers and the global crisis persistent effects. Because of the lack of satisfactory assessments of the real SCF impact by using econometric models and simulations, the study suggests addressing this issue by studying the relationship between SC funds and relevant macroeconomic indicators.Even Romania stands for a net beneficiary position relative to the EU budget, the macroeconomic impact of SCF has not been significant. The amount of 5.1 billion EUR reimbursed to Romania from SCF, cumulated during the period 2007-2013 represented only 2% of the GFCF and 0.6% of the GDP. It was found that the main macroeconomic indicators in terms of employment, foreign investments, external debt and public debt have deteriorated over the period, the absorption of SCF having not the strength to counterbalance these negative trends, due mainly to the persistence of the crisis effects. As concerns the exercise 2014-2020, the lessons learned from the previous programming period, along with addressing Romania's economic vulnerabilities and under favorable circumstances of the international context, a significant improvement of SCF absorption rate is expected, increasing also their macroeconomic impact.

Key words: Cohesion Policy; EU allocations vs. EU reimbursements; pay rate; absorption rate; EU funds macroeconomic impact.

JEL Classification: E22, F15, F36, F43, O19

1. Introduction

In the context of the efforts aimed at improving the competitiveness of the EU as a whole, the European cohesion policy is the most important financial instrument to support the objective of the Member States convergence, namely to promote economic and social cohesion by reducing disparities, starting from the regional level.

The convergence objective includes as eligible the NUTS 2 regions where GDP per capita (at purchasing power standard - PPS) is less than 75% of the EU average and is

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characterized by a relatively low level of infrastructure development, investments and related business services.

In Romania's case (as in Poland, Bulgaria, Slovakia and the Baltic countries) the whole territory (actually all regions) has been declared as eligible for EU funding under this objective.

For the exercise 2007-2013, in support of this policy, a budget of 347 billion euros has been allocated (over one third of the total EU budget) out of which 201 billion euros by the European Regional Development Fund (ERDF) and 76 billion euros by the European Social Fund (ESF), also known as Structural Funds (SF) and 70 billion euros from the Cohesion Fund (CF).

In addition to SF and CF, the European Union promotes separate policies of rural development and fishery, financially supported by the European Agricultural Fund for Rural Development (EAFRD), European Agricultural Guarantee Fund (EAGF) and European Fisheries Fund (EFF), from which Romania also benefits (about 8.4 billion euros for 2007-2013), which are not subject to this study.

Of the total amount of EU Structural and Cohesion Funds for the period 2007-2013, 19.2 billion euros have been allocated to Romania, out of which 9 billion euros by the ERDF, 3.7 billion euros by the ESF and 6.5 billion euros by the CF. Divided by the number of Romania's population these commitments stood around 900 euros per capita, representing (along with Bulgaria) the lowest level compared to other countries of Central and Eastern Europe, which benefited from EU allocations per capita about twice as high.

These EU grants are intended to co-finance projects (on programs, priority axis, major areas and actions) in a proportion of up to 85%, being supplemented by allocations from national budgets and private contributions from beneficiaries. In the case of Romania, the corresponding ante-calculated contribution from the national budget stood at a level of about 4.3 billion euros, raising the total amount allocated to structural and cohesion funds for the period 2007-2013 to 23.5 billion euros.

2. SCF absorption in Romania compared to other EU Member Countries in 2007-2013

The architecture of the EU budget on the expenditure side should be based on the assessment of financial efforts in order to achieve the objectives taking also into account the capability of each Member State to attract structural and cohesion funds (SCF).

The experiences of the previous years, and also of the 2007-2013 periods have revealed significant differences between the amounts allocated and respectively reimbursed by the Community budget, which have created difficulties for achieving the convergence objective and for reducing development gaps, implicitly of improving the UE competitiveness in the context of increasing competition pressure on global markets.

At EU level, the cumulative payments from SCF to Member States (advances + interim payments) in the years 2007 to 2013, accounted for only about 60% of the total allocations, which (except for the implications of the n+2 rule i.e. respectively the extension by two years of the period of spending the amounts allocated in the year n) would mean that an amount of about 140 billion euros remained unspent over the period (Table 1).

The European Commission data show that by the end of 2013, Romania attracted about 7 billion euros (advances + interim payments) out of the total 19.2 billion euros of EU allocations for 2007-2013, representing a pay rate of only 36.7%, the lowest among the countries of Central and Eastern Europe taken in comparison (to which was added Italy, which has four regions eligible under the convergence objective).

Poland has succeeded to attract about two thirds of the funds allocated, in absolute terms representing almost 45 billion euros, or 6 times more than Romania.

Other countries such as the Czech Republic, Slovakia, Italy and Bulgaria have registered a pay rate of about 50% of the EU allocations and Hungary, with a pay rate of nearly 60% being around the EU average.

Table 1

**SCF pay rate and absorption rate in selected EU Member Countries
cumulative in the years 2007 to 2013**

Country	EU Allocations (mil.EUR)	EU Payments (mil.EUR)	EU Reimbur-sements (mil.EUR)	SCF Pay rate (%)	SCF Absorbtion rate (%)
(0)	(1)	(2)	(3)	(4) = (2):(1)	(5) = (3):(1)
Bulgaria	6,673.6	3,225.3	2,666.3	48.3	40.0
Czech Republic	26,539.7	12,973.8	11,068.8	48.9	41.7
Italy	27,955.9	13,535.9	11,906.5	48.4	42.6
Poland	67,185.5	44,784.4	39,387.2	66.7	58.6
Romania	**19,213.0**	**7,055.9**	**5,088.6**	**36.7**	**26.5**
Slovakia	11,498.3	5,523.6	4,968.5	48.0	43.2
Hungary	24,921.1	14,584.9	12,069.1	58.5	48.4
EU 27	**347,563.3**	**208,920.2**	**184,244.6**	**60.1**	**53.0**

Source: own calculations based on *Financial execution by period/fund/country*, European Commission Inforegio.

Regarding the SCF absorption rate calculated by dividing the EU Reimbursements to EU Allocations, it is worth mentioning that the EU 27 average was 53% over the period 2007 to 2013, being overtopped only by Poland among selected countries, by almost 59%. Most of the other countries that have been taken into consideration recorded a SCF absorption rate between 40% and 43%. Romania, with an absorption rate of 26.5% stood on the last position, with a difference of over 10 percentage points from the pay rate, which means, in addition to low level of repayments, the slow pace of financial execution of interim payments i.e. of projects implementation.

Looking at the proportion of EU payments in relation to EU allocations for each of the three structural and cohesion funds (Table 2), no substantial differences in the EU 27 pay rate average at the level of the total of each fund are seen. The pay rate of ERDF envelope is around it, in the case of ESF is slightly higher (by 3.3 pp) and of CF slightly lower (by 5.7 pp). From this point of view, Romania ranked on the last position in all three funds pay rate, with differences between 20 pp to 24 pp below the EU 27 average.

Table 2

**The pay rate breakdown on ERDF, ESF and CF
in selected EU Member Countries cumulative in the years 2007 to 2013**

- % -

Country	ERDF	ESF	CF
Bulgaria	50.41	54.73	42.08
Czech Republic	47.62	49.95	50.43
Italy	45.04	58.66	…
Poland	71.21	70.32	57.95
Romania	**36.39**	**40.35**	**35.15**
Slovakia	55.07	46.89	37.47
Hungary	64.39	55.88	51.05
EU 27	**60.74**	**63.40**	**54.69**

It should be noted that Poland exceeds the threshold of 70% of the pay rate in relation to the ERDF and ESF allocations, with a lower pay rate of CF (about 58%). Hungary has recorded a pay rate above the EU 27 average for ERDF (64.4%), but lower in the cases of ESF and CF (56% and 51%).

Deepening the analysis for the ESF, for which some data are available, and examining the breakdown of EU payments on advances and interim payments allow the revealing of a picture closer to the reality of funds absorption status.

Table 3

The breakdown of ESF payments on advances and interim payments in selected EU Member Countries cumulative in the years 2007 to 2013

- % of ESF allocations -

Country	Total	Advances	Interim payments
Bulgaria	54.7	9.0	45.7
Czech Republic	52.1	9.0	43.1
Italy	61.7	7.5	54.2
Poland	70.3	8.7	61.6
Romania	**40.7**	**13.0**	**27.7**
Slovakia	46.9	9.0	37.9
Hungary	55.9	13.0	42.9
EU 27	**64.1**	**8.4**	**55.7**

* status on 30.11.2013

The amounts advanced by the EU to co-finance projects stood in the margins approved at the Community level (ceiling of max. 13% out of total allocations). In the case of ESF, the average EU 27 ratio of interim payments was 55.7% (Table 3). Romania, with a rate of 27.7%, exactly half the EU average, is far behind on the last position, followed by Slovakia (38%).

Contrary to the general impression that Bulgaria would share with Romania the last positions in terms of EU funds absorption capacity, it registered a ratio of 45.7% interim payments in the total ESF allocations, more than Czech Republic and Hungary (about 43 %). The only country among Central and Eastern Europe above the EU average is Poland, with a ratio of 61.6%.

The annual chart of interim payments in the years 2009 to 2013 reveals a completely non-uniform scheduling (Table 4).

In the first two years of the programming period, namely 2007 and 2008, the ratio of interim payments in ESF allocations was virtually zero, including at the EU 27 level, which is explained by the normal time lag of about two years after the launching of EU co-financing programs to interim payments transferred to the Member States in order to support the starting of projects, followed by their execution through reimbursements of expenditures related to projects implementation.

In the period 2009-2013, in most cases, a steady but significant growth of interim payments ratio is recorded as the end of the period got closer. At the EU level, the average

ratio of these payments increased from levels of 6% and 8% respectively in 2009 and 2010 to 12% in 2011, 14% in 2012 and 15% in 2013.

Breakdown on countries, data show differences between Poland and Hungary on the one hand, which have recorded relatively similar ratios of interim payments in 2011, 2012, 2013 and, on the other hand, the Czech Republic, Bulgaria and Romania whose ratios went up in 2013, surpassing the accumulated ratios throughout the years 2009 to 2012.

Table 4

ESF interim payments in selected EU Member Countries in the years 2009 to 2013

- % of ESF allocations -

Ţara	Total 2009 to 2013	2009	2010	2011	2012	2013*
Bulgaria	45.7	0	3.6	7.4	11.5	23.3
Czech Republic	43.1	0	6.1	6.4	7.9	22.7
Italy	54.2	6.6	4.8	10.2	16.4	16.1
Poland	61.6	5.5	9.7	16.3	16.6	13.5
Romania	**27.7**	**0**	**0.6**	**5.0**	**3.0**	**19.0**
Slovakia	37.9	1.8	3.1	9.4	16.5	7.1
Hungary	42.9	3.1	1.9	15.4	10.4	12.0
EU 27	**55.7**	**6.1**	**8.3**	**12.4**	**14.0**	**14.7**

* status on 30.11.2013

Source: *ESF 2007-2013 Advances + Interim Payments,* European Commission Inforegio, February 2014.

The international comparison regarding the absorption rates of EU financial instruments in 2007-2013 has revealed, with smaller or larger differences between countries, an average discrepancy of 39.9 percentage points compared to allocations for payments and 47 pp respectively for reimbursements.

3. Main causes explaining the low absorption rate of SCF in Romania

We believe that, in the case of Romania, a primary factor that contributed to a low absorption rate of structural funds were the inherent difficulties of a new exercise (and new tools) generated by an unprecedented mechanism of funds managing, accessing and implementing.

The analysis of the main causes of the low absorption rate of SCF allocated to Romania in 2007-2013 has revealed that they are found within the management and accessing system of European funds but also suffering from the outer factors influence (see Figure 1).

Among the causes manifested at the Managing Authorities level, based on the analysis of OP implementation reports, the study identified as having a major impact on the absorption capacity for all operational programs, but specific on different stages of accession: lack of staff professionalism; disincentive payroll; projects calls overlapping; poor technical assistance; unclear provisions of guidelines, standards, methodologies; lack of coordination and correlation between the Operational Programs; excessive bureaucracy; failure of tracking the objectives sustainability; malfunction of financial monitoring system ex ante and ex post. To these were added irregularities discovered in the process of funds accessing, leading the European Commission to temporary suspension or to total or partial pre-suspension of Operational Programs.

At the beneficiary level, the analysis has revealed a number of causes explaining the low degree of SCF absorption in Romania manifested in the stages of preparation, submission, contracting and implementation, such as: poor expertise in making projects;

errors in documents submitted; adverse effect of measures to reduce bureaucracy; slowness of decision-making process of local governments beneficiaries; improper conduct of public procurement procedures; overvaluation of projects financing and implementation capacity from the part of many beneficiaries; changes in technical solutions; the limited capacity of management of works / services within projects and the lack of clauses in terms of complying with quality and timetable requirements.
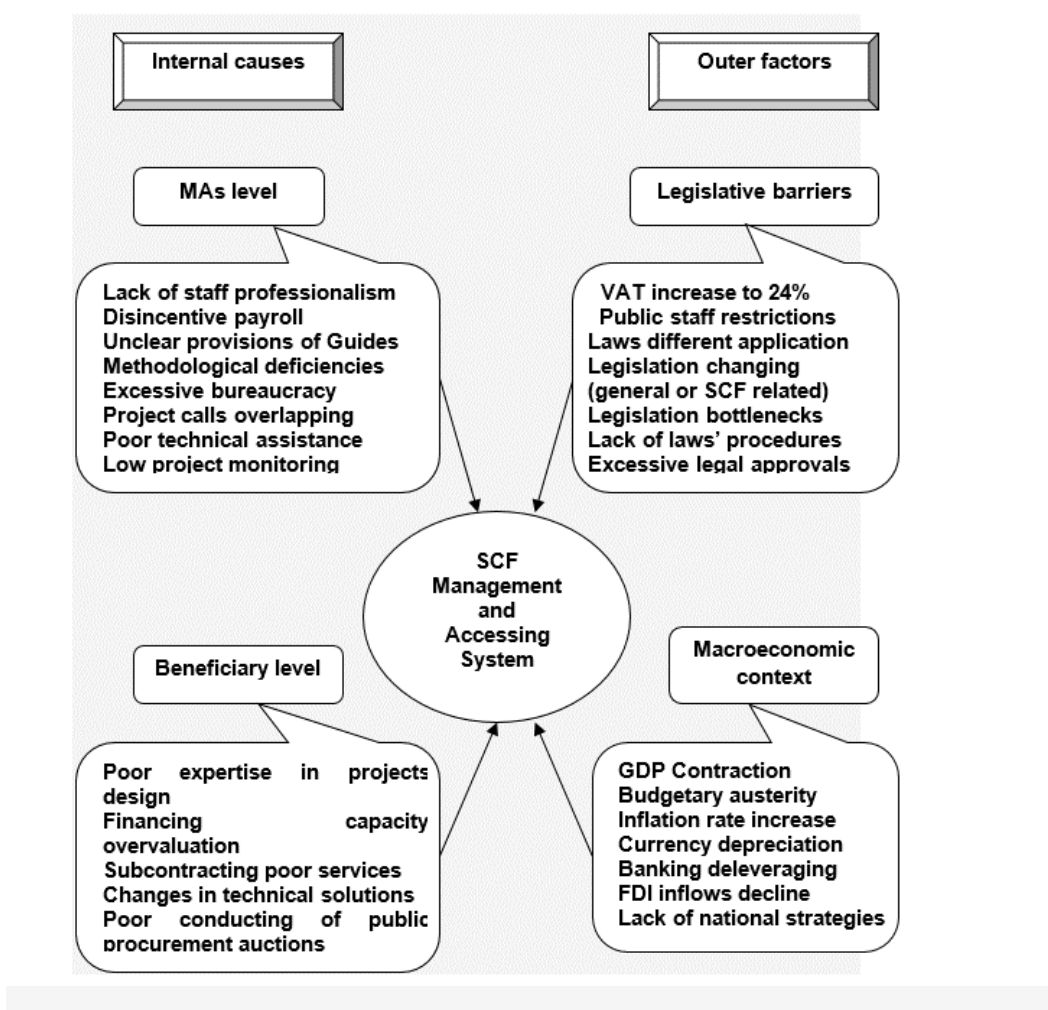
Figure 1

The SCF absorption capacity has been negatively affected by factors from outside the system, mainly the different ways of legislation application and interpretation, particularly the public procurement, legislation changing during SCF accessing procedures, legislation bottlenecks, the VAT increase. Under the circumstances of the lack of national strategies, the extension of global crisis effects along with GDP decline, inflation rate increase and currency depreciation, decrease in FDI inflows and lending contraction has deteriorated the financial situation of projects beneficiaries, including the public local authorities, under the low involvement of the banking system in covering the financial shortages.

4. The SCF impact on macroeconomic indicators of Romania

The issue of SCF impact has been mostly approached through econometric models and simulations trying to assess the GDP growth basically in two scenarios i.e. "with EU funds" and "without EU funds" respectively. More common are HERMIN model (Bradley et al., 2007), GIMF model (Allard et al., 2008), QUEST model (Varga and in 't Veld, 2010) and other models derived, on specific country cases, from these ones. Based on optimistic assumptions, all these models estimated positive effects of SCF on economic growth, some times spectacular.

However, some authors have drawn attention on results inconsistency due mainly to models failures in reflecting the complexity of economic growth and convergence processes (Barca, 2009, p. 87). Other authors showed that the methodological issues encountered are very difficult, the estimates representing only a potential impact that could be compromised by the funds absorption realities (Marzinotto, 2012, p. 12). The results of HEROM model (Romanian version of HERMIN, Unguru et al., 2007) were criticized by Zaman and Georgescu, because of questionable assumptions. The evaluation of SCF impact in Romania using macroeconomic models and simulations have proved totally unrealistic, if considering only the cumulative additional GDP growth between 13% and 37% estimated by different authors in scenarios with European funds.

Table 5

The relationship between SCF and macroeconomic indicators of Romania over the period 2007-2013

MCROECONOMIC INDICATORS*		Cumulated for the period 2007 to 2013
Gross Domestic Product	EUR bn.	907.3
Gross Fixed Capital Formation	EUR bn.	243.4
SCF allocated	EUR bn.	19.2
SCF reimbursed	EUR bn.	5.1
Foreign Direct Investments net inflows	EUR bn.	29.1
INDICATORS IN RELATIVE TERMS		
SCF allocated / GDP	%	2.1
SCF allocated / GFCF	%	7.9
SCF reimbursed / GDP	%	0.6
SCF reimbursed / GFCF	%	2.1
SCF reimbursed / FDI net inflows	%	17.5

Source: Calculations based on data from EUROSTAT, National Bank of Romania and National Commission of Prognosis.

In value terms, Romania received reimbursements related to SCF from the EU budget amounting to 5.1 billion euros over the period 2007-2013. In relative terms, the impact of these funds on the economy has not been significant, representing only 0.6% of GDP over this period and 2.1% of gross fixed capital formation (Table 5). In fact, due mainly to

the crisis effects, many macroeconomic indicators of Romania have deteriorated over the period 2007-2013, among them the external debt and the public debt, the SCF having not enough consistence in order to change this unfavorable trend.

The studies focusing on European funds absorption do not usually take into account the interface with the foreign investments. In our view, both SCF and FDI have to be considered from the standpoint of their interference because higher FDI inflows could be a prerequisite for successful implementation of SOP and the creation of new opportunities to develop further favorable spillover effects at regional, national and EU levels.

Compared to other macroeconomic indicators in relative terms, the ratio of SCF reimbursed to FDI net inflows is much more significant in the case of Romania. However, it should not be neglected the more volatile character of FDI in comparison with the EU financial instruments. Another specific feature of FDI consists in the fact that developed areas are more attractive for foreign investors, leading to a high degree of concentration and of regional gap deepening. Trans-boundary growth poles and infrastructure developments supported by SCF could improve the business environment and, by attracting more FDI, create conditions for a better territorial distribution and for reducing the regional discrepancies.

5. Challenges and opportunities for the exercise 2014-2020

At the end of the financial exercise 2007-2013 the results in achieving the Member States convergence, the main priority of the EU Cohesion Policy, were not satisfactory.

The lack of progress in reducing disparities between regions within the EU, and the fact that just opposite trends have occurred, i.e. the increase in regional disparities (European Commission, 2014b) led Brussels authorities to major shifts in the Cohesion Policy for the programming period 2014-2020, in order to achieve a greater impact, in terms of growth and jobs (European Commission, 2014a, c). The new approach of the EU Cohesion Policy is seen also by renaming the financial instruments, respectively from Structural and Cohesion Funds (SCF) into European Structural and Investment Funds (ESIF). Although one might expect a significant improvement of Romania' position in terms of ESI funds allocations for 2014-2020, as shown in Table 6, the level of about 1150 euros per capita remains (along with Bulgaria) marginal compared to other countries of Central and Eastern Europe: as against Romania, the EU allocations per capita are 2.3 times higher for Slovakia, 1.9 times for Hungary, 1.8 times for Czech Republic and Poland.

	EU allocations (mil. EUR)	EU allocations per capita % (EU=100)	(EUR)	% (Romania=100)
Bulgaria	7588.4	2.16	1042.4	90.8
Czech Republic	21982.9	6.25	2091.6	182.1
Croatia	8609.4	2.45	2021.0	176.0
Hungary	21905.9	6.23	2210.5	192.5
Poland	77567.0	22.05	2013.2	175.3

Romania	**22993.8**	**6.54**	**1148.5**	**100.0**
Slovakia	**13991.7**	**3.98**	**2586.3**	**225.2**
EU 28	**351854.2**	**100.00**	**695.9**	**60.6**

Table 6

**Total EU allocations of Cohesion Policy for 2014-2020
in selected EU Member Countries**

Source: calculations based EUROSTAT data

Compared to other CEE countries with higher economic performances, as Jedlička showed (2014, p. 5), Romania and Bulgaria received fewer grants - expressed per capita - than would be needed to accelerate their convergence. One explanation, asserts Jedlička, consists in the fact that the other countries have been more successful in negotiations with the EU, which, in subtext, refers to the low level of absorption rate in the previous period and to the poor ability from the part of the Romanian and Bulgarian authorities of arguing the necessary funds size during the dialogue with the European Commission.

The Romanian government sent to Brussels, in April 2014, the Partnership Agreement for the 2014-2020 programming period which includes the main measures to be taken to comply with the Europe 2020 Strategy on smart, sustainable and inclusive growth and to the use of structural instruments in order to achieve the EU objectives regarding the economic, social and territorial cohesion of Member States.

Under the circumstances of the new result-oriented EU Cohesion Policy, based on principles of funds efficient implementation and of ex-ante conditionalities, the elaboration of this document started from the analysis of Romania's existing gaps, growth potentialities and sustainable development needs.

In this context, key development challenges that require strategic investments in the areas of competitiveness and local development, transport and ICT infrastructure, natural resources, especially energy, administrative capacity of public institutions were identified.

In order to reduce the economic and social disparities between Romania and EU countries, also at regional level, taking into account the macroeconomic situation and the national and sectoral policies and strategies, funding priorities for the use of EU allocations were set up.

6. Conclusions

The absorption rate of structural and cohesion funds allocated to Romania in 2007-2013 stood at a low level compared both to authorities and people's expectations and the other EU Member States because of the deficiencies within the funds management and accessing system but suffering also the impact from the outside factors.

The analysis of the main causes of the SCF absorption has revealed the importance of depoliticize the public administration, improving the professionalism of institutions' staff, including of MAs, reducing bureaucracy and simplifying the procedures for European funds accessing, increasing the transparency and restoring the confidence among the various levels of central and local governments.

The impact of SCF absorption on macroeconomic indicators of Romania over the period 2007-2013 has not been significantly relative to GDP, gross fixed capital formation or to alleviating the financing gap increase.

For the programming period 2014-2020, the EU Cohesion Policy has a new vision, in order to achieve a greater impact in terms of economic growth and job creation, under the context of Europe 2020 Strategy. There are many lessons to be learned by Romania from the 2007-2013 experience in order to increase the ESI funds absorption rate in the current

financial exercise, with potential positive outcomes for both the actors in the system (management authorities, beneficiaries of private sector, NGO, public authorities) and the economy, at overall and regional levels.

Reducing development gaps and the entry into a convergence trend require the priority orientation of European funds to disadvantaged regions, which are characterized by a lower capacity to absorb funds. In the 2014-2020 programming period, a better coordination of projects aimed at infrastructure, transport, employment and social inclusion, rural population at regional / county level with sectoral strategies on investment in education and social infrastructure, and that between different EU funds or the complementarity between them and the one with other funds are expected.

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A NEW CLASSIFICATION OF ROMANIAN COUNTIES BASED ON A COMPOSITE INDEX OF ECONOMIC DEVELOPMENT

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Abstract: *This paper is dealing with the problems concerning the improvement of regional classifications by using a composite index of economic development which encompasses four individual indicators: GDP/capita, labour productivity, FDIs and life expectancy. Our aim is to offer a better methodology and a multi-sided image on the regional development, from the perspective of two major factors of influence: Romania's accession to EU and the recent economic crisis. A special attention should be paid to the hierarchical position of each influence factor. Depending on the specific factor mix, we try to draw conclusions regarding the relationship between economic resilience and vulnerability of each regional economy. The new approach based on the composite index's computation has the advantage of providing a unique answer on problems such as unclear hierarchies or even contradictory results emerging from different classifications that use separate indicators. The study is covering the 2001-2012 period, divided into two sub-periods: 2001-2006 (pre-accession) and 2007-2012 (post-accession).*

Keywords: *economic development, composite index, classification, regions, Romania*

JEL classification: *O18, R11*

1. Typological categories of regional growth and decline

Regional science has imposed widespread use of rigorous methods for analyzing phenomena and processes where space plays a significant role. Analysis of territorial growth profiles for a medium-developed country like Romania raises different issues compared to developed countries (Barca et al., 2005; Dincă, 2005; Banciu, 2006; Constantin and Constantinescu, 2010; Ailenei et al., 2012; Antonescu, 2012). It is about the different stages of the process of sustainable economic growth, which in the case of Romania rather reflect the increase of relative and absolute gaps. It is important that these rising disparities take place in the context of economic performance increases, both regionally and locally. From the perspective of regional statistics, Romania is currently an assembly of eight development regions NUTS 2, of which seven are below 75% of the EU-28 level of GDP per capita. This requires a thorough multicriterial analysis of regions' specificities and inter-regional disparities, although territorial disparities are lower in Romania than in many other European Union countries (Goschin et al., 2008; Nahtigal, 2013).

Given the need to analyze these issues in a territorial context and to offer improved tools for regional analysis to practitioners and economic decision makers, in this paper we present and apply a regional economic typology (Zaman and Goschin, 2005) based on the development levels of regions at a given time and their evolution over different time periods. The results may be useful to policy makers at central and local levels in order to underpin regional development policies and local development projects that can support efforts to reduce the growing disparities.

The theoretical and practical interest of the method applied in this paper consists in the possibility of combining the static and dynamic analysis for performing a comparative analysis of regional levels of one result variable against the average at national level at a certain moment (static aspect), as well as for comparing the evolution in time (growth rate) of regional levels against the national average (dynamic aspect).

This typology of regional growth might be employed for any result indicator recorded at regional level by using the absolute level of the indicator at a certain moment, as well as the growth rate of the same indicator for a given period. Correlating this information, each region is included into a certain type of economic evolution (Table 1) depending on the position it holds in relation to the average level and dynamics of the national economy.

Table 1: Typology of regional growth and decline

Typology of regional growth		
Level of regional indicator against national average	**Growth pace of regional indicator against national average**	
	Above average	Under average
Above average	*Developed regions on increase* (DI)	*Developed regions on decline (DD*)
Under average	*Underdeveloped regions on increase (UI)*	**Underdeveloped regions on decline (UD)**
Typology of regional decline		
Level of regional indicator against national average	**Decrease pace of regional indicator against national average**	
	Above average	Under average
Above average	*Developed regions on fast decline* (DFD)	*Developed regions on slow decline (DSD*)
Under average	*Underdeveloped regions on fast decline (UFD)*	*Underdeveloped regions on slow decline (USD)*

Source: adapted from Zaman and Goschin (2005)

In order to characterise the economic development at regional and national levels a widely used indicator is the Gross Domestic Product, which represents a barometer for the favourable/unfavourable evolution of the economy. When the result indicator (GDP) is associated to population, at regional and national levels (for instance under the form of GDP per capita) we obtain a sui-generis image of the economic-social development level. When GDP is associated to an effort indicator (for instance employment, investments, fixed assets, research-development expenditures, etc.), we obtain an assessment of the regional and national efficiency and development level, useful for understanding the synthetic economic effects achieved as a result of resources consumption lato sensu. Applied to concrete data for various regional disaggregation levels, this method confers to decision makers information for designing the economic policy mix based on the ranking of each region into a certain type of economic evolution.

When the regional typology is defined as depending on the GDP per capita indicator, the level of the indicator on each region (GDPR/cap) is compared to the national average (GDP/cap), and the percentage growth of GDP per capita at regional level ($R_{GDPR/cap}$) to the average growth rate recorded for overall economy ($R_{GDP/cap}$) as well.

As result of corroborating the regional level and dynamics of GDP/capita against the national ones, we obtained four regional categories for which the main characteristics shall be presented in the following.

a) Developed regions on increase are placed above the national average as regards both the absolute level of the indicator (GDPR/cap >GDP/cap) and its dynamics ($R_{GDPR/cap}$ > $R_{GDP/cap.}$). These regions practically rise to economic decision making process the issue of continuing to maintain the swift dynamic on different time horizons, so as to avoid the overheating phenomenon, as well as the risk of slow-down and decline. In this context it is necessary to take into account the possible impact of the business cycle, the determinants of which might be of economic-social nature, but of technological or environmental nature as well. As a rule, these regions have a strong driving effect and are regarded as growth "engines" for the overall economy.

b) Developed regions on decline have a GDP per capita level higher than the national average (GDPR/cap > GDP/cap), but their growth rate is below average ($R_{GDPR/cap}$ < $R_{GDP/cap}$). This slowness is caused by various factors whose action could no longer be offset and lay in front of the decision makers the need to restructure the existing activities and to create some new competitive activities with positive effects.

c) Underdeveloped regions on increase are those aiming to recover the gaps against the mean level of GDP per capita by having a growth rate above the average one (GDPR/cap < GDP/cap and $R_{GDPR/cap}$ > $R_{GDP/cap}$). Their future development strategy needs to maintain a dynamic that allows to partially or entirely recover the gap and even to exceed the average level, which could allow them to enter the category of developed regions on increase.

d) Underdeveloped regions on decline have a GDP per capita level below average, but cannot diminish or recover this gap because their growth rate is lower than the national mean (GDPR/cap < GDP/cap and $R_{GDPR/cap}$ < $R_{GDP/cap}$). As a consequence, the distance separating them from the average is continuously growing, these regions representing the most unfavourable case, to which special attention should be paid, because the worsening of their economic-social situation might unfavourably influence the entire national economic complex. The problem of underdeveloped regions is chronic and requires state's support at local and regional levels, as well as the creation of an attractive business climate for foreign investments, through economically developed areas, technological parks, free zones, etc.

These underdeveloped regions are a priority to the macroeconomic decision board from the viewpoint of stimulating private business, and avoiding possible critical crisis situations and social tensions. In addition, the issue of investments in education and social fields emerges, and it cannot be solved but by means of some efficient public-private partnership schemes, taking into account that the private sector usually is targeting only the profit.

An absolutely special interpretation, in the frame of the depicted regional typology, would require the cases in which the growth level and/or rhythm from a region is equal to the national one, resulting some particular situations: *average level regions on increase* (GDPR/cap =GDP/cap and $R_{GDPR/cap}$ > $R_{GDP/cap}$) or *on decline* (GDPR/cap =GDP/cap and $R_{GDPR/cap}$ < $R_{GDP/cap}$) that reached an average level of GDP per capita either by climbing up the regional hierarchy from the position of underdeveloped region, or downgrading from the category of developed region; *stagnant developed regions* (GDPR/cap > GDP/cap and $R_{GDP/cap}$= $R_{GDP/cap}$) that maintain their relative advantage comparatively to the average without recording either progress or decline in the regional hierarchy; *underdeveloped stagnant regions* (GDPR/cap < GDP/cap and $R_{GDPR/cap}$ = $R_{GDP/cap}$) also maintain their relative position against the average level, but contrary to the previous category, they are under the average level of economic results per capita.

In the above mentioned cases, a particular practical importance has the quality of economic growth. If the national average growth is high enough, then we might qualify as satisfactory the evolution of regions placed around this average. To the contrary, if this average is low, the regions coming close to it cannot be regarded as finding themselves in a favourable economic-social situation. A case with obvious negative connotations for regions close to the average is when the growth rhythm at national level is negative.

A particular situation within this methodology emerges when the economy is on decline at regional and national levels, and we need to reinterpret the typology under new circumstances. From the perspective of economic recovery strategy and in view of solving economic crises' problems, the identification and monitoring of various cases of economic decline are also important (Table 1).

Since a single indicator is not enough for characterising and classifying complex entities such as the regional economies, we are further going to put together four regional variables in order to build a composite *index of economic development*. In view of compatibility between the selected variables, a normalization procedure should be applied first. Original data on each indicator is transformed as follows:

$$y_{ijt} = \frac{x_{ijt} - \min(x_{jt})}{\max(x_{jt}) - \min(x_{jt})},$$

(1)

where:

y_{ijt} - the normalized value of indicator j for region i in year t;

x_{ijt} - initial value of indicator j, region i and year t.

Converted values range from 0 (worst case) to 1 (best case) for each region/county and for all four indicators.

The composite index of economic regional development (CED) is computed using the weights p_j for normalised values on each variable j.

$$CED_{it} = \frac{\sum_{j=1}^{3} y_{ijt} \cdot p_j}{100}.$$

(2)

The weights of the four standardized variables included in the composite index are as follows: GDP per capita-30%, labour productivity – 20%, FDI -15%, life expectancy -35%. These weights are not exclusive, they might be changed according to different priority settings or preferences.

2. Typological categories of Romanian counties

Starting from the theoretical premises depicted in the preceding paragraph, we have attempted to apply the previously presented methodology for the case of the Romanian counties, for the period 2001-2012 divided, according the date of Romania's accession to EU, into two sub-periods: 2001-2006 (pre-accession) and 2007-2012 (post-accession).

Prior to the computation of the composite index of economic development, it is useful to analyse the level and dynamics of the annual coefficients of variation (CV) among counties for our four variables: GDP/capita, labour productivity, FDI stock and life expectancy. The coefficients of variation are computed by dividing the standard deviation to the average. This indicator measures the inter-county dispersion for each variable analyzed. CV describes the variation of a variable from the mean independently of the measurement unit, allowing meaningful comparisons with other variables. The coefficient

of variation can range between 0 and $\sqrt{n-1}$, **n** being the number of terms in statistical series (number of territorial units in our case). The higher is CV, the more dispersed is the variable. Above unit values, less frequent in the case of economic variables, are indicating a high level of dispersion. Percentage expression of the coefficients of variation can be misleading because the value of CV may exceed unity, resulting percentages higher than one hundred. Therefore we prefer the adimensional form of CV.

Table 1: Annual coefficients of variation for GDP/cap, labour productivity, FDI stock and life expectancy, 1995-2012

| | **Coefficient of variation for:** | | | |
	GDP/cap	**Labour productivity**	**FDI stock**	**Life expectancy**
1995	0.190	0.173	…	0.0172
1996	0.193	0.193	…	0.0175
1997	0.195	0.201	…	0.0171
1998	0.197	0.239	…	0.0161
1999	0.199	0.320	…	0.0152
2000	0.202	0.350	…	0.0148
2001	0.203	0.303	3.001	0.0149
2002	0.198	0.279	3.014	0.0147
2003	0.200	0.259	3.035	0.0149
2004	0.200	0.237	3.128	0.0154
2005	0.199	0.273	3.089	0.0142
2006	0.201	0.266	3.127	0.0127
2007	0.201	0.259	3.107	0.0125
2008	0.204	0.266	3.062	0.0126
2009	0.200	0.268	3.059	0.0129
2010	0.203	0.276	3.023	0.0141
2011	0.207	0.281	2.980	0.0139
2012	0.207	0.291	2.956	0.0133

Source: authors' computations.

Calculations of coefficients of variation for GDP/capita, productivity, life expectancy and the stock of FDI, on an annual basis, in the period 1995-2012 (Table 1) reveal the following:
- changes in territorial per capita GDP are less marked than the variation in productivity and have higher stability, which can be explained by higher territorial variability of employment against total population, mainly as a result of external migration; the dispersion of GDP/capita follows a slightly upward trend, indicating steady increase in disparities at the county level during 1995-2012;
- of the four variables, the productivity records the largest changes; the coefficient of variation calculated for productivity increased from 0.173 in 1995 to 0.350 in 2000; doubling of the coefficient of variation over this relatively short period indicates an intense process of territorial differentiation and rapid growth of productivity gaps

between counties during the transition to market economy; the upward trend was reversed in the next period, amid strong economic growth in 2001-2007, but resumed since 2008;

- the large values of the annual coefficients of variation calculated for the foreign direct investments stock over 2001-2012 show an extremely high level of territorial inequalities; CV enrolled on a slightly downward trend since 2006, the decrease being more pronounced in recent years in the context of severe decline in FDI inflows as a result of the economic crisis; it is worth mentioning that the variations in FDI inflows depend not only on domestic fluctuations, but also, to a larger extent, on numerous external factors of influence.

The level and dynamic of the composite index of economic development calculated for the Romanian counties over 2001-2012 showed that Bucharest Municipality was constantly placed on the first position. The typological categories of the Romanian counties for the period 2001-2006 (pre-accession) are as follows (Table 2):

- ***Developed counties on increase (DI):*** Alba, Arad, Arges, Cluj, Constanta, Ilfov, Prahova, Sibiu, Timis;
- ***Developed counties on decline (DD):*** Bistrita- Nasaud, Brasov, Buzau, Covasna, Galati, Gorj, Harghita, Bucharest Municipality, Mures, Suceava and Valcea;
- ***Underdeveloped counties on increase (UI):*** Bihor, Braila, Dambovita, Ialomita, Iasi, Maramures, Neamt, Tulcea, Vrancea;
- ***Underdeveloped counties on decline (UD):*** Bacau, Botosani, Calarasi, Caras-Severin, Dolj, Giurgiu, Hunedoara, Mehedinti, Olt, Salaj, Satu Mare, Teleorman, Vaslui represent the largest group.

The typological categories of the Romanian counties for the period 2007-2012 (post-accession) are:

- ***Developed counties on slow decline (DSD):*** Prahova, Iasi, Gorj, Arad, Covasna, Constanta;
- ***Developed counties on fast decline (DFD):*** Alba, Suceava, Bistrita-Nasaud, Arges, Sibiu, Vrancea, Cluj, Ilfov, Dambovita, Timis, Brasov, Valcea, Bucharest Municipality;
- ***Underdeveloped counties on slow decline (USD):*** Tulcea, Braila, Bacau, Ialomita, Mehedinti, Satu Mare, Botosani, Vaslui, Teleorman, Neamt, Galati, Buzau, Salaj, Calarasi, Mures;
- ***Underdeveloped counties on fast decline (UFD):*** Harghita, Dolj, Hunedoara, Caras-Severin, Bihor, Maramures, Olt, Giurgiu.

Table 2: Typological categories of the Romanian counties over 2001-2012 according to the composite index of economic development

	2001-2006 (pre-accession)			2007-2012 (post-accession)		
	2001 level	2001-2006 index	type	2007 level	2007-2012 index	type
Alba	0.342	1.034	DI	0.422	0.733	DFD
Arad	0.353	1.023	DI	0.362	0.701	DSD
Arges	0.381	1.221	DI	0.453	0.743	DFD
Bacau	0.300	0.939	UD	0.285	0.527	USD
Bihor	0.249	1.077	UI	0.277	0.767	UFD
Bistrita-Nasaud	0.357	0.981	DD	0.351	0.740	DFD

Botosani	0.182	0.988	UD	0.207	0.592	USD
Braila	0.321	1.025	UI	0.345	0.520	USD
Brasov	0.505	1.006	DD	0.534	0.825	DFD
Buzau	0.350	0.897	DD	0.333	0.692	USD
Calarasi	0.201	0.826	UD	0.183	0.701	USD
Caras-Severin	0.254	0.929	UD	0.248	0.748	UFD
Cluj	0.466	1.025	DI	0.529	0.767	DFD
Constanta	0.343	1.258	DI	0.394	0.725	DSD
Covasna	0.432	0.765	DD	0.350	0.704	DSD
Dambovita	0.315	1.022	UI	0.354	0.777	DFD
Dolj	0.289	0.947	UD	0.295	0.741	UFD
Galati	0.375	0.862	DD	0.334	0.660	USD
Giurgiu	0.244	0.686	UD	0.150	0.999	UFD
Gorj	0.416	0.985	DD	0.448	0.674	DSD
Harghita	0.375	0.890	DD	0.334	0.739	UFD
Hunedoara	0.282	0.947	UD	0.288	0.746	UFD
Ialomita	0.268	1.022	UI	0.254	0.533	USD
Iasi	0.327	1.043	UI	0.366	0.658	DSD
Ilfov	0.499	1.304	DI	0.595	0.771	DFD
Maramures	0.180	1.200	UI	0.225	0.783	UFD
Mehedinti	0.289	0.809	UD	0.242	0.567	USD
Bucharest Municipality	1.000	1.000	DD	1.000	0.957	DFD
Mures	0.348	0.936	DD	0.332	0.712	USD
Neamt	0.274	1.116	UI	0.323	0.631	USD
Olt	0.280	0.665	UD	0.216	0.905	UFD
Prahova	0.384	1.161	DI	0.460	0.654	DSD
Salaj	0.222	0.990	UD	0.253	0.694	USD
Satu Mare	0.099	0.943	UD	0.087	0.576	USD
Sibiu	0.415	1.054	DI	0.455	0.760	DFD
Suceava	0.342	1.005	DD	0.359	0.734	DFD
Teleorman	0.294	0.671	UD	0.227	0.599	USD
Timis	0.441	1.160	DI	0.515	0.796	DFD
Tulcea	0.128	2.103	UI	0.248	0.285	USD
Valcea	0.433	0.950	DD	0.428	0.954	DFD
Vaslui	0.222	1.000	UD	0.241	0.592	USD
Vrancea	0.296	1.189	UI	0.352	0.763	DFD
Average	0.335	1.008		0.349	0.729	

Source: authors' computations.

As it results from the comparative approach of the two sub-periods, the main conclusion which could be drawn is that the global impact of the economic crisis that hit the Romanian economy could not be countered by the expected benefits of integration and advantages of the enlarged EU market. Even worse, some state that the impact of crisis and integration is overlapping in the same negative direction because, as it is revealed by the experience of new-comers to EU, there is an period of accommodation and difficult interface between the new members and EU market rigours, resulting in initial economic decline as the price paid for integration.

It is not less important to acknowledge the territorial variation in the severity and duration of economic decline under the circumstances of a different set of vulnerabilities and resilience. The best example of resilience is the Bucharest Municipality, owing to its relatively high level of economic and social development. On the opposite, weaker resilience and higher vulnerabilities are specific for most counties in North-East and South-East of Romania because of their lower level of development. A factor having important impact on lower robustness for the developing areas of Romania is the negative influence of labour force emigration, especially from less developed zones, having scarce business and employment opportunities and low-paid jobs.

The main advantage of using a typology based on this composite index of development, instead of individual indicators, consists in a more complex, multi-sided approach of regional classification of economic and social development, but it is also noteworthy the potential loss of information, as bringing together several indicators may partially level the differences between counties.

4. Conclusion

The paper offered a new approach of regional classifications, based on a composite index of economic development which encompasses four individual indicators: GDP/capita, labour productivity, FDIs and life expectancy. The method has the advantage of providing a unique answer on problems such as unclear hierarchies or even contradictory results emerging from different classifications that use separate indicators. The study covered the 2001-2012 period, divided into two sub-periods: 2001-2006 (pre-accession) and 2007-2012 (post-accession). The results revealed that the two sub-periods display distinct trends, as the pre-accession period recorded a clear trend of overall economic growth, although the underdeveloped counties on decline represented the main group, while the second period was impacted by the effects of the global economic and financial crisis. The main conclusion which could be drawn is that the global impact of the economic crisis that hit the Romanian economy could not be countered by the expected benefits of integration in the EU market.

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SECTION: ECONOMICS, BUSINESS ADMINISTRATION, TOURISM AND STATISTICS

SUB-SECTIONS: BUSINESS ADMINISTRATION, ECONOMIC STATISTICS AND MODELLING, TOURISM

IS THERE EVIDENCE OF A EUROPEAN LIFESTYLE ENTREPRENEUR IN TOURISM?

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Abstract: *Entrepreneurship is a very important field for research, due to its contribution to development and growth. Moreover, investigating particular features of entrepreneurs in different sectors would be an important point to further policies to fostering entrepreneurship. This paper investigates the specific traits of entrepreneurship in tourism, particularly questioning of the evidence of a different type of entrepreneur in tourism. As literature proposes the model of a "lifestyle entrepreneur" in tourism, we focus on testing this hypothesis by using the data available in EUROSTAT database on "Enterprises managed by the founder". Based on evaluating empirical data that would support this idea, we find the conclusion that there is not enough evidence to support the idea of a more family-motivated and not only profit-oriented entrepreneur in tourism.*

Key words: tourism entrepreneur; lifestyle entrepreneur; tourism; EU and Romania

JEL Classification: M13, L26

1. Introduction

The nature of entrepreneurship, the entrepreneur's attributes and personality traits have been extensively studied in the last century, but the variety of approaches, methods and influences express a lot about the impossibility of consensus in this regard. Ever since the first systematic research on entrepreneurship, it has been associated with development. Thus, the entrepreneur was considered as an intermediary combining goods and services demanded on the market (Cantillon 1730, 1959), as risk undertaker (Say 1880, 2001) or capitalist-entrepreneur employing production factors, assuming risks and carefully analyzing the market developments (Turgot), because his/her entire business is based on anticipating consumers' desires to whom the production results are intended. Classics (e.g. Smith, Ricado or Mill) are more succinct, they rather see the entrepreneur in terms of "business management", even if Mill shows that entrepreneurship requires "special qualities". The importance of entrepreneurship was first officially recognized by Alfred Marshall, who stated that the organization is the coordinating factor of productive inputs and the entrepreneur is the leading factor within the organization. Marshall shows that qualities associated with a good entrepreneur are rare and limited, "so large and numerous that very few people can accumulate in a truly effective way" (Burnet 2000). This contractor is the employer of human resources, a leader of others, but their deep business knowledge, to take bold risks, continued to seek opportunities that lead to lower costs. The economist most associated with entrepreneurship theory is Joseph Schumpeter (Formaini 2001), who considered that the entrepreneur does not necessarily discover things or goods, but exploit in an innovative way things that have already been invented, so he or she makes a "creative destruction" and brings up new industries, while obsolete industries retire or disappear.

Frank Knight, addressing entrepreneurship theory, makes a clear distinction between risk and uncertainty, and consider that the role of entrepreneur is to assume uncertainty about these events and even to protect the other shareholders of firm effects of the event. Later, Knight insists that entrepreneurs are owners of the company *(residual claimants)* and thus they are entitled to profit. For Kirzner, businesses suffer from an "utter ignorance", they

simply do not know what useful information are available and the contractor, always alert, discover and exploit new opportunities and removes a part of its "utter ignorance" (Iversen et al 2008). For Kirzner, the entrepreneur is a pure governor, who has no property. Gilder believes that the real economy is the creation of entrepreneur and entrepreneurial activity and not multinational corporations, economic policy and political compromises, which suppress simple and creative energy and enthusiasm of individual entrepreneurs. Gilder calls often irrational entrepreneurship as a process, carried on by "orphans and outcasts" conducted in a hostile environment. Schultz argues that entrepreneurship is in every aspect of human existence, and student and housewife are entrepreneurs they reallocate their time and try to use it better for learning activities or household. Casson tried to meet the definitions of Schumpeter and Knight by affirming the idea that the entrepreneur is that person trained to make decisions. Mark Casson defines the entrepreneur as someone who has different skills that allow him/her to make value judgments for the intelligent use of scarce resources, make difficult decisions on supply and demand forecasting under uncertainty, and is able to claim as a reward profit. William Baumol considers the entrepreneur as assuming two functions: the Schumpeterian innovator and the modern manager (Aidis 2003). Baumol argues that the entrepreneur does not disappear and reappear, the number of productive and unproductive entrepreneurs change if there are some motivational structures. An entrepreneur may own or not a business, may be employed or not in a productive activity, but the defining factor is the "innovative behaviour".

However, the entrepreneurial behaviour is not driven only by rational decision-making structures, does not aim only development at any price; there are other explanations, non-economic, that should be approached to understand the entrepreneurial process, i.e. those typical characteristics and personality traits, such as creativity, risk undertaking, innovation and pro-active behaviour that can be observed in different social, political or economic environment (Timmons, 1994). Thus, according to Morrison (2006), the various entrepreneurial hypostases such as lifestyle, social and family relationships may indicate that there is often a clear orientation towards non-economic reasons. There is no doubt that a positive attitude towards entrepreneurship itself is not sufficient to motivate a person to develop a business. However, the intention to create a business occurs only when positive attitude towards entrepreneurship (Koh, 1996).

2. The "lifestyle entrepreneur": some literature

The importance of entrepreneurship for tourism and leisure industry is very special, as revealed by numerous authors, such as: Thomas (1998, 2000), Morrison et al (1998), Getz (2004), Buhalis and Main (1998). These activities are based on entrepreneurial spirit and activism of SMEs. Tourism and leisure have always attracted a large number of various entrepreneurs, but not always growth oriented, both concerning the business itself, and their own skills and knowledge. Entrepreneurial activity in tourism, hospitality and leisure has been often perceived more from tourists' perspective than from a business perspective. Images of idyllic beaches, spectacular mountain landscapes etc. have often been identified as one of the main reasons for which future tourism business owners have left their jobs or residences in cities to set up tourist establishments. The picture of their existence as entrepreneurs in places they have dreamed before eclipsed the fatigue of solving current problems, difficulties and required managerial decisions. Often the desire to enjoy the perceived quality of life, a certain lifestyle and economic status has leaded to ignore the real business. Thus, the entrepreneurial decision, taken on the basis of psychological determinants, without any experience or training, quickly led to failure, to the rapid consumption of savings collected in earlier career of the entrepreneur (Peters, Frehse, Buhalis 2009).

Components often approached in defining the profile of small business owners, managers and entrepreneurs in tourism are related to age and gender (Ateljevic et al 1999; Szivas, E. 2001, Ahmad 2005), education (Glancey and Pettigrew 1997; Avcikurt 2003), work experience (Ateljevic et al 1999; Szivas, E. 2001), marital status (Getz and Carlsen, 2000), and motivational impulses can be added.

According to the mentioned authors, the dominant small business owners / managers / entrepreneurs are middle-aged (30-45 years) or more over 45 years. Most are married (Getz and Carlsen, 2000) and as such, small businesses are majority owned and managed by men (Morrison, Breen and Ali 2003, Avcikurt 2003), although researchers like Getz and Carlsen are reluctant to the male domination. However, Ahmad (2005) believes that male owners and entrepreneurs dominate in net proportion (81%), especially in small firms. This can be an expression of traditional society influences, where the man is, at least formally, head of the family and the decision maker (Mastura Jaafar et al 2010).

In terms of formal education of entrepreneurs and business owners, the data are more inconsistent. In Australia, entrepreneurs with higher education comprise only one third of total (Getz and Carlsen, 2000), or even less, while in European countries it seems to be a balance between people with secondary studies and university graduates (Glancey and Pettigrew, 1997). Both are still haunted by the fact that most types of studies completed at whatever level, is significantly different from the requirements of the profession (technical studies, language, etc.) and should be supplemented by further stages of their studies and training courses in tourism.

Given the ease of entry into this industry, many owners / managers are reported to have different types of occupations and experience before venturing into the tourism sector (Ateljevic et al 1999; Szivas, 2001). In New Zealand and the UK prior work experience in tourism and hospitality industry is not particularly representative, i.e. about one third of the entrepreneurs said they had previous experience in this field, while the most common previous experience is related to agriculture, retail, education, marketing, constructions (Ateljevic et al 1999; Szivas 2001).

According to Dewhurst et al. (2007), there are two conflicting ideas about the need for training in the hospitality sector. One line suggests that owners / managers do not need training because they know how to manage their business better than anyone else. However, other line recognizes very specific gaps in knowledge. Either unwilling or because deemed sufficiently trained in this profession without education or specialized courses, as revealed by Schroeder (2003) who reports a low involvement in training or development in the tourism business.

The entrepreneurial profile comprises, according to Glancey and Pettigrew (1997), the motivations that led into the business:

- on one hand, there are "push" factors, such as dismissal, uncertainty on the current job and the need for additional revenue;
- on the other hand, "pull" factors such as the desire to be their own boss, the expectations for high profit levels, business opportunities valorisation, or retirement.

Another defining aspect of the entrepreneurial profile directly related with the motivational factors is the position of the entrepreneurs concerning the business future growth. The literature on entrepreneurship and small business is divided between opinions arguing for a clear overlap between entrepreneurs and small business owners, and opinions pointing out the important differences between them. The most relevant and strong distinction here is the entrepreneurs' orientation to business growth, as opposed to small business owners who want to maintain the *statu quo*. Authors like Timmons (2004) and Nieman (2001) see entrepreneurship as a business launch (exploiting an opportunity), followed by growth and development on a specific area, while small business owners start a business, reinforce and develop it to a certain stage, where they lose availability, ability, entrepreneurial

intuition. For Trevisan and Matulella (1994) or Grundling and Steynberg (2008), the difference between the two categories is given by an essential feature of the entrepreneur, i.e. the inventiveness, which is found in considerable lower proportions in the case of small business owners. Crijns and Ooghe (1997) add to this the dichotomy between favouring the use of internal resources (in the case of small owners) versus the external resources (in the case of entrepreneurs), or the local and limited vision (in the case of small owners) vs. the global, expansion based vision (in the case of entrepreneurs), or the survival perspective, the refuse to undertake more risks after the business has reached the ideal size (in the case of small owners) vs. vigorously pursuing success (in the case of entrepreneurs).

Many researchers agree that small business owners do not see the increase of the organization as one of their main objectives (Hankinson, Bartlett and Ducheneaut, 1997). Reijonan (2008) found that small business owners are not growth oriented (in terms of increased turnover and employment), they rather prefer to keep the business in the developing stage, and remain in waiting (Getz and Peterson 2004; Hollick and Braun, 2005; Ateljevic and Doorne, 2000).

Thus, the entrepreneurs see opportunities where small business owners see risks, recommended to be avoided, often related to business growth factors, such as cash flow management, company size, the uncertainty of entering new markets, the lack of confidence in the ability of the staff to assume new responsibilities.

In Australia, Bransgrove and King (1996) found that the main objectives of the small business owners, both from rural and urban areas, are the challenge, ambition, business opportunities, long term lifestyle and financial gain. According to Getz and Carlsen (2000), 34% of the respondents suggested that an attractive lifestyle is the main reason for going into business, followed by business and investment opportunities. Glancey and Pettigrew (1997) found that the behaviour of the majority of the sample analyzed (65%), adheres to the "pull" factors. This provides evidence to classify them as opportunistic entrepreneurs.

Most studies cited above, and many others trying to identify specific entrepreneurial business features and characteristics of the entrepreneurial personality, have identified features such as: the desire to succeed, self achievement, willingness to assume risks, independence, innovation, self confidence, ability to learn from failure. Morrison and Thomas (1999) suggest that key elements of entrepreneurship (including tourism business) should include: initiating change, creative combination of resources, entrepreneurial learning (continuous), innovation and creativity, the accumulation of essential and priority information, alertness and opportunity, relationship management, maintenance of effective teams and networks, fast action, vision and strategic orientation. However, some of these features seem to be reflected, in the tourism business sector, in a lower proportion than the average for entrepreneurs, and here we refer particularly to innovation and risk undertaking (Litzinger, 1965). However, tourism entrepreneurs believe they can control everything, they have an excessive self-confidence and independence (Schroeder, 2003), they are highly motivated and eager for autonomy (Lerner and Haber, 2000).

In the case of tourism entrepreneurs, sharing lifestyle is listed sometimes as main motivation. Let us remind that, according to Burns (2001), "Lifestyle firms are businesses set up primarily either to undertake an activity the owner manager enjoys or to achieve a level of activity that provides adequate income". Lifestyle entrepreneurship in tourism relies on unique features, acting rather like factors limiting the business expansion, such as:

- priority given to lifestyle versus improving the customer service (Peters, Frehse, Buhalis 2009);
- irrational management, under-utilisation of resources and decisions ignoring the investment efficiency criteria (Peters, Frehse, Buhalis 2009);

- limited range of new products;
- limited availability to IT&C (Buhalis and Main, 1998), to assessing the emerging opportunities in IT&C (Paraskevas and Buhalis, 2002);
- reluctance to accept foreign coaching;
- motivated by business survival and ensuring sufficient income to maintain a comfortable lifestyle for themselves and their families (Komppula, 2004);
- little interest in training personnel, maintaining connections with professional organizations in the field;
- aversion control, refusal to accept new business associates and venture capital,
- increased dependence to distribution partners, conservatives and reticent for new partnerships, even if old network provide decreasing returns (Weiermair, 2001; Buhalis, 2000; Bastakis et al, 2004).

Moreover, Shaw and Williams (2004) consider that the tourism entrepreneur is different than in other economic sectors; tourism attracts lifestyle entrepreneurs due to the easy access into the business, as there are not high levels of human capital and investment needed, respectively not necessary professional licensing or formalized education, and due to largely transferable skills from other sectors.

3. The "lifestyle entrepreneur" and its profile: the data

In order to empirically test the literature findings concerning the lifestyle entrepreneur in tourism, we used the dataset "Enterprises managed by the founder", available in Eurostat database. We select from this database the data regarding the start-up motivation, start-up difficulties, education and previous professional experience and other information relevant to confirm the hypothesis of a different type of entrepreneur in tourism, more "lifestyle" and family oriented. We use the data available for European Union, for both NACE H sector – Hotel and restaurants (Hotels and restaurants) and NACE Industry and services, excluding public administration and management activities of holding companies, for some comparison. Available data are for the year 2005.

First, we can address the *motivations* for business start-up, to investigate whether there are significant differences in motivations for the Hotels and restaurants sector versus general sector Industry and services. For EU as a whole and for both two sectors (Hotels and restaurants and Industry and services), the top 3 motivators to start up a business are the same, i.e. respectively: "the desire to be one's own boss", "the prospect of making more money", and "the desire for new challenges". There are also the same rankings for those motivations related to life-style entrepreneurship, i.e. "combining work and private life" and "desire to make a living from a hobby activity", ranked no. 5 respectively no. 8. Moreover, the motivation "desire to be one's own boss" – related to "lifestyle entrepreneurship" is ranked by EU entrepreneurs as the first motivation to start up a business, both in the hotel and restaurants sector and in the general industry and services sector.

In the case of Romania, the top 3 motivations are the same, even not in the same order, while motivations "combining work and private life" and "desire to make a living from a hobby activity" are ranked no. 4 respectively no. 6.

The next figures reveal the whole picture about the motivations for starting-up a business in EU and Romania.
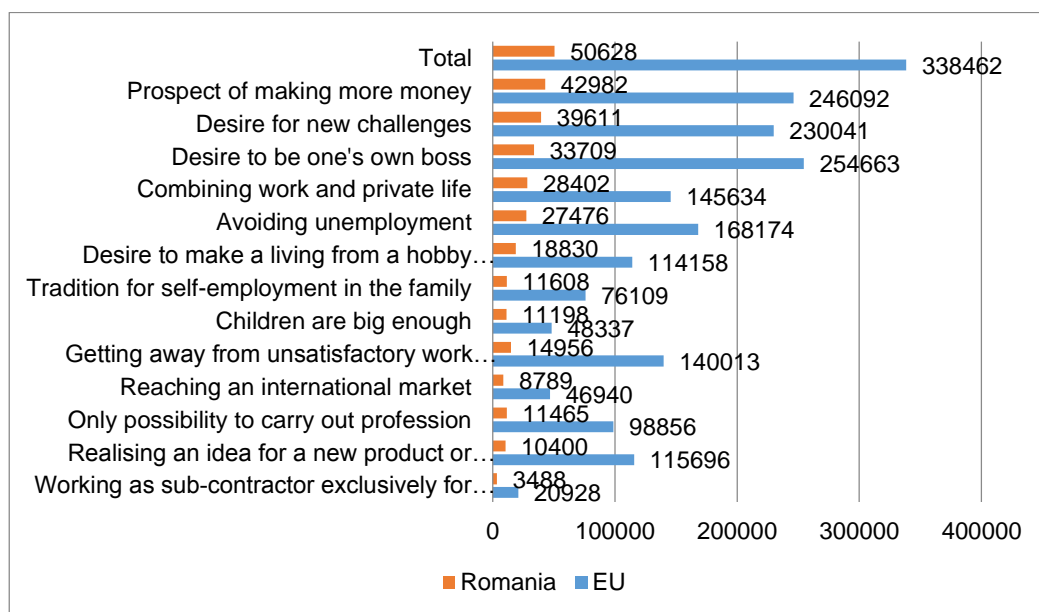
Figure 1: Motivations to start up a business, industry and services sector, EU and Romania
Source: own construction based on dataset

It is very interesting to find that the most nominated motivations to start up a business in hotels and restaurants sector (see Figure 1), both in EU and Romania, are very much like for the general industry and services. There are practically the same top 3 motivations and the rankings for those motivations related to life-style entrepreneurship, i.e. "combining work and private life" and "desire to make a living from a hobby activity". They are ranked no. 5 respectively no. 8 in the EU case, and no. 4 respectively no. 6 in the case of Romania. Moreover, the motivation "desire to be one's own boss" – related to "lifestyle entrepreneurship" is ranked by EU entrepreneurs as the first motivation to start up a business, both in general industry and services sector, and in the hotels and restaurants sector.
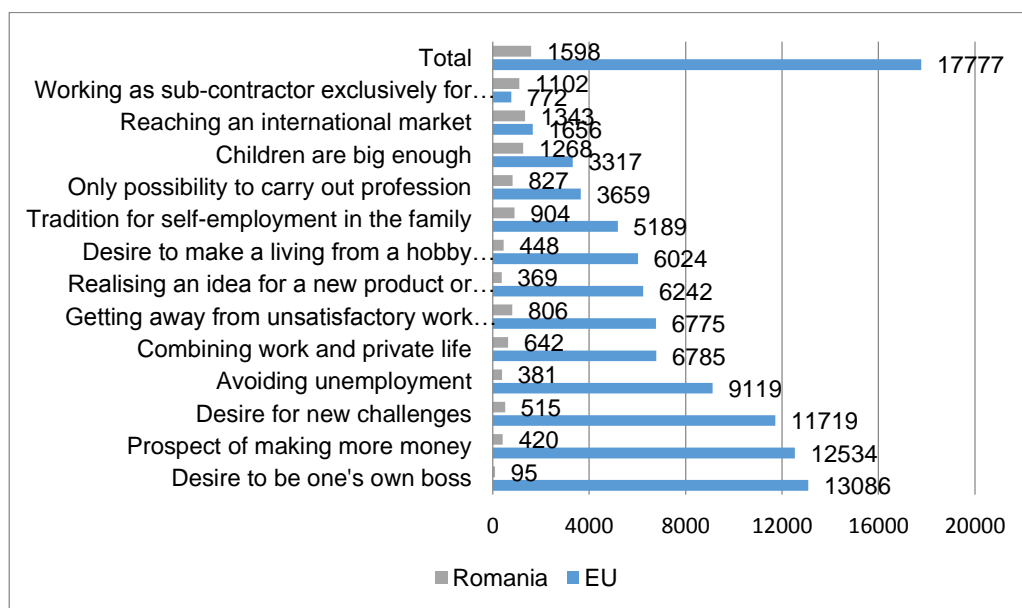
Figure 2: Motivations to start up a business, hotels and restaurants sector, EU and Romania

Source: own construction based on dataset

Another issue to support the idea of "lifestyle entrepreneurship" in tourism could be related to the *financing sources to business start-up*. As Peters, Frehse and Buhalis (2009, p. 397) states, "Sometimes this is financed with savings from property or previous careers", we could expect that 'own funds and savings' and 'financial assistance from family or friends' could be more often used to start-up financing in tourism than in other sectors. However, in the case of hotels and restaurants sector, "own funds and savings" was indicated by 73% of the respondents as main financing sources, "financial assistance from family or friends" by 39% of the respondents, while for the general industry and services sector, the figures were 85%, respectively 26%.

Concerning the *start-up difficulties*, the option "to get adequate personnel" was indicated by 45% of the European entrepreneurs in tourism, while by only 28% of the general industry and services entrepreneurs. So, contrary to the expectations, finding suitable personnel in tourism is more difficult than in others sector, at least at the start-up stage.

More individual and family-related start-up difficulties, i.e. "To be alone as an entrepreneur" and "To get backing from spouse or family" were mentioned by 41%, respectively 22% of the tourism entrepreneurs, while for the general sector industry and services the figures were very similar: 42% and 18% (contrary to the expectations, even more Hotels and restaurants entrepreneurs mentioned getting backing from spouse or family as start-up difficulty). Moreover, when listing impediments to developing the business activity, in the Hotels and restaurants sector 39.12% state combining family and work, while only 36.22% in the case of industry and services.

Entrepreneurship in tourism is sometimes related to *low skills of personnel* and lower levels of human capital. As figures reveal, 56% of the entrepreneurs in Hotels and restaurants have no previous branch experience, while 37% for industry and services; 73% of the entrepreneurs in Hotels and restaurants have no previous experience running an enterprise, while 76% for industry and services.

As for the *educational background*, in Hotels and restaurants sector there is significant lower level of qualifications, as in Hotels and restaurants, 32% of the staff has educational

background of ISCED 1 or 2 level, 50% ISCED 3, and only 8% ISCED 5 or 6, while for the general sector industry and services, 28% has ISCED 1 or 2, 42% ISCED 3, and 19% ISCED 5 or 6.
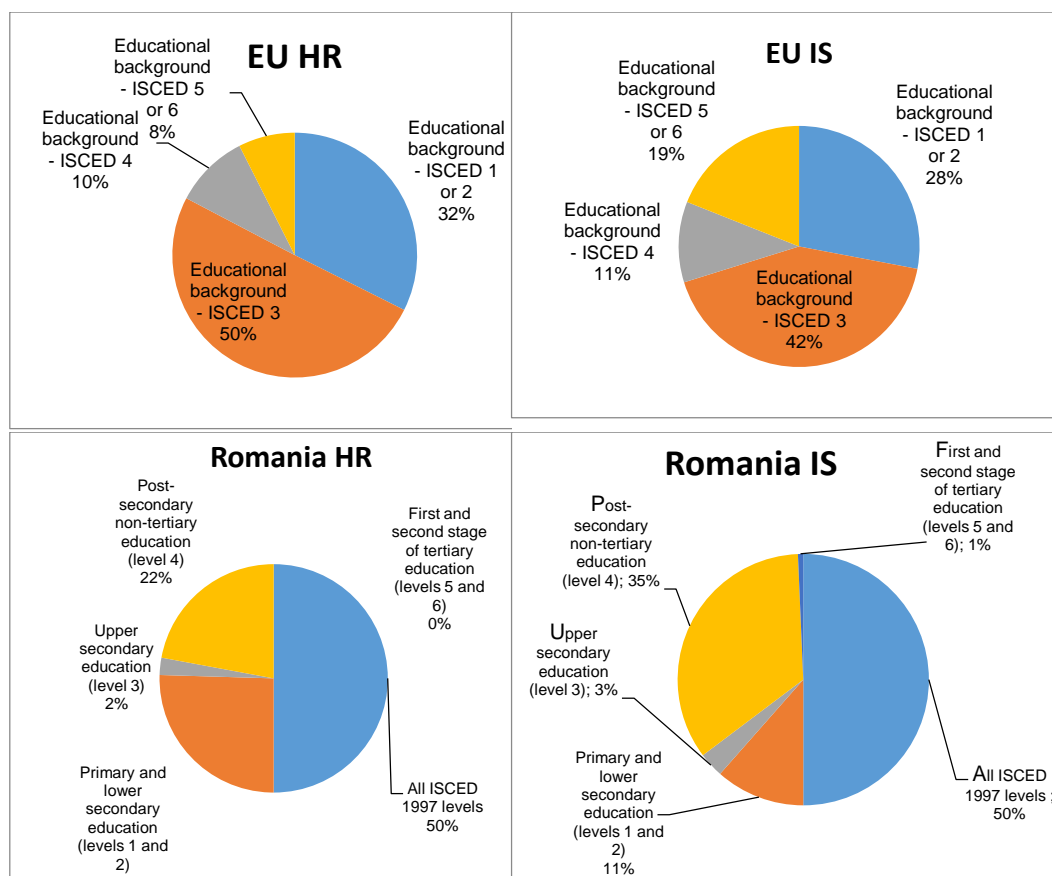
Figure 3: Educational background, EU, Hotels and restaurants versus Industry and services
Source: own construction based on dataset

Lifestyle entrepreneurs are often describes as more family-oriented, or "family-first" entrepreneurs, using the expression of Getz and Carlson (2000). They are more driven by non-economic motives, more family oriented, more interested in the quality of life and leisure.

As the next figure shows, family and friends are *source of advice* for 52% of the Hotels and restaurants entrepreneurs (compared to only 46% for Industry and services sector), but the whole picture is here:
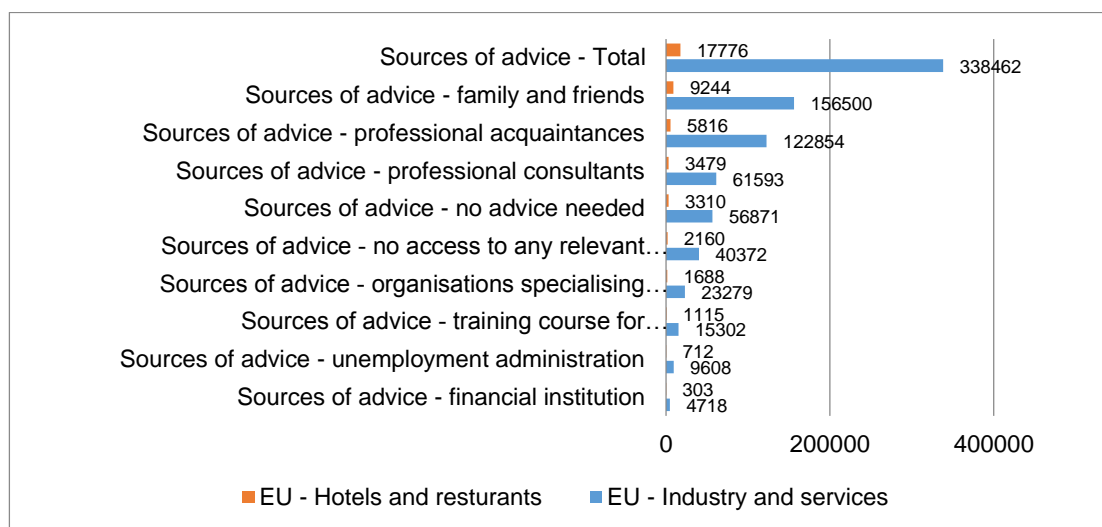
Figure 4: Sources of advice, EU, Hotels and restaurants versus Industry and services
Source: own construction based on dataset

Finally, the relative non-profit orientation is another feature of lifestyle entrepreneurs, who are satisfied with lower levels of profit if non-profit goal are achieved. As figures show, there are no significant differences between sectors when it comes to *judgement of profitability*: 21.75% of the entrepreneurs in Hotels and restaurants consider as "poor" the profitability of their business (against 21% in the industry and services sector), 32.65% as "good" (against 35% in industry and services) and 43% as "barely sufficient" (against 40%)

4. Conclusions

Lifestyle entrepreneurs and their presence in tourism is described in literature as a more life and leisure-oriented, family-oriented, motivated not only by profit and growth, investing in business as a consequence of their large previous experience as consumer.

The figures, however, confirm only partially this behaviour in the case of entrepreneurs in hotels and restaurants, compared to general industry and services sector. When it comes to motivations, financing sources for start-up, family-related difficulties or source of advice, and judgement of profitability, virtually there is no difference that could sustain the idea of a different style of entrepreneur in tourism versus other industry and services sector. Of course, there are considerable limitations and impediments to draw final conclusions, the figures we analysed keeping their relevance in the framework and with the limitations of the database itself.

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THE ENTREPRENEURIAL WAY: CALLING, CHANCE OR OPPORTUNITY. AN ESSAY

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Abstract: *Entrepreneurship plays an important role in shaping economies and producing economic added value. Among other determinants of the economic activity, the influence of religion on economic activity was a major concern in socio-economic research. However, how the religion affects the decision to enter into entrepreneurship has been approached in fewer studies and researches. The decision to enter into entrepreneurship is a complex process, determined by many factors, from different sources, exerting various influences. Thus, it was argued that certain religions can foster business initiative, while others inhibit it. On the other hand, individuals and communities, separated by native environment, prove outstanding entrepreneurial capabilities and determination. Although the "protestant" attributes of entrepreneurship have long ceased to make the rule in researching the religious perspective on the entrepreneurial phenomenon, the temptation to explain some successful business by vocation, gift or even by "call" still exists in contemporary research. A significant part of entrepreneurs, self-declared as religious, are deeply convinced of the divine grace bestowed on them and their businesses, while other entrepreneurs avoid to associate "calling" with business success. There are certain reasons explaining this reluctance, e.g. caution, separation between religious practice and business, fear that entrepreneurial failure could mean lack of divine grace etc. The theological studies accept and promote the concept of calling in trade and business, but they place it in a pastoral context, i.e. the true calling should be realized in the act of faith and religiously guided. Nevertheless, examples of entrepreneurial activity, both honest and successful, can also occur outside the revelation of calling.*

1. Introduction

The analysis of the interdependencies between religion and economic activity has an important place in social sciences. The classics of economic or entrepreneurial theory (from Adam Smith to Max Weber, or William Baumol) have argued that religion plays a major role in shaping economics (Audretsch, et al., 2007). However, the effective ways and forms in which religion influences the economic activity appear to be a relatively recent concern. Moreover, the link between religion and individual decisions to enter the entrepreneurship and persevere in business is a less approached area. Contemporary researches and studies are based on the principle that not only economic institutions and policies play a role in entrepreneurship, but also individual and collective values and attitudes (Audretsch, et al., 2007). On this basis, a correlation between faith and entrepreneurship seems to be logical.

The paper aims to investigate some of these links between the act of faith and entrepreneurship. In the first part we will briefly review the main contributions to the theory of entrepreneurship, both in terms of economic and social sciences, and from theological perspective. In the second part we will try to understand whether individual relationship with the divinity can be identified among the entrepreneurial determinants and attributes.

In the third part we will try to figure out the meanings of calling in entrepreneurial activity, how much is calling, vocation and how much is just opportunity rewarding personal faith of the entrepreneur. Finally, we present the main conclusions.

2. The entrepreneur in economic theory and theological debates

The scholars of economic theories have assigned to entrepreneur and entrepreneurial phenomenon a variety of roles, often very different, and sometimes contradictory. Thus, the pioneer who introduced the term of "entrepreneur" is Richard Cantillon who, in his work from the beginning of the 18th century, i.e. *Essay on the Nature of Trade in General*, defined the entrepreneur as an agent who buys means of production at a certain price to be combined into a new product demand by the market (Cantillon, 1959). Jean Baptiste Say adds that, by its nature, the entrepreneur is, and should be, a leader – the term *entrepreneur* is difficult to translate into English: "the corresponding word, *undertaker,* being already appropriated to a limited sense (…), the person who takes upon himself the immediate responsibility, risk, and conduct of a concern of industry, whether upon his own or a borrowed capital. For want of a better word, it will be rendered into English by the term *adventurer*" (Say, 2001). Thus, Say moves the meaning of the entrepreneur from a risks-undertaker, to the sense of manager, whose main quality should be the "good judgment", he acts seeking the best economic opportunities.

Adam Smith, John Stuart Mill or David Ricardo also approached the concept of the entrepreneurship, but in a more succinct manner, often referring to this in terms of "business management". In his famous Wealth of Nations, Smith does not seem explicitly interested in theological issues or even in the nature of religious belief, but rather focused on finding those economic motivations leading to practice religion, or how the economic effects of different religious belief are assimilated in individual behavior (Smith, 1965). "Smith attempted the more limited task of defining the logical economic consequences of certain kinds of religious beliefs" (Audretsch, et al., 2007). Thus, Adam Smith testifies a clear preference for those who are willing to invest "at home", where their entrepreneurial ability allowed them controlling, understanding and managing production capacity and market opportunities, contributing to the viability of the local economy, pursuing and promoting standards and local traditions.

Dominant in Karl Marx's works is the image of a capitalist entrepreneur investing capital in its own enterprise, and then appropriating for itself the whole added value created by employed workers (and only by these workers!), and thus exploiting them. Although Marx's ideas are atheistic in their fundamentals, they are inspired, paradoxically, from a socio-ethical vein, i.e. the search for social justice, intrinsically linked to the biblical condemnation of accumulation of wealth as a sin. "It was the motive of envy, which, in the 19th and 20th centuries, led socialism into the error of considering a policy of distribution to combat poverty more important than a policy directed towards growth (Werhahn, 1990). It is possible that Marx understood that his utopian ideal of an affluent, or even sufficient, society can be achieved by highlighting the much hated entrepreneur: by moving beyond the accumulation of capital to the increase in national outcome, and, finally, to the economic growth. However, scanty measures encouraging private initiative in the socialist countries (immediately after the October Revolution or in the 60s) did not resist to the inflexibility of ideology.

According to Max Weber, the entrepreneur plays a crucial role in modern capitalist economy: he takes essential decisions in the company, enhances capitalist economy and counteracts the negative impact of capitalist bureaucracy (Swedberg, 2005). Weber does not focus on the creative entrepreneur, but more on entrepreneur direct involvement in company management, on the general mindset (so called *spirit*) brought into enterprise. The entrepreneur is the guiding mind and dynamic spirit in the enterprise of modern capitalism. In *The Protestant Ethics and the Spirit of Capitalism* (Weber, 1993)*,* Weber

reveals the significant contrast between the new entrepreneur – who consider the business as a call and wants to reform the state of the art, and the traditional entrepreneur – who is satisfied with the status quo.

Werner Sombart discerns between two types of capitalists: *entrepreneurs* and *traders*. In his writings, Sombart defines the entrepreneur in the following terms: quick thinking, rational decisions, clear speech, intuitive in identifying the needs, good memory. He finds the difference between these two ideal types through what he names "*calling*" or "*vocation*" for entrepreneur, respectively instrumental work for trader.

The meaning of "calling" is not just economic. Sombart identifies other human types, such as explorer, inventor, conqueror and organizer. Of these four types, the conqueror – characterized by freedom in making plans, driving their implementation and the ability to succeed – seems to Sombart as the closest to the entrepreneur. In contrast, the trader is a person whose emotional and intellectual world is focused on the value of money, on exchange and transactions. Perhaps the most important, the trader is not necessarily someone who has a true vocation for his destiny, but rather a man – with good negotiating skills and a practical speculative nature – who can fulfill a specific function in the capitalist economy. For Sombart the trader's role is more important in the modern society than the role of "heroic" entrepreneur (Loader, 2001).

The economist most associated with entrepreneurial theory is Joseph Schumpeter. In the famous expression of "*creative destruction*", he outlines a concise explanation of his concept. Schumpeter pointed out that the entrepreneur does not necessarily reveal things or goods, but he operates in an innovative way what it has already been invented. In combining existing inventions, the entrepreneur induces a creative destruction and moves forward new industries, while the old ones draw back, are destroyed or simply disappear. Schumpeterian entrepreneur is not, in the same extent, a risk undertaker (the risk undertakers are the capitalists, the financial intermediaries), but the entrepreneur is the manager who decides what resources will be used in the capitalist economy (Formaini, 2011).

Frank Knight (1921) brings remarkable contributions to the development of entrepreneurship theory. Knight's concern was to make a clear distinction between risk and uncertainty. The role of the entrepreneur is to assume these uncertainties relating to these events, and even protect the other shareholders of the company in case of adverse effects. The entrepreneur examines those unique events in economy, applies its own judgment and then acts. Kirzner, representative of the Austrian school of economics, comes with a modern approach to entrepreneurship. In Kirzner's view, the economy is in a constant state of dis-equilibrium, businesses suffer from a "sheer ignorance", the managers just do not know which of the useful information are actually available to them (Iversen, et al., 2007). In this world, the entrepreneur, always on alert, discovers and exploits new opportunities and removes some of the "sheer ignorance"; thus, the economy moves towards equilibrium, i.e. to the status where there is no significant information to discover.

For Gilder (1984), real economy is created by entrepreneurs and entrepreneurship, and not by multinational corporations, economic policies and political compromises that only suffocate the simple and creative energies and the enthusiasm of individual entrepreneurs. Gilder often calls *irrational* entrepreneurship as a process led by "orphans and *pariah* of society" in a hostile environment. Entrepreneurship requires a lifetime of work and learning, courage and aspirations, as an inner response to an oppressive or indifferent world.

A more detailed approach to entrepreneurship belongs to William Baumol. He considers the entrepreneur as cumulating two roles: the Schumpeterian innovator and the modern manager (Ruta Aidis, 2003). For Baumol, *productive* entrepreneurial activity refers to any activity contributing, directly or indirectly, to the net output of an economy (Baumol, 2002).

This "productive" type should not be limited to achieving a tangible result, but aims to achieve a positive marginal product, regardless of how employed factors in its production. Instead, *un-productive* entrepreneur gets involved in innovative activities, without any real contribution to the economic output; in some cases, the unproductive activity could reduce the social output or even slow down growth. In this case, Baumol mentions the actions of governmental officials who, under the protection given by an authoritarian regime, try – by hindering or interpreting the law and procedures – to increase his personal revenues. The third class of the Baumol's entrepreneurs is the *rent-seekers* or *destructive* entrepreneurs who get involved in innovative activities lead to resources misallocation in useless (economic and social) goals. These activities serve only for achieving personal goals of the respective "entrepreneurs" (Baumol, 1990). Here, Baumol cites the military conflicts in the Middle Age in Western Europe as unproductive entrepreneurial activities, expression of a rather violent economic activity than an innovative one, engaged in rent seeking: "its net effect may be not merely a transfer but a net reduction in social income and wealth" (Baumol, 1990). As a conclusion, an entrepreneur may hold or not a business, can be or not involved in a productive activity, but the determining factor is the "innovative behavior".

For theologian scholars investigating the relationship between faith and economics and business aspects, their interpretations, obvious, came from biblical texts and fundamental theological writings. According to Richard M. Liddy and William J. Toth, in the 5th century, St. John Chrysostom found it highly unlikely that traders could practice their specific vocation without sin, and Gratian, an author of a text on canonic law, from the 12th century, stated that traders cannot please God. In fact, traders and entrepreneurs' "conviction" in those times was based on the impossibility of distinguishing between the two types of assets that could be achieved by these persons: the "social wealth" – shared with the community, and "personal wealth" that remains in individual possession. Thus, the Catholic theology in the Middle Age and later, until the dawn of the modern age, justifies entrepreneurs' profits only if they have made useful, productive services for the community. Profits gained out of the social welfare and which are individually appropriated were, morally and religiously, unhealthy, thus sinful (Liddy & Toth, 2004).

The contemporary theological (catholic) writings reveal a significant change in entrepreneurial understanding. Thus, "Pope John Paul II treated enterprise and the role of the entrepreneur as a right subsumed under the right to personal economic initiative and considered this right to be co-equal to the right of religious liberty" (Liddy & Toth, 2004) focusing on the social role of the entrepreneur. The entrepreneur is considered as a dynamic and socially involved character, and we owe him many of the benefits of the modern world. However, the authors remember that the nation's resources "are not to be possessed, but to serve labor and ultimately, to be made available to all in society" (Liddy & Toth, 2004).

For the theologian Morgan Guyton, the biblical parable of the talents multiplication (Matthew 25:14-30) seems to be the most commonly used formula by which capitalists justifies right to gain fabulous wealth: "The master rewards the first two servants and punishes the third one. Capitalist Christians often use this story as a proof-text in economic debate to say simply, «See, Jesus endorses capitalism». But there's way more going on here than Jesus' endorsement" (Guyton, 2012); Guyton insists on the essential distinction between *real entrepreneurs* and *money changers*, arguing that entrepreneurs are the valuable capitalism, while money changers (especially the greedy actors of financial markets) are the worse of capitalism.

3. The importance of the religious factor for entrepreneurship

The decision to enter into the entrepreneurship, to set up a business and to act as an entrepreneur, is a very complex process, driven and influenced by many factors coming

from different sources and exerting various influences. The literature cites as the most important determinants acting as enablers or enhancers of the entrepreneurship factors such as age, labor market experience, marital status and the level of (low) taxation. Moreover, factors such as the risk of self-employment and the higher interest rates generally have negative effects, acting as inhibitors. There are also individual determinants and motivators influencing the choice of an entrepreneurial career, such as: the advantages of the occupational alternative as employee (by comparing the income earned as entrepreneur vs. as employee), risk aversion, personality attributes, level of education and human capital, reaction to unemployment threat etc., all of them contributing in different manners and senses to the final complex decision of involving in or abstaining from entrepreneurship (Badulescu, 2010).

Does religion acts as an important determinant in the individual decision to become an entrepreneur? In order to answer this question we will return to Max Weber and his explanations on the emergence of capitalism factors, the development of a system of individual morality, called "Protestant ethic". In Weberian approach, Protestant ethics involves two fundamental concepts: first, the idea of "calling" – i.e. individuals must try to fulfill their duty in this world and consider professional success as a *sign of election*, and second, the puritan asceticism and dedication by hard working as condemnation of waste, indolence and luxury.

We could accept that protestant framework was favorable to capitalist development; however, it seems risky to attribute only to a Christian denomination the essence and impetus of entrepreneurship. More recent researches of Clark and Drinkwater (1998) and (2000) on ethnic and religious minorities in United Kingdom reveal that members of other religions, even non-Christian, such as Islamist, Sikh, Hindu have got a positive attitude towards entrepreneurship, and thus, register a higher probability to get involved in entrepreneurial activities, compared to the indigenous population of "British Islands" (most of them Protestant, and entrepreneurial by tradition in the last centuries). Carroll and Mosakowski analyzing historical data series for West Germany (from 1963 to 1987) have found some confirmation of Protestant Ethics theory, i.e. the members of these (protestant) communities report a greater propensity to self-employment, for productive activities (Carroll & Mosakowski, 1987). Moreover, the same availability can be found at other minorities or immigrants communities, and thus, religion appears a determinant less important than it might appear at first sight.

Addressing the issue of the impact of Greek Orthodoxy on entrepreneurship, George Gotsis and Zoe Kortezi argue that the Greek Orthodoxy's faith and involvement of individuals in specific vocational activities (based, of course, on a wide range of cultural and collective identity items) has not diminished the interest towards entrepreneurship or entrepreneurial performance. On the contrary, authors suggest that Greek Orthodoxy has boosted commercial activities, mainly by social capital, business networking, knowledge and negotiation skills, matching the ethnic and religious identities (Gotsis & Kortezi, 2009). Historical examples of various Greek merchant communities in the Ottoman Empire, and, closer to the modern era, the viability of their enterprise, the survival and development of large commercial networks of Greek Orthodox community in the basin of The Eastern Mediterranean Sea and The Black Sea confirm the assertion.

Investigating the impact of religion on entrepreneurship, Audretsch et al. found that, indeed, "religion matters. While India is rich with diverse religions, some of them, such as Islam and Christianity, are conducive to entrepreneurship. By contrast, others, and in particular Hinduism, inhibit entrepreneurship" (Audretsch, et al., 2007). This caste system – undoubtedly result of the impact of religion in social, economic and politics, in individual and community values – seems to play a decisive role. "At least in the case of India, Max Weber's insight is found to hold – religion is an important influence on economic behavior" (Audretsch, et al., 2007). However, the authors argue that local and historical context can

exert a significant impact on entrepreneurship propensity; they mention various studies on Indian immigrants (regardless of religion) in the United Kingdom and North America, with impressive entrepreneurial spirit and initiative. "While the specific religion of the immigrants is not explicitly identified, the inhibiting impact of a specific religion and particular caste may, in fact, disappear along with the change in location and institutional context" (Audretsch, et al., 2007).

Eisenstadt (1968) argues the importance of the "transformative potential" of the religion in economic decisions and the "capacity to legitimize, in religious or ideological terms, the development of new motivations, activities, and institutions which were not encompassed in their original impulses and views". Those religions focused on transcendentalism, responsibility and individual engagement, unmediated relationship between the individual and the sacred traditions, enjoy the best chance of generating a remarkable entrepreneurial take-off (Eisenstadt, 1968) and (Audretsch, et al., 2007).

Barro and McCleary (2003), analyzing the results of international surveys on the degree of religiosity, have tried to determine the impact of adherence to religious beliefs on economic performance. They find that increases in church attendance tend to reduce economic growth, while increases in the belief in hell and in afterlife increase economic growth (Audretsch, et al., 2007).

There are also a large number of articles and empirical researches that have reported a limited impact of religion as a determinant in entrepreneurial endeavor. Moreover, in the modern era, we are witnessing the creation of a "myth of the entrepreneur", massive fueled and validated by mass media reports about the success of entrepreneurs and the respect enjoyed by those who decide on their own destiny by starting a business. This could be an indicator of a culture attributing a great social value to entrepreneurship, but also a collective willingness to find easy explanations on transcendental nature, sometimes superficial, and less related to socio-economic analysis (more elaborate, thus less spectacular) to entrepreneurship.

4. *Calling, vocation* and the entrepreneurial life

To considering religion beliefs among the main determinants of entrepreneurship, it is necessary to investigate how these beliefs act on individuals, and to reveal the relationship between individual motivations for acting as entrepreneur and the religious beliefs and behavior. The most invoked arguments is "the calling". The "call" in Christian doctrine is a topic as important as it is vast. Perhaps this is the reason why most Christian practitioners are reluctant to place it beyond the purely religious context; those people involved in serving the church and the communities, i.e. the ministrants and priests, are the most entitled to be considered as "called". Thus, a part of this call may be covered in current terminology, by terms such as vocation, gift, grace or divine support.

According to theologian Gordon T. Smith (1999) there are three different ways of "divine calling", understood in their unity: first, a general call, to follow Jesus Christ; second, a specific calling, or unique vocation (or an individual task in the world, during his life); and finally, a call for immediate burden that divinity requires to be performed by each, in every moment of existence (Goossen, 2006). Paul Stevens states: "In the Bible there is only one call of God that comes to God's people, but there are three dimensions in the call: to belong, to be and to do". Thus, a Christian should belong to the Church, to live the Christian identity (in the Church and in the world) and finally "to do" the work of God in the church and in the world. This third way of calling refers to all aspects of life, and therefore includes entrepreneurship. Involvement in business can be equally a characteristic and a call for a good Christian, not only those called to work full-time ministry (Stevens, 1997). However, Goossen and Stevens noticed that business satisfactions and success should not be an end in itself.

Another contemporary scholar cited in Goossen's work, namely Os Guinness, argues that the true calling helps the individual to cope with three major life challenges. First, the call is an incentive keeping us active during life; second, the call helps us to overcome the confusion between occupation and vocation (employment could be an occupation or a vocation, but entrepreneurship should be a vocation), and finally, the call help us to understand the relationship with divinity (Goossen, 2006).

Beyond these theological arguments, the importance of calling in starting and developing a business is not so clear, and there are different interpretations among entrepreneurs. Thus, in a survey conducted in a program including Christian associations of entrepreneurs in the U.S.A. ("CERP - Christian Entrepreneur Research Programs") the question: "Do you feel that you were «called» to entrepreneurship? If so, what does that mean to you?", get various and surprising answers (Goossen, 2006):

- Thus, about 50% of the responses (and it should be remembered that the survey was conducted among self-declared religious entrepreneurs), stated unequivocally that they felt the divine call in choosing and pursuing entrepreneurial way. They elaborated it in terms as: "a mysterious thing that requires a vision", „a dream, or an experience to discern", a full confidence in God will. Some of them express this idea through suggestive "economic" words: "the market place becomes a mission field; it becomes an opportunity".
- The other half of the interviewed entrepreneurs were reluctant to consider the notion of calling as part of "individual spiritual journey". Without diminishing the role of faith in daily behaviors (within family, society or business), they relied "secular" reasons, often found in scientific studies of entrepreneurship: the desire to succeed or to be their own boss, intuition for certain directions, discovering profitable business skills, providing an income for himself and family, and so on. They hesitated to include these propensities and motivations in the concept of call.

Goossen considers that all these above responses are the result of different perceptions and understanding of call: some entrepreneurs admit the call only if it appears clear and unambiguous (like St. Paul on the Damascus road), while others have tried to distinguish between success in business and spiritual vocation - specific to church servants - the "souls saving". Another complication comes from the fact that issue can be understood in relation to other theological concepts such as gifting and seeking the will of God. Furthermore, some people have been reluctant to apply the term of "divine call" to financial success of their business, either as a form of respect, or as a fear to a profound disappointment in case of failure in entrepreneurial activity.

Another aspect of identifying the call or grace can refer to the context of the discovery itself of this call. According to the same survey, almost two thirds of respondents admitted they had a revelation in individual contexts: daily activities, family related context, or social interactions with relatives and friends. Only 15% of the respondents reported that the revelation of call occurred in a pastoral context, within the church. In other words, "this critical issue of calling in one's life was determined by oneself, and therefore by implication without any pastoral input (…), many Christian entrepreneurs do not integrate the concept of calling into their lives and fewer still seek input from their Christian community" (Goossen, 2006).

What do we understand from these considerations? On the first hand, the researches and studies on entrepreneurship give a considerable importance to personal determination and individual motivators as driving forces determining the decision to enter into entrepreneurship, e.g. ability, talent, perseverance, desire to self-achievement. When the person feels honestly drawn to entrepreneurship we could speak about vocation, about personal achievement in entrepreneurship, about an "entrepreneurial destiny" even if we don't put it a context of faith. On the other hand, (Christian) theology recognizes and

promotes the concept of calling, not only in the church, for its servants, but also in daily activities, in trade or business: however, it places it in a pastoral context; i.e. true calling should be contextualized in the act of faith and religious guided. Otherwise we can speak about talents, disposition or even opportunities (by luck or carefully constructed) covered in the religious form, of God calling.

Finally, we consider difficult and challenging to associate the divine calling with the prosaic and materialistic "success in business", especially in the capitalism of our times. Given that the business success is measured in monetary terms, and it is intrinsically related to individual and not community achievements, it is difficult for a honest entrepreneur to avoid separation between the spiritual side of his/her existence and business. It is much harder for those who feel themselves "called" to not consider financial success as confirmation of "divine call" and do not take possible failure as losing the God grace.

5. Conclusion

Religion acts as a significant determinant of fostering (or inhibiting) entrepreneurial initiative, but its influence is highly contextualized; moreover, modern times tend to limit its influence, both on social (community) level and individual level. Located at the crossroads of various internal and external determinants (e.g. economic, social, personal, vocational etc.), entrepreneurial involvement requires strong motivation to overcome risks and uncertainties. Faith can play an essential role in overcoming these difficulties. Interposing the act of faith in entrepreneurial activity is more visible when the person builds a strong relationship between individual determinants (e.g. personality attributes, education, human capital, risk aversion) and the monetary results of its activity.

Thus, business success tends to validate the initial choice and belief that "there is a divine plan in this outcome". This seems to explain why a significant proportion of entrepreneurs feel themselves "called" or "gifted" for business. On the other hand, a cautious understanding of "calling" explains why many entrepreneurs avoid to link or correlate the "call" with the financial performance of their business. The fear that short or long-run difficulties in business are due to a lack of divine inspiration seems to be a strong motivator to remove the "call" from the business life. For most of the entrepreneurs, "divine call" could be named as passion, talent, intuition, flair, chance, opportunity.

Based on strong religious fundamentals, entrepreneurs could generate fair businesses, models for the community within they live and in the same time, from a personal point of view, they can find the true meaning of their life. Indeed, being in business not only for money but especially to promote the good for themselves and for other people, doing things with passion may be examples of calling, but we strongly believe this honest and dedicated behavior could exist within and beyond calling.

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INTEGRATED SYSTEMS FOR PLANNING AND RESOURCES MANAGEMENT IN COMPANIES

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Abstract: Information is one of the most valuable resources of a company, since with it and around it the whole set of business processes unfold within companies. Till using internet companies were eager to find information that was necessary for the functioning and development of the company; now things have changed radically: the information is abundant and is provided through all possible channels; today, in order to thrive you have to „choose" and to filter the information to remain competitive on the market you are active on. The performance of an enterprise is influenced by its ability to adapt itself to the environment, by the effectiveness of its actions in capitalizing opportunities, by its ability to cope with adverse situations and risks. Information management is a process that analyzes the previously collected information and then the information is used by managers to make decisions or as a base for their decisions. Information in management is the information that is necessary for making managerial decisions. Distribution or Information Flow: in order for it to be used appropriately, information should be exchanged between the various participants in the project. Other parts involved in the project may also use this information in making their own decisions. This way they can help those who collect information to determine its usefulness for the management. For management, information is an integral part of monitoring because it is obtained during monitoring and helps in planning and implementing its activities. The problem and the reason of this study is to increase awareness of the need for implementation of ERP solutions, primarily, and secondly to share observations with regard to this issue as well as the evolution of acceptance and integration in Romania of such integrated solutions. The effectiveness of information management and knowledge management is urgently needed to assure a continuous organizational survival and the necessary competitive level in the face of constant change of the organizational environment. ERP and the concept of "resources management and planning within companies".

Keywords: enterprise systems' for resource planning, integrated information systems for management, software systems to support management, systems for production planning

JEL classification: M1

1. Introduction

A new class of integrated software applications has emerged in the last decade, apparently consolidated - dated under one umbrella, in an industry that gets to be several billion dollars worth, which includes most of the largest companies in the software field and the largest management consulting organizations in the world. Usually referred to as systems enterprise resource planning (ERP), these integrated software solutions try to integrate a full range of business functions and processes within companies and groups of companies, in order to present a full and correct vision of the business under a single

system. Most large organizations around the world have already adopted ERP, and small and medium-sized (SMEs) are too uncovered in the cost efficiency area and there is a competitive necessity for them to follow this example. Although the complexity and tight integration of an ERP have become available only in the last few years, ERP have a pedigree in software, and such applications have been widely used since the 1970s. However, until recently, ERP and software in general, although ubiquitous, have been investigated in the management of information and information systems. While ERP has gained a certain importance in the scientific literature over the past few years, we may observe some dissident acts among academics about the nature and recognition of ERP. Some authors (Davenport, 2000; Laudon, Laudon & 2000) are against the use of ERP and they suggest alternatives; others (for example, Pawlowski, Boudreau et al.,1999) say that ERP was not a term that referred to a distinct object, but rather a category, which means a range of similar products. A new class of integrated software applications has emerged in the last decade, apparently consolidated-dated under one umbrella, in an industry that gets to be several billion dollars worth, which includes most of the largest companies in the area of software and the largest management consulting organizations in the world.

2. Issue and motivation of this study

Is to increase awareness of the need to implement ERP solutions and secondly to share observations with regard to this issue as well as the evolution of acceptance and integration in Romania of such solutions.

The ERP concept can be viewed from a variety of perspectives: first, and most obviously, ERP is a product marketed as a product sold in the form of computer software. And secondly and fundamentally, the ERP can be considered a development goal mapping for all enterprise data and processes into a comprehensive, integrative structure. Thirdly, the ERP can be seen as a key element of an infrastructure that provides a business solution. This integrated system can reach understanding on the part of possible users only if we pass from articles related to ERP teaching and studying this topic in education programs. Access to ERP software systems through collaboration with their suppliers must be a desideratum of educational institutions to use the media to expose the students "tools" valuable business for an efficient management and predictable evolution of the company. Theory-based approaches are still rare, but are likely to occur in the future.

Manuals are fundamental elements for the introduction of the concept in the university education system. They are usually perceived to contain a set of problems and consensual solutions that characterize this concept. After 1995 ERP market gained substantially momentum, when the seller has introduced software client-server in USA; It should be borne in mind that it takes several months to install an ERP system, implementation should be preceded by a systemic analysis of the business processes that should be adjusted and then mapped to the native streams of ERP systems.

Industrial Corporation

catalog, price list
promotion, advertisement
basic merchandise data
terms and conditions

control (amount, value, delivery goods)

stock, delivery

outgoing order, recall

delivery note

stock, requested delivery date,
receiving area
invoice

quantity and monetary differences
(invoice against goods received)

advice of payment, payment, account

Strategic plan
EIS controlling

contracting

order management

goods receipt

invoice auditing

accounts payable

warehousing

marketing

selling

goods issue

billing

accounts receivable

processes data functions

Retail Information System

Merchandise Information System

general accounting and asset management
cost accounting
human resources

Figure 1. An integration framework for retail and external interfaces Source: Becker and

Rosemann, 1997

In the academic environment the recognition was slow in accepting the importance of the integrated ERP software. Debates on this topic of ERP have just started to arise in the last few years.

In terms of the ERP approach Romania is far more behind that the other countries.

Until 2002 the Romanian IT industry had poor odds, but starting with 2002, it can be stated that this sector begins to say the word. These things happen as in Western Europe the market is almost saturated, having low growth rates.

The first companies that entered the ERP market in Romania are SAP, Oracle and they took advantage of the chain of multinational companies who wanted to have the same integrated solutions and their subsidiaries in Romania. In addition to these companies, also the Romanian companies entered the market with the solutions Scala, Siveco solutions, from Total Soft Charisma.

At international level, in developed countries in terms of technology, ERP is the culmination of the evolution of over 40 years in economic management techniques that have benefited from the support of international technologies, and its main purpose consists in the integration of all economic processes, optimizing the available resources. In our country ERP has a completely different situation since we do not have a Romanian tradition in the field of IT system evolution and even less we can say about a certain practice of implementation.

ERP started to work in the area of manufacturing where things had been better structured, in a mega application, which covers flows from production and related departments. Management of orders and customers, purchasing and management of suppliers, general accounting, warehouse and logistics management, and human resources have grown to be integrated in the same structure. All studies show that implementation of an ERP does not necessarily mean a full replacement of existing applications, if they

correspond to the information requirements of the organization. Their deployment follows primarily the elimination of "information Islands" and bring together all corporate functions into a single system. In Romania a lot of companies have remained faithful to the insular applications without integrating them into the system. In many Romanian companies each Department has its own software system or a system where they use Excel files to share information with other department. Under a unique database, a single ERP solution combines all functional systems in one single, integrated system, which is offered to all departments, which can share information and communicate with each other.

In Romania, an obstacle in implementing ERP systems was the price that was considered to be too high by the companies; according to these findings there was a legal European initiative to support companies and this initiative was achieved by: The Sectorial Operational Program „Improvement of Economic Competitiveness" 2007-2013, Axis III „Information and communications technology for the private and public sectors", Major Field of Intervention 3 - Supporting E- economy, 2nd Operation „Support for the development of e-commerce and other online business solutions".

The Romanian ERP market did not overcome the crisis, but it grows lightly, says Pierre Audoin Consultants (PAC).

According to PAC researches, the total market of ERP software and services in Romania fell in 2010 by 3.2%, given that implementation services dropped by 7.5% as compared to 2009.

The evolution of the ERP market in 2010 was far more serious than this figures show; "saving" the market, however, came only from 2-3 large contracts that have positively influenced especially the sale of licenses towards the end of the year.

In 2010, SAP kept its software sales leading position (licenses and maintenance) and ERP was again the solution preferred by one of the largest industrial groups in Romania which decided to switch to SAP and buy a large package of licenses at the end of 2010.

Among local companies, TotalSoft consolidated its position as the most sold ERP system after the world's leading ERP system providers, SAP and Oracle, and in 2010 it increases its sales of licenses reaching new record values for the company and at the same time, it increased the market share in Romania.

Eugen Schwab, Managing Director of CAP Eastern Europe and coordinator of the ERP study in Romania attracts attention that "the public sector in Romania is, along with Russia and Turkey, the least modernized, the least transparent and most inefficient in Central and Eastern Europe. It is just a coincidence that the implementations of ERP software solutions is carried out chaotically by the public administration of the three countries, through specific developments that exclude the intake of know-how from Europe or even the USA and that there is no evolution of the internal processes, of the working manner of the budgeting and control?"

However, PAC forecasts a change, either voluntary or forced, of the purchase and use manner of the IT systems in the Romanian public sector in the next five years, which is expected to lead to a growth of the demand and of the budgets for the implementation of ERP solutions that are dedicated to the needs of the public administration and which have already become a standard in most EU countries.

For now, even though they would be perfect for the needs of the Romanian SME sector, ERP solutions do not seem to gain any advantage in a consistent manner. There are first offer, first customers but the demand is currently in an incipient stage.

3. Conclusions

Some reasons why Romanian companies are reluctant to implement a business management system refer to:

■ Managers lack experience in using such systems. This does not allow them to recognize the benefits they could obtain on long term-as well as the automation of activities that will bring substantial savings of resources - but only the short-term efforts for the implementation.

■ The fact that they do not have a level of internal organization that allows the implementation of the systems. A software works on the basis of well defined workflows, and no matter how flexible and customizable, there must be a business infrastructure that is blended. In this case the "business analysis" service offered y the software provider, which consists in mapping the flows that we cover ERP system, is very important.

■ People in general are not open to change, and the fact that they will have to learn to operate a software would make them even more reluctant. On the other hand, they will understand only that the system keeps a general record of everything that is done (which documents have been registered, when and how they worked etc.). All these elements will lead to the underestimation of the need for such systems.

■ The implementation of an integrated system takes training time, adaptation of employees and even the change of the organization and internal flows. This may mean an additional effort on their part, and if they are already overloaded, there will not be any available resources to assimilate a new system.

■ The business itself is not yet perceived as being interesting enough so that its owners consider it as worth the investment.

Further, the non-use of integrated systems for the business management can have major adverse effects such as:

■ The impossibility of accessing the centralized company data in real time, respectively to identify losses at every company level and to correct them in time.

■ Limiting the capacity of human capital efficiency, due to the lack of intuitive workflows and the impossibility of repetitive operations automation, without added value

■ Impairing or even blocking companies in natural growth process, because to do so you must continuously invest in new financial and human resources, of time to sustain the growing volume of activity

However, in Romania there are experienced managers who have worked with such systems, and who know how important such system are for the smooth running of a business. They represent a special category, and they choose to start with an integrated management system, considering it to be necessary for the further development of the business.As a result of this work the opportunity of other researches has resulted, like: "ERP in the Romanian education system versus other countries."

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A STATISTICAL AND ECONOMIC ANALYSIS OF THE HOTEL INDUSTRY FROM BIHOR AND HAJDÚ-BIHAR COUNTIES IN THE CONTEXT OF THE (EURO) REGIONAL DEVELOPMENT

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Abstract: *This research has in sight the Bihor – Hajdú-Bihar Euroregion located at the border between Romania (in the north-western part) and Hungary (in the east). The research methodology that was used consisted in the statistical data collection in order to gather representative information on the evolution of tourism for the 2008 - 2011, in Bihor – Hajdú-Bihar Euroregion. In the first part of the research is presented an analysis regarding the evolution of the number of tourists within the tourist accommodation establishments in the Bihor – Hajdú-Bihar Euroregion. The analysis is based on the following aspects: the evolution of the number of tourists within the Bihor – Hajdú-Bihar Euroregion is presented; a comparison regarding the number of national tourists registered in the two counties belonging to the Bihor – Hajdú-Bihar Euroregion and finally an analysis based on the number of foreign tourists registered within the two counties belonging to the Bihor – Hajdú-Bihar Euroregion. In the second part of the research, the study continues with the analysis of the activities of the hotel units from Bihor and Hajdú-Bihar starting from the data obtained from the Bihor County Statistics Department, for Bihor County, and from the Debrecen Central Statistics Office, for the Hajdú-Bihar data. The research covers the period from 2008 - 2011, following the indicators regarding: the number of active units, turnover, and employee related expenses, staff and gross investments in tangible assets. This statistical and economic analysis presents on one hand the centralization of the indicators used within a table, (initially, in a rough form and subsequently in a shaped form based on the annual average exchange rates of the leu and forint compared to the euro during 2008-2011) and on the other the evolution of each indicator in chart form. Due to the fact that a part of the analyzed indicators are expressed in the national currency of the two countries (Romania and Hungary), I have used the annual average exchange rates of the leu and forint compared to the euro, in order to bring them to comparable units of measurement. The sources of information for these were the websites of the National Bank of Romania, for the annual average leu/euro exchange, and The Central Bank of Hungary for the annual average forint/euro exchange rate.*

Keywords: Bihor – Hajdú-Bihar Euroregion; active hotel units; turnover of the hotel units; employee related expenses in the hotel units; number of employees within the hotel units; gross investments in tangible assets from the hotel units.

JEL classification: L83

1. General Introduction

The basis of the Bihor and Hajdú-Bihar counties collaboration is represented by the document entitled *The concept and the development program of the Romanian-Hungarian cross-border region,* designed through the PHARE CBC program in 2000. Subsequent to this document the idea regarding the set up of Bihor – Hajdú-Bihar Euroregion was outlined (in 2002), which is based on direct bilateral relationships, adapted to the development strategy of the region.

Thus, according to the Bihor County Council, the set up of the Euroregion had as purpose the stimulation of new ways of cooperation between the communities of the two countries, according to the set objectives: maintaining and developing good neighbors relationship;

- identifying the possible domains of cross border cooperation;
- organizing and coordinating the activities meant to promote the cooperation in the established domains;
- implementing solid programs in areas of mutual interest;
- promoting the Euroregion collaboration with other international organizations;
- supporting the members of the Euroregion in the European integration process.

2. The evolution of the number of tourists within the tourist accommodation establishments from the Bihor – Hajdú-Bihar

An analysis regarding the evolution of the number of tourists within the tourist accommodation establishments in the Bihor Hajdú-Bihar Euroregion is performed in the first part of the research.

The study refers to three major aspects regarding:

- The presentation of the number of tourists evolution within the Bihor - Hajdú-Bihar Euroregion;
- The realization of a comparison regarding the number of domestic tourists registered within the two counties, which are part of the Bihor – Hajdú-Bihar Euroregion;
- The realization of a comparison regarding the number of foreign tourists registered within the two counties, which are part of the Bihor – Hajdú-Bihar Euroregion.
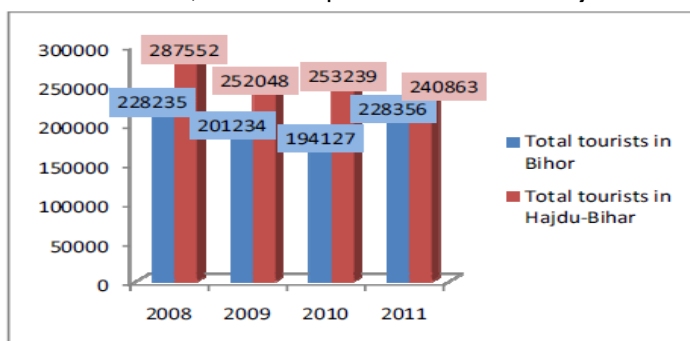
Figure 1: Tourist arrivals in the tourist accommodation establishment in the Bihor - Hajdú-Bihar Euroregion; (UM: Number of persons)
Source: made by the author based on the data obtained from the https://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=TUR104B (Bihor) and http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_oga012.html (Hajdú-Bihar) websites.

At Hajdú-Bihar County level, in 2009, the total number of tourists registers a decrease of 12% compared to the total of 2008, a decrease that drops in 2010 by 0,42%. Within the analyzed period (2008-2011) the lowest number of tourists is registered in 2011, which is a decrease of 16.23% compared to 2008.

In the analyzed period (2008-2011) the following situation can be noticed within Bihor County:

- In 2009 an 11% decrease is registered, which amplifies in 2010 by another 4% (resulting a decrease of 15% compared to 2008);
- In 2011 a comeback to the situation of 2008 can be observed, a number of 228,356 persons being registered.

Comparing the values of the two counties we can notice that during the analyzed period an adjustment occurred at Bihor county level, in 2011 returning to the situation of 2008.
If the comparison is independently made on each year, we can observe that in each year at Hajdú-Bihar County level, the number of registered tourists increased by approximately 21% (in 2008 and 2009), respectively 23% (in 2010) compared to Bihor County. In 2011 the registered value, for the indicator regarding the *total number of tourists* in Bihor County, is lower by only 5% compared to the values registered at Hajdú-Bihar County level (the range between the values decreased by approximately 16% in comparison to the previous years), due to the fact that the number of tourists from Hajdú-Bihar County registered a continuous decrease, while at Bihor County level a spectacular comeback to the values of 2008 can be noticed.
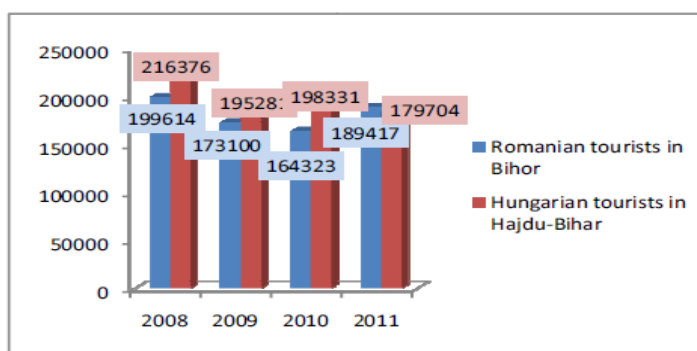
Figure 2: Domestic tourist arrivals in tourist accommodation establishments in the Bihor – Hajdú-Bihar Euroregion (UM: Number of persons)
Source: made by the author based on the data obtained from the https://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=TUR104B (Bihor) and http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_oga012.html (Hajdú-Bihar) websites.

During the analyzed period (2008-2011) a decrease of the number of Hungarian tourists can be observed at Hajdú-Bihar County level thus:
   • In 2009 the number of Romanian tourists decreases by 9.74% compared to 2008, that is a decrease of 1.4% in 2010;
   • In 2011, a decrease of 16.94% is registered, this being the highest decrease compared to 2008.
The number of Romanian tourists within Bihor County, during 2008 -2010 in comparison to 2008, registers a decrease of 13.28% (in 2009), that is 17.68% (in 2010), the decrease from 2010 being diminished by 12.57% in 2011.
A decrease of the number of domestic tourists can be observed in both counties due to the economic crisis of 2008-2009 that lead to the increase of the number of layoffs in most areas and thus to the decrease of the buying power of many families, which determined the decrease of travel package purchases.
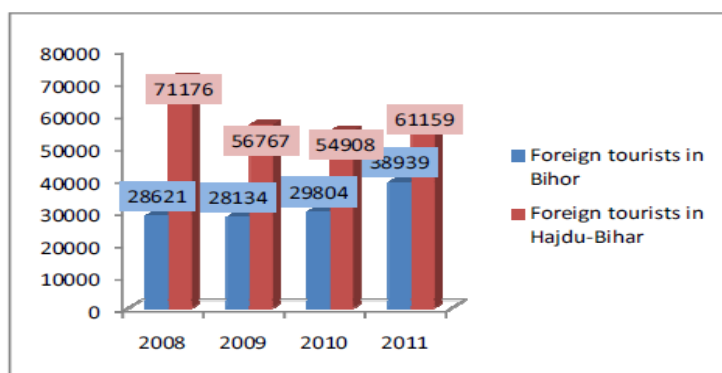
Figure 3: Foreign tourist arrivals in tourist accommodation establishments in the Bihor – Hajdú-Bihar Euroregion (UM: Number of persons)
Source: made by the author based on the data obtained from the https://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=TUR104B (Bihor) and http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_oga012.html (Hajdú-Bihar) websites.

At Bihor – Hajdú-Bihar Euroregion level a huge difference can be noticed between the number of foreign tourists registered in Bihor in comparison to the number registered in Hajdú-Bihar. Thus, within the analyzed period, the number of foreign tourists registered in Hajdú-Bihar is approximately 50-54% higher (in 2009, 2010) and by 64% in 2011, compared to the values registered in Bihor County. This fact is due to the quality-price relationship (for the travel offers), which is more advantageous in Hajdú-Bihar than in Bihor.

3. Analysis of the hotel units from Bihor – Hajdú-Bihar Euroregion
The study continues with the analysis of the hotel units from Bihor – Hajdú-Bihar, starting from the data obtained from the *Bihor County Statistics Department*, for Bihor County, and from *Debrecen Central Statistics Office,* for Hajdú-Bihar County.
The analysis covers the period between 2008 and 2011, following the indicators regarding:
- the number of active units;
- turnover;
- employee related expenses;
- staff;
- gross investment in tangible assets.

The above mentioned indicators are the data obtained from both sources, as common data, followed both for the Romanian part and for the Hungarian one.

Table 1: Analyzed indicators regarding the activity of the hotel units from Bihor and Hajdú-Bihar (gross value)

Analyzed indicators		2008	2009	2010	2011	
Bihor	Number of active units	64	84	73	74	number
	Turnover	140.017	145.212	129.256	153.015	thousands RON
	Employee related expenses	29.437	30.463	26.700	25.460	thousands RON
	Staff	2.121	2.170	2.017	1.766	number
	Gross investments in tangible assets	54.001	77.243	76.439	132.076	thousands RON
Hajdú-Bihar	Number of active units	114	119	115	121	number
	Turnover	5.822.322	5.430.824	5.187.505	4.803.444	thousands HUF
	Employee related expenses	2.243.554	2.110.882	1.890.583	1.786.210	thousands HUF
	Staff	1.327	1.244	1.218	1.139	number
	Gross investments in tangible assets	1.264.000	2.354.000	3.442.000	1.315.000	thousands HUF

Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*.

It can be observed that in gross form (Table 1) comparisons can be made only in respect to the indicators that present the number of active units and the employed staff. As for the other indicators no direct comparisons can be made, because these are expressed in the national currencies of the two countries (Romania and Hungary have not adopted yet the euro currency). Thus, I have used the annual average exchange rates of the two currencies compared to the euro, in order to convert them in comparable units of measure.

Table 2: Annual average exchange rates of the leu (RON) and forint (HUF) in comparison to the euro (2008-2011)

Annual average exchange rate	2008	2009	2010	2011
RON/euro	3,6827	4,2373	4,2099	4,2379
HUF/euro	251,25	280,58	251,25	251,131

Source: made by the author based on the data obtained from the National Bank of Romania (for the annual average exchange rate for RON/euro) and the Central Bank of Hungary, (for the annual average exchange rate of HUF/euro).

Subsequent to the calculation of the annual average exchange rates of the leu and forint in comparison to the euro (during 2008-2009), a new table is made, which will include the values resulted after processing the data obtained from the *Bihor County Statistics Department* and *Debrecen Central Statistics Office.*

Table 3: Analyzed indicators regarding the activity of the hotel units from Bihor and Hajdú-Bihar (processed values)

	Analyzed indicators	2008	2009	2010	2011	
Bihor	Number of active units	64	84	73	74	number
	Turnover	38.020	34.270	30.703	36.106	thousand euros
	Employee related expenses	7.993	7.189	6.342	6.008	thousand euros
	Staff	2.121	2.170	2.017	1.766	number
	Gross investments in tangible assets	14.663	18.229	18.157	31.165	thousand euros
Hajdú-Bihar	Number of active units	114	119	115	121	number
	Turnover	23.173	19.356	20.647	19.127	thousand euros
	Employee related expenses	8.930	7.523	7.525	7.113	thousand euros
	Staff	1.327	1.244	1.218	1.139	number
	Gross investments in tangible assets	5.031	8.390	13.700	5.236	thousand euros
Total	Number of active units	178	203	188	195	number
	Turnover	61.194	53.626	51.350	55.234	thousand euros
	Employee related expenses	16.923	14.713	13.867	13.120	thousand euros
	Staff	3.448	3.414	3.235	2.905	number
	Gross investments in tangible assets	19.694	26.619	31.856	36.402	thousand euros

Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

From the analyzed data presented in table 3, we can notice that Bihor County has a lower number of hotel units (approximately by 30%) compared to Hajdú-Bihar County, but nevertheless, the number of employed staff is higher by almost 40%, phenomenon that we can observe even in the situation of the turnover. Also, the gross investments in tangible assets in Bihor County are by approximately 60% (in 2008 and 2009) and even by 80% (in 2011) higher than for Hajdú-Bihar County.

As follows, each indicator will be presented in a figure including the values registered, in percentage, at Bihor and Hajdú-Bihar Euroregion level, by Bihor and Hajdú-Bihar counties during the analyzed period (2008-2009).

Analysis of the number of active units
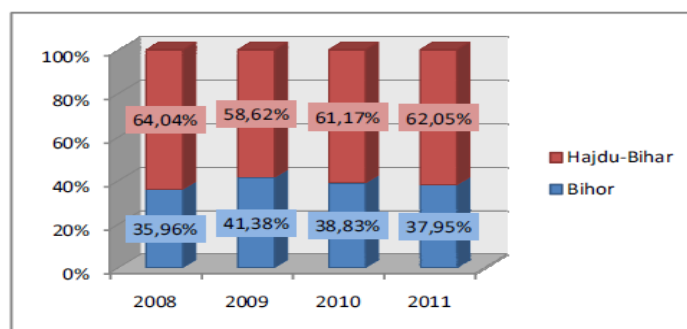
Figure 4: The number of hotel units from the Bihor – Hajdú-Bihar Euroregion
Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

During the analyzed period at Bihor and Hajdú-Bihar Euroregion level can be noticed that the weight of the hotel units from Hajdú-Bihar is higher than that in Bihor.
In 2008 the weight of the accommodation units in Hajdú-Bihar County is higher by approximately 28% compared to Bihor. This difference decreases in 2009 by 10.76%, an increase of 23.81% being registered in Bihor in comparison to 4.20% in Hajdú-Bihar.
In 2010 even if the number of accommodation units decreases in both counties, Hajdú-Bihar still has the highest weight having by 22.34% more accommodation units than Bihor County. This weight increases in 2011 by approximately 1.76%, the number of accommodation units from Hajdú-Bihar being of 3.61% higher (as compared to 2010) than in Bihor.

Turnover analysis of the hotel units
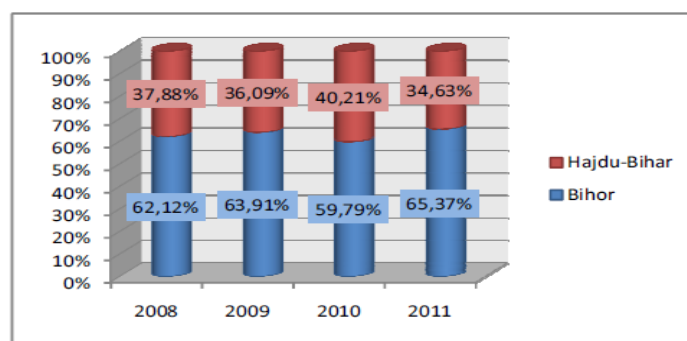
Figure 5: Turnover of the hotel units from the Bihor – Hajdú-Bihar Euroregion
Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

Even if the number of accommodation units from Bihor and Hajdú-Bihar Euroregion registers a higher weight than in Hajdú-Bihar County (an average of 23%), we cannot say the same thing about the turnover.
We notice that in 2008 the turnover of the hotel units from Bihor County is higher by 24.24%. In 2009, this weight increases by 3.58%, even if in both counties a decrease of the turnover is registered (in Bihor by 9.86% and in Hajdú-Bihar by 16.47%).

In 2010 the turnover of the hotel units from Bihor county is higher by 19.18% decreasing as compared to 2008 and 2009, due to the fact that the registered turnover in Hajdú-Bihar increased by 6.25%, while in Bihor county decreased by 10.44%. In 2011 the weight of the turnover in Bihor County is of 65.37%, which is by 30.74% higher than that for Hajdú-Bihar County.

Analysis of employee related expenses
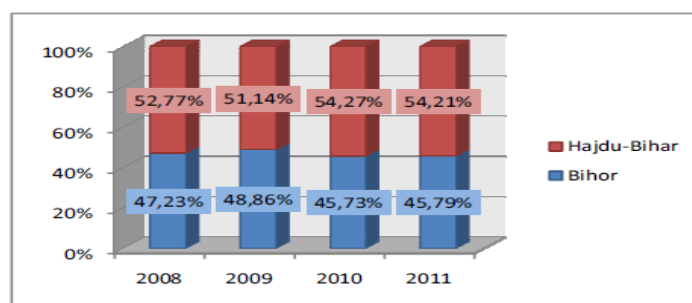
Figure 6: Employee related expenses in the hotel units from the Bihor – Hajdú-Bihar Euroregion
Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

At Bihor - Hajdú-Bihar Euroregion level, Hajdú-Bihar County has a higher weight in the total of the employee related expenses in the hotel units, fact that highlights the attempt of the management to optimize the tourist accommodation establishments and of the activities related to the managed units.

Analysis of the number of employees
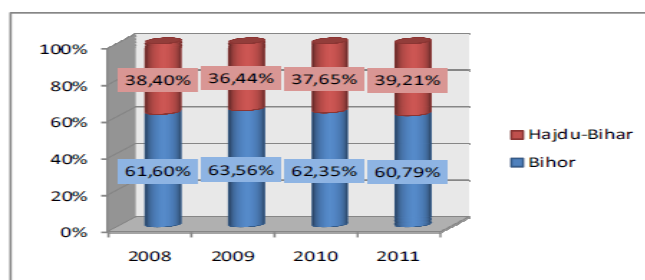
Figure 7: The number of employees within the hotel units from the Bihor – Hajdú-Bihar Euroregion
Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

Within the Bihor - Hajdú-Bihar Euroregion we notice that at Bihor County level the weight of the hotel units employees is higher (on average by 24%) than in Hajdú-Bihar County, which further emphasizes the idea that in Bihor tourist accommodation establishments offer a larger number of beds than those from Hajdú-Bihar.
Despite the 2008 - 2009 crisis we can observe a tendency to maintain the jobs in the hotel units of both counties resulting the fact that tourist services represent an important source in the development of the Bihor - Hajdú-Bihar Euroregion.

Analysis of gross investment in tangible assets
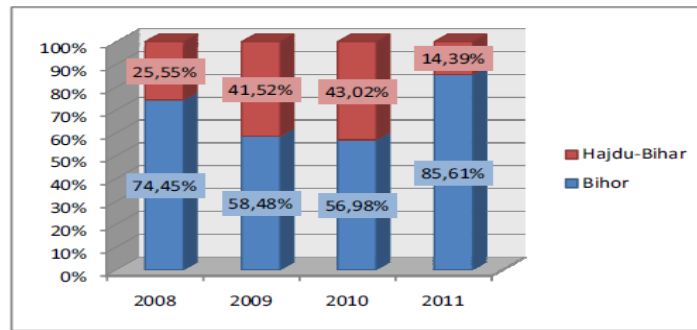
Figure 8: Gross investments in tangible assets from the hotel units of the Bihor - Hajdú-Bihar Euroregion
Source: made by the author based on the data obtained from the *Bihor County Statistics Department*, and from the *Debrecen Central Statistics Office*

In 2008 Bihor County represents a weight of 74.45% in the total of gross investments in tangible assets from the hotel units made at Bihor - Hajdú-Bihar Euroregion level.
In 2009 and 2010 this weight decreases at Bihor - Hajdú-Bihar Euroregion level, due to the fact that within Hajdú-Bihar County the gross investments in tangible assets from the hotel units increase by 40% (in 2009 as compared to 2008), respectively 23.27% (in 2010 as compared to 2009) in comparison to those in Bihor where the increases are much lower.
In 2011, the weight of 85% registered by Bihor County in the total of the gross investments in tangible assets from the hotel units made in Bihor - Hajdú-Bihar Euroregion are due to the fact that while in Bihor the investments have increased by 41.74% compared to 2010, in Hajdú-Bihar these have dropped by 61.78% as compared to 2010.

4. Conclusion
The higher turnover at Bihor County level was achieved due to the fact that the hotel units of Bihor County are bigger considering the occupied surface (thus offering a larger number of beds) than those in Hajdú-Bihar. Those from Bihor County also have a stronger local monopoly position than the units from Hajdú-Bihar, on one hand this is due to the existence of a larger number of balneal resorts (Băile Felix, 1 Mai, Băile Tinca) and on the other due to the mountain area of the county known as Apuseni Mountains (including Plopiș Mountains, Pădurea Craiului, Codru Moma and Bihor Vlădeasa), which represent an important tourist attraction of the county. The impressive number of caves (Bear Cave, Wind Cave, Cristal Cave, Meziad Cave, Vadul Crișului Cave) present in the area and of the ice abysses (Vivid Fire Glacier, Borțig, Bârsa, Vârtop) and of the mountain resorts renowned for the existent ski slopes: Vârtop-Arieșeni, Stâna de Vale, Valea Bogăi etc., also make the difference between the two counties because these types of attractions are inexistent in Hajdú-Bihar.
The analysis regarding the gross investments confirms the fact that Bihor County in comparison to Hajdú-Bihar pays more attention to improving existent tourist services, bringing them to European standards, thus holding the attention of both domestic and foreign tourists.
Also from the performed analysis we can notice that in Bihor County employee related expenses are lower than those in Hajdú-Bihar, therefore it can be said that the staff in Hajdú-Bihar has twice as much wage as the one in Bihor.

The quality – price relationship (in the case of tourist offers) is better in Hajdú-Bihar than in Bihor. Furthermore, the travel packages from Hajdú-Bihar are much more diversified and even customized (travel packages for newlyweds, for retired persons etc.) including a series of additional services (massage, city tour, romantic dinner, free tickets to the well-known Hajdúszoboszlo swimming pool, etc.) free of charge in most tourist packages.

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THE INVESTMENT IN HUMAN CAPITAL – MORE THAN AN IDEA IN PRESENT AND FUTURE REALITIES

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Abstract: *The essence of the idea of human capital is of "investment in people" in order to improve their productivity. Education and health costs are generated in the hope of future benefits, hence the term "human capital investment". In general, the human capital is treated as an investment. Moreover, the investment is a continuous one, targeting either the development (training or continuous education courses, for example) or to maintain the capital stock (regular medical appointments, for example). Accepting numerous studies published in the last decades regarding the human capital, we will mention education as a main factor contributing to the training and development of individuals. The costs of education are investments in the human capital, investments that assure the accumulation and avoidance of its depreciation.*
In countries, there is a consensus, that parts of the level of government investment include also the need for investment in educational services, governments undoubtedly playing a central role in directing the formation and development of human capital. We need to invest in human capital, doubly so as that the investment in education is a profitable one, the rate of capitalization of the investment in education ranging from 5-30%, according to OECD statistics.

Keywords: *human capital, investment in human capital, education, professional training*

JEL classification: *I 20, I 21, 0 11*

1. Introduction

We agree that the present shows an increase in the importance of human capital for the economic progress and the way governments and society can intervene for a future development, development that will depend largely on the individuals' skills and knowledge; that, finally, the new society, makes from *the human capital one of its cornerstones.*

The idea that the human society has known certain development levels, each bringing it on higher levels of organization and operation, is real and sustained. James Michaels, in his work "How new is the new economy" points the ages that mankind passed and passes: stone age, iron age, agriculture age , industry age, (information) technology age, knowledge age (Michaels, 1999 4). Commonly known as revolutions, they made an imperceptible transition from an economy based on material resources to a knowledge-based economy, focusing on the intangible assets and less on the financial and fixed assets. If in the classical economy, the ability to compete depended more on the availability or quantity of classic production factors, now it is more important to use them effectively and to considerate some influencing factors such as: *human capital, investment in human capital, macroeconomic stability and quality of institutions.* Therefore, the analysis of human capital and the investment in human capital is a complex and actual problem, which can be treated both at international / national level and at the company level. Multiple studies reflect the close correlation between the accumulation of human capital, economic growth and competitive advantage, as well as direct and indirect impact on the economic system.

The attempt to transpose in a single article all these trajectories is difficult and undoubtedly impeachable of omissions. The work aims to highlight the positive relationship between the investment in human capital and economic growth; the magic of human capital results from the increased efficiency of specific investments as its stock increases.

2. Human capital - some considerations about the origin of the concept

We want to preface our study indicating that human capital has captured the attention of a large number of economists who believed that human beings and their skills as a capital, well known names in the history of economic thought such as Petty, Smith, Say, Roscher , Bagehot, Ernest Engel, Walras and Fisher. However, the foundations of this theory were created by A. Smith, culminating with the 60's, when the modern theory of human capital developed around the University of Chicago, led by T. Shultz, president of the American Economics Association. Among the promoters of human capital we also mention G. Becker (Nobel Prize in 1992) and J. Mincer.

Regarding the classical economists, as M. Blaug notes they have failed to explore the implications of human capital in the labor market. Adam Smith started, JS Mill went a little further and A. Marshall certainly started to shed light on the human capital theory stating that "the most valuable capital is invested in human beings". No more, no less, Smith, Mill and Marshall have only opened the way for studies of Becker, Schultz, Mincer etc.

Adam Smith (1776) was the first classical economist that included human capital in the definition of capital. Without offering a way to estimate the value of human capital (the size of quantitative analysis is missing), Adam Smith in "Wealth of Nations" defined as elements of capital in general skills and knowledge "useful" of the human being, regarded as a machine associated with both costs and the ability to produce income instead.

Th. R. Malthus developed a theory *"The theory of population"* that analyzes in dynamic the population, its growth and the ability to feed (the population increases in geometrical progression and consumer goods in arithmetic progression), the human capital being in this model cause and effect. Unlike Smith who analyzed the human capital in terms of quality, Malthus failed precisely this qualitative side, but was the first author who has speculated on demographic issues.

From K. Marx, who built the worker "collective productive", we learn how not to think on the subject of human capital (Popescu, CC, Pohoaţă, I., 2007.5). Marx placed the human capital analysis outside the qualitative parameters, the qualitative side of the workforce being reduced to zero. From his work "Capital" results that the simple and complex work have a historical character changing from one stage to another, along with the scientific progress. Such an interpretation is far from the truth.

The economists after Smith neglected to study this particular type of capital considering what contributes decisively to the production of goods and services are installations, lands, buildings, etc. and their corresponding investments. Economics needed almost two centuries to return to Smith's remark that investments in knowledge and skills of individuals bring profit and participate directly in the enrichment of a nation. The explanation is given by the quantitative tint, which characterized the neoclassical analysis.

The late 50s and the whole 7th decade brought the human capital to the attention of the academic world, especially under the impetus of the works of Theodore Schultz *"Investment in Human Capital*", Jacob Mincer "*Investment in Human Capital and Personal Income Distribution"* and Gary Becker, *"Human Capital"* .

Initially, the modern theory of human capital developed in the group around the University of Chicago led by Theodore Shultz, president of the American Economics Association. Postulating the rationality of individuals, Schultz and his collaborators have treated the educational and health expenses as investments in order to increase labor productivity and hence economic growth.

Jacob Mincer, Gary Becker, and those who followed them were more focused on the study of relations between the human capital and the income from labor, specifically on the study of variations in income in terms of the individuals' education level. This is the subject of the human capital theory, whose outstanding exposure is performed by Becker. The essence of the theory is simple: the individual incomes increase substantially depending on the level of his education. Mincer and Becker have generally restricted their approaches of the human capital to the analysis of the educational capital, highlighting the costs related with the investing in training, and the relationship between school and post-school investments.

In the recent decades, the analysis on human capital has begun to define it, especially as educational capital, as a result of the impact of the human capital theory. Blaug (1976) shows that *education is in fact the essence of human capital*, its importance is superior to the health related components.

3. The investment in human capital - between theory and observation

Undoubtedly, humans accumulate useful knowledge and skills and the sizing of this "capital", as well as the conventional capital, are covered by investments. Therefore, the efficiency in the allocation of rare resources comes from the investments made to achieve substantially improved quality and quantity effects. Among the efforts made, *"education and professional training are the most important investments in the human capital"* (Becker, 1997.1) but not the only. For Schultz, "the investment in man" (Schultz, 1981, 7) could mean the amount of resources required for a normal diet or funds allocated to ensure a good health. Through it, we can also understand the striving to protect the environment and, in principle, any activity that can improve the quality of life. But, underlying all, there are undoubtedly, the resources invested in education and research. Schultz stated that such investments have increased in Western societies in more accelerated paces than those in the "conventional capital"; moreover this increase can be considered an important feature of the economic system, on which the national product growth and the productive superiority of the technologically advanced countries may be explained (Bundă. RN, 2008, 2).

Both the expenses on education and on health can be seen as an investment and as an input (Schultz, 1981, 7). In general, the treatment of the human capital as an investment was imposed, moreover this investment must be a continuous one, targeting either the development or the maintenance of the capital stock.

Accepting numerous studies published in the last decades on human capital, we will discuss about education as a main factor contributing to the training and development of individuals. The expenses on education are investments in the human capital, investments that assure the accumulation and avoidance of its depreciation. Romer in his work *Human Capital: Theory and Evidence* (1989, June) focuses on education, arguing that its role is manifested at three levels:

 by forming physical abilities (strength and physical endurance, formation of fast reflexes);

 by educational skills obtained through primary and secondary education;

 by the "scientific talent" developed through post secondary education.

One of the most important motivations of the individuals to invest in education is linked to the accumulation of a human capital stock - embodied in knowledge and skills, leading to an increase of productivity and, hence, of the potential earnings that the individual hopes to obtain - expressed both in monetary and non-monetary terms.

OECD has confirmed the importance of investing in education as a determinant of economic growth, education being associated with various benefits. In the countries, there is a consensus, that a part of the level of government investments include the need for

investment in educational services, governments undoubtedly playing a central role in directing the formation and development of human capital. All OECD countries should provide young people with a minimum of capital accumulated during compulsory education, as a major part of knowledge, skills, qualifications are learned in school through the educational process. Thus, there was recognized the crucial role of education in the acquisition and development of human capital and ,therefore, in the economic development of a country.

The Center for the Study of Living Standards (CSLS), Ontario (2001, 9) has defined the concept of education indicators in indicators of inputs (inputs) showing the size and quality of investments in the human capital and of results (outcome). Education is the most important component of the human capital and therefore its determination indicators are closely correlated with: the investments in the capital stock, the training programs provided by the government, the expansion of opportunities for secondary education, the enrollment rates for specific programs and the importance of lifelong learning.

As to maximize the effects of education on the development of human and economic capital, some conditions must be observed:

 the quantity and quality of education measured in number of years of study, the percentage of GDP allocated to education, the school participation rates, the results, the school performances, to be high and the educational offer to meet the current and future demands of the labor market;

 the existence of a socio-economically and politically stable environment and fast economic growth rate;

 the income differences at the individual level, remuneration must correspond to the level of education and professional development of the individual.

The public budgets are generally the major paymasters, but private expenditures must be also considered. The beneficiaries of human capital development are alike the individuals, the companies and the society. Investing in the human capital, as a political decision with important distributional and growth effects involves five major types of options (OECD 1998, 10):

 the decision for the level of investment, optimal for the company in question and its members;

 the costs sharing between the public budget, companies / organizations and individuals, all parts benefiting from the investment;

 the optimal allocation of rare resources (such as the access to higher education or pre-school, the access to medical care, etc..), taking into account the unequal distribution of benefits;

 ensuring equity in the distribution of the benefits of investing in the human capital;

 establishing the procedures for monitoring, measuring, evaluation and accountability for the results of investment in the short, medium and long term.

From this point of view, the role of the government in education should be reduced to financing primary education (which produces strong positive externalities as Friedman suggests) or lending students during the university courses.

4. Investing in education - a few considerations about Romania

Investing in the human capital (particularly in education) has long-term effects, appearing first as a cost element (cost based approach). *The cost-based approach (cost-based)* estimates the human capital stock by adding the education costs (including the opportunity cost) and other elements defined as investments in the human capital.

In general, education is financed by the public sector, by funds allocated directly to the educational institutions (direct expenses for the educational institutions) or by supporting students and their families with scholarships and public loans as well as by transferring

public subsidies for educational activities; all types of transactions are reported as total public expenses on education.

Table 1: Provides a summary analysis of these costs across countries. Public spending on education, total (% of GDP)

Country	% of GDP							
	2006	2007	2008	2009	2010	2011	2012	Average
EU-27	5,16	5,07	5,16	5,55	5,51	5,33	5,26	
EU-28	:	:	:	:	:	:	5,26	
EA-17	4,82	4,74	4,81	5,22	5,18	5,05	5,01	
EA-18	4,82	4,75	4,82	5,23	5,18	5,06	5,02	
DK	7,05	6,75	6,93	7,97	8,06	7,76	7,88	7,48
SE	6,90	6,68	6,84	7,23	6,90	6,80	6,82	6,88
CY	6,37	6,32	6,80	7,24	7,45	7,18	6,69	6,87
SI	6,36	5,93	6,10	6,53	6,60	6,62	6,41	6,37
EE	5,97	5,88	6,72	7,11	6,70	6,34	6,40	6,44
FI	5,99	5,75	5,89	6,58	6,57	6,40	6,35	6,22
BE	5,82	5,73	5,90	6,23	6,14	6,26	6,32	6,06
FR	5,76	5,57	5,66	6,16	6,16	6,05	6,14	5,93
UK	6,09	6,04	6,32	6,85	6,83	6,21	6,02	6,34
MT	5,51	5,31	5,22	5,39	5,67	5,74	5,91	5,54
NL	5,35	5,33	5,45	5,90	5,84	5,78	5,81	5,64
PT	6,60	6,15	6,25	6,80	7,07	6,57	5,66	6,44
LT	5,33	5,17	5,78	6,83	6,09	5,79	5,60	5,80
AT	5,24	5,17	5,37	5,74	5,73	5,59	5,57	5,49
LV	6,03	5,85	6,58	6,78	6,09	5,73	5,48	6,08
PL	5,95	5,67	5,74	5,58	5,65	5,54	5,46	5,66
LU	4,38	4,24	4,64	5,30	5,23	5,13	5,43	4,91
IE	4,57	4,76	5,29	5,40	5,40	5,19	5,21	5,12
CZ	4,73	4,49	4,47	4,81	4,82	4,92	4,84	4,73
HU	5,82	5,45	5,23	5,32	5,65	5,20	4,80	5,35
ES	4,29	4,38	4,61	5,05	4,94	4,81	4,47	4,65
DE	4,04	3,94	3,97	4,40	4,43	4,36	4,34	4,21
IT	4,56	4,56	4,40	4,64	4,46	4,19	4,15	4,42
EL	3,88	3,87	4,12	4,26	4,01	4,11	4,10	4,05
SK	3,74	3,86	3,48	4,35	4,47	4,08	3,85	3,98
BG	3,74	3,79	4,12	4,32	3,79	3,63	3,52	3,84
RO	**4,12**	**3,94**	**4,47**	**4,09**	**3,35**	**4,13**	**3,01**	**3,87**
IS	8,30	8,11	8,35	8,55	8,34	8,08	8,00	8,25
NO	5,36	5,38	5,19	6,04	5,87	5,56	5,47	5,55
CH	5,74	5,56	5,65	6,12	6,13	6,11	6,14	5,92

Sources:http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/main_ta bles

We may conclude that countries like Denmark or Iceland allocate over 8% of GDP for education, while the EU average is of 5.26% of GDP; in the case of Romania, the

percentage of GDP for education ranged from 3.28% in 2001 to reach 4.47% in 2009; the same percentage value reached 3.01% in 2012 (hence important conclusions can be drawn concerning the attitude of political decision-makers towards education). We must emphasize that, in 2012, the lowest ratios were recorded in Romania (3.0% of GDP), Bulgaria (3.5% of GDP) and Slovakia (3.9% of GDP).

It should be noted that during 2001-2012, the proportion of the global GDP allocated to education remains stable around 5.3%, while in Romania the average is 3.87%. However, this value hides large disparities between countries. In Ireland and Iceland the proportion of GDP allocated to education increased by over 20% between 2000 and 2012; also, this increase was over 10% in the Czech Republic, the Netherlands and Great Britain.

Therefore, the increased financing of education exclusively on public funds is an issue that may raise questions; in theory, the states should pay at least 6% of GDP for education, as other sources will be attracted from the private sector of the economy; the accumulation of both financing sources could provide the education and the qualification of human capital needed in the global competition.

In addition to public financing intended for education, a particular importance is given to private resources (table no. 2), which is why Romania should provide more alternatives (to attract private sources, a more intense public-private cooperation) and equal opportunities for the development of private education, especially in higher education. There are states that have created such systems, relevant in this respect being the way of allocation of resources.

Table 2: Expenditure on education for all levels of education

COUNTRIES	Public expenditure on education % of GDP		Private expenditure on education % of GDP		Annual expenditure on public and private educational institutions per pupil/student By level of education (PPS based on full-time equivalents)	
	2002	2010	2002	2010	2002	2010
UE -28	-	-	-	-	-	-
UE – 27	5,10	5,44	0,6	0,82	5307,1	6900,1
Belgium	6,10	6,57	0,36	0,34	6573,2	8036,5
Bulgaria	4,03	4,1	0,69	0,63	1574,9	2639,7
Czech Republic	4,32	4,25	0,24	0,57	2947,3	4600,4
Denmark	8,44	8,8	0,28	0,44	7378,5	9604,8
Germany	4,70	5,08	0,87	0,74	6057,9	7737,9
Ireland	4,29	6,41	0,28	0,48	4939,5	-
Greece	3,57	-	0,17	-	3548,6	-
Spain	4,25	4,98	0,54	0,82	4850,3	6831,5
France	5,88	5,86	0,56	0,64	6160,7	7337,4
Italy	4,62	4,5	0,35	0,46	5735,9	6097,3
Cyprus	6,55	7,92	1,4	1,61	5495,4	9144,6

Latvia	5,71	5,01	0,82	0,57	2267,1	3628,6
Lithuania	5,84	5,36	:	0,68	2012,4	3738,3
Hungary	5,38	4,88	0,55	-	:	-
Malta	4,38	6,74	0,61	1,31	3447,9	7645,4
Netherlands	5,15	5,98	0,89	1,04	6779,9	8522,5
Austria	5,72	5,89	0,38	0,52	7691,5	9217,8
Poland	5,41	5,17	0,64	0,8	2506,5	4483,6
Portugal	5,54	5,62	0,09	0,43	4190,7	-
Romania	**3,51**	**3,53**	**0,16**	**0,12**	**:**	**2132,5**
Slovenia	5,78	5,66	0,83	0,68	4930,3	6633,9
Slovakia	4,30	4,22	0,2	0,73	2032,2	4173,1
Finland	6,21	6,85	0,13	0,15	5707,2	7419,6
Sweden	7,43	6,98	0,17	0,16	6742,8	8311,7
United Kingdom	5,11	6,22	0,89	2,01	5707,5	8334,6
Iceland	6,79	7,6	0,57	0,75	13162,4	7226,7
Liechtenstein	2,96	2,68	0,26	-	8470,3	-
Norway	7,58	6,87	0,61	0,1	8554,7	10403,9
Croatia	3,72	4,27	0,13	0,26	:	3796,1
United States	5,58	5,49	1,9	2,25	9334,6	11508,7
Japan	3,65	3,85	1,21	1,54	6445,6	7747,3

Sursa:http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/main_tables

The analysis of the summarized above data clearly highlights the fact that, in general, the education expenses are financed to a very large extent from public funds. Indeed, in all countries, public funds are at least 75% of the costs on education at all levels; the share of private financing is low, it varies significantly from country to country. The position is, probably, similar in the countries for which we don't have all the data on private financing. No doubt, the share of private financing attracted by education depends, among other factors, on issues such as: whether the access to preschool and primary education is free or not and whether the registration and tuition fees are paid by students in tertiary education; if so, private financing depends on the amount of these fees. The relative shares of funding for education (public and private) are also linked to the institutional autonomy.

In conclusion, the basic idea that we want to emphasize is that the allocation of resources in education should be made after the criterion of economic and social efficiency taking into account the fact that the investment in education should be continuous and that the results become visible only in the medium and long term.

 Therefore, education is by far the number 1 project in Romania in the coming years. The complex and long-term focus of our country on profound transformation of education at all levels, in an unprecedented manner, represents the critical condition of success of the new Romania.

Whether we like it or not, whether we agree or not, the data place Romania in the world and in Europe on a lower level. Romania is mediocre because the public system of education in Romania is mediocre, unworkable and ineffective. The conclusion we have reached is especially true as the aboriginal potential is clearly underutilized by neglecting

the private or public investments in education and research. The preparation and exploitation of knowledge, skills, professional skills and cultural values depend on the public awareness that only the transformation in priority of the investments in human capital can bring the necessary competitiveness to face the new circumstances of the dynamic of modern economy.

5. Conclusions

Overall, taking into account these aspects, as different, as interconnected, the hope is to have justified the consistency of the idea of "human capital investment", that beyond a simple title that "sounds good", remains an idea deeply rooted in reality, for the following reasons:

☐ the human capital (the man) has always underlied achievements and progress;

☐ the access to knowledge tends not to depend anymore on getting a predetermined education, specific to a certain age, the process of accumulation of the individual human capital being of "life long learning";

☐ the human capital is, at the same time, resource that, usually, is assessed by use and intrinsic good of individuals - the same kind; in addition, its limiting seems to depend less on its physical side and this can cause radical effects;

☐ the human capital and the investment in human capital has become a visible condition of economic and social existence.

For Romania, there is a clear difference in the investments in education (in highly developed countries the average is 5.33% of total government expenses, while Romania, according to the data, is among the countries with a low percentage of expenses for education, the average is 3.87%). Taking into account the comparison Romania – EU, it shows significant differences on the category of allocated expenditures, Romania being too far from the European maximum achieved by Denmark and Iceland. A brief assessment of the investment in the human capital (particularly in education) reveals underinvestment in this area and hence, consequently, its effects on the economic performance of the labor force.

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COMPARATIVE STUDY BETWEEN TRADITIONAL AND ENTERPRISE RISK MANAGEMENT – A THEORETICAL APPROACH

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Abstract: *The complexity, volatility and unpredictability of the current economic environment are a daily reminder that organizations face many risks. The traditional approach, according to which risk is a necessary evil which must be removed, is no longer sufficient and that is why companies nowadays are forced to spend significant resources to manage risks. Risk transparency is what one looks for; therefore, identification and management of risks within an organization become increasingly necessary for success and longevity. Risk approach has a major role in a company's ability to avoid, reduce and turn risks into opportunities. Enterprise risk management is a new concept that revolutionizes the traditional approach and summarizes risk management in an integrated, comprehensive and strategic system. Studies use several synonyms for enterprise risk management such as integrated risk management, holistic risk management, global risk management and strategic risk management. Enterprise risk management implements at the end of the last century a new way to deal with risks: the holistic approach. This risks approach – i.e. interaction of several types of risks which become increasingly threatening and varied and may cause more damage than individual risk – brings forward the need of risk management and raises issues at the highest level of company management. For a proper view on company risks, each individual risk and the possibility of risk interaction must be understood. This is essential to establish a risk classification according to their impact on the company. Traditional approach on risk management, as a management function, is limited to only threats and losses, so relatively few organizations see risks as potential earning-generated opportunities. However, risk management process is not radically changed. Enterprise risk management is an improved version of the traditional risk management, created by expanding its scope. The new risk management model, adapted to the complexity of current economic situation confers a global vision to prepare the organization to face the adverse effect of any event or series of events. Identification and understanding the risk nature is a factor that must be known by all company personnel because an effective risk management minimizes the adverse impact on the organization, i.e. reducing losses and eliminating the danger of bankruptcy.*

Keywords: risk; management; traditional risk management; enterprise risk management; risk analysis, risk assessment.

JEL classification: A1; D00; G3; M1; M2.

1. Introduction

The complexity, volatility and unpredictability of the current economic environment are a daily reminder that organizations face many risks. The traditional approach, according to which risk is a necessary evil which must be removed, is no longer sufficient and that is why companies nowadays are forced to spend significant resources to manage risks. Risk transparency is what one looks for; therefore, identification and management of risks within an organization become increasingly necessary for success and longevity.

The following risk management models are known today:

traditional risk management, involving: risk identification, loss control, analysis request, methods of insurance and risk transfer;

progressive risk management, involving: alternative risk financing, business continuity, total cost of risk, education and communication;

strategic risk management, relating to: integrated risk management, risk indexing, use of technology.

2. Risk Management

Risk management provides a mechanism to facilitate risk classification and reaction to risk, while providing control over reality, effectiveness of actions and compliance with regulation. A proper risk management creates a new vision on company's internal or external, estimated or retrospective exposures. A sustainable and efficient process requires risk assessment through a process which should be simple, practical and easy to understand, but with significant support from management and, last but not least, with resources. A process conducted by individuals without appropriate skills and without a well-sized framework shall not be successful.

2.1 Traditional Risk Management

Studies in the field state that traditional risk management is a reactive model that can be defined either as a managerial or administrative process or as a decision-making process: Regarded as a process, risk management includes the four functions of management: planning, organizing, leading, and controlling the organization's activities to minimize the adverse effects of accidental and business losses of that organization at reasonable cost (George L. Head, 1972).

Regarded as a decision-making process, risk management is a sequence of the following 5 steps: identifying and analysing exposures to accidental losses, examining feasible alternative risk management techniques for dealing with those exposures, selecting the best risk management technique, implementing the chosen risk management technique, and monitoring the results of the chosen technique to ensure that the risk management program remains effective.

Traditional risk management is a risk approach which is the managed by various responsible departments. According to risk management structures, risk is managed in each business unit, adapted to each strategy, level of profitability, products, prices, and relationship with the management.

Traditional risk management focuses on pure risk (hazard risk where consequences may or may not be losses) and refers to individual risks as if they don't interact. As the focus is on pure risk, management emphasizes identification and management process of insurable natural hazards and has five components:

- risk identification (risk classification, identification and measurement);
- risk analysis through: qualitative assessment – classification of exposures (frequency and potential loss assessment, identification of organization assumptions, contractual and compliance exposures, and alternatives

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proposals) and quantitative assessments – information on accounts receivables, personnel and third parties exposure, deductions and contractual transfers, measurement of risk cost;
- risk control – retrospective actions and prospective actions;
- risk financing by keeping small and medium risks (programs for losses or budget allocation for such losses when they occur, transfer of severe risks with low frequency, calling for insurers' enhanced services, contractual transfers etc.);
- risk administration by specific risk management activities, monitoring the flow of information and databases.

Traditional risk approach does not align with the company's risk management requirements according to which risk should be treated as a whole, and therefore results are satisfactory due to increased independence of different types of risks to be managed. Such risks cannot be segmented and managed by individual departments, this being the reason why a fragmented approach to risk does not fit within the aggregated approach to risk throughout the company.

2.1 Enterprise Risk Management

Enterprise risk management is a new concept that revolutionizes the traditional approach and summarizes risk management as an integrated, comprehensive and strategic system.

Basic company objectives are vision, mission and strategic development. Enterprise risk management process establishes goals to have a global focus on various aspects of company risk management. The starting point is the company's strategy, i.e. strategic objectives that relate to decision-making process, work organization, resource allocation and management, protection and enhancement of patrimony and company as a whole, a strong organizational culture, and efficient operating optimization.

Thus, the organization strategy should define the risk incurred so as to have a starting point. Achievement of organizational objectives can be obtained through an effective risk response by reducing or removing losses, proper risk management, identifying and exploiting opportunities, and achieving a more efficient allocation of capital.

James Lam is known as "the father" of risk management and the first to approach the term "chief risk officer" while working at General Electric in 1993. He states that there are seven elements of risk management: company management which is responsible for implementing the risk management system; management's task to adjust business strategy to risk policy; setting of limits on management portfolio and risk limits; risk transfer strategies; analytical risk based on quantification and management of credit, market and operational risk on a consistent basis; information and technological resources; transparency management.

It is considered that risk analysis should meet the following steps: identifying potential risk, prioritizing risk, and implementing the proper strategy.

Enterprise risk management is applicable to any type of organization (with different business areas), this being possible by developing various frameworks and risk management concepts, even a risk management standard – ISO 31.000. Of course there are differences of approach, but they are based on the same way of thinking.

The figure below represents the framework of Enterprise Risk Management.
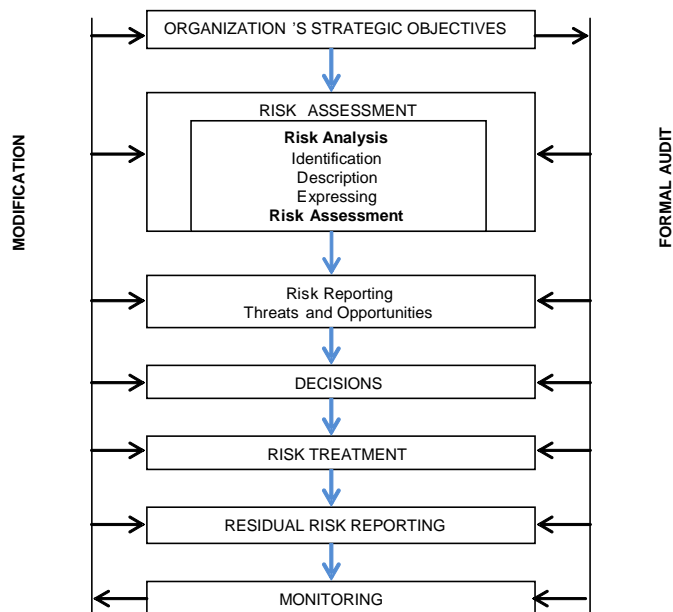
Figure 1: Enterprise Risk Management Framework
Source: Federation of European Risk Management Associations (2003) – A Risk Management Standard

Risk management program proposes the following steps (James Lam, 1999): creating the risk management department and the risk committee, and appointing a manager on risk issues;

- creating an integrated risk management framework to deal with all aspects of risk;
- creating the linkage between risk management and risk transfer strategies;
- adopting better management decisions as a result of an efficient risk management by incorporating the concept of risk – return.
- Although integrated risk management offers significant benefits, there are certain situations in which its application might have not very efficient results:
- human judgment may be flawed in terms of risk, and therefore decisions on control and risk response may be inaccurate;
- control and risk response can incur high costs consistent with lower benefits, if the process is not well developed;
- the management may override risk management decisions in the event that there are unknown actual effects of certain types of risks;
- control must be performed by several persons, and therefore high costs and wasted time might interfere;
- the notion of global risk management is not yet fully clear, its stage of development is still early, therefore its application is not fully understood by potential implementers;
- risk management components will not function identically in each entity, and therefore company specific branch with its related risks, risk management implementation framework, and the role of each in the process must be well understood.

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implementation in smaller companies is still unreasonable, since it may incur higher costs and be informal and unstructured.

3. Transition from Traditional Risk Management to Enterprise Risk Management

Traditional risk management specific to the '70s focuses on financial risk and accidental risk. Evolution of risk in the '80s adds to the perspective of this market risk a still insufficient perspective, and so the following years start considering the key risks facing an organization: strategic risk, operational risk, financial risk, and accidental risk.

Table 1: Evolution of Risk Management

The '70s	The '80s	The '90s
credit risk	market risk	strategic risk
		operational risk
accidental risk	credit risk	financial risk
	accidental risk	accidental risk

Source: own processing

With a global view of the entity, risks can be classified in a variety of risk frameworks:
strategic risk which may include risks related to strategy, political, economic, and regulatory conditions, as well as risks related to global market, i.e. reputation risk, management risk, brand risk, and change of customer's needs;
operational risk related to human resources, business processes, technology, business continuity, efficiency of distribution channels, customer's satisfaction, health and safety;
financial risk including foreign exchange risk, interest rate risk, credit risk, liquidity risk, and market risk;
accidental risk resulting in natural disasters, various insurable debts, physical impairment etc.

4. Comparative analysis between Traditional Risk MAnagement and Enterprise Risk Management

Risk vision is based on the new and old paradigm, shown in the table below, according to The Economist Intelligence Unit – Managing Business Risk.

Table no. 2: Old Paradigm and New Paradigm of Risk Management

Old Paradigm	New Paradigm
retrospective analysis	strategy
ad hoc activity	ongoing activity
accounting, treasury and internal audit	all management activities
fragmentation	centralization and coordination
financial risk	business risk
inspection, detection, reaction	anticipation, prevention, monitoring, controlling
focus on people	focus on processes and people

Source: adaptation from The Economist Intelligence Unit (1995) – Managing Business Risk – An Integrated Approach

Enterprise risk management has advantages over traditional risk management, because it does not manage risk at a certain moment based on decentralization, but rather on a systematic and constant way. Decentralized approach creates inefficiencies due to lack of coordination between different departments of risk management.

Enterprise risk management allows identification of interdependencies between risks from various sources, amplifying it from traditional approach focus on market and credit risk to operational, reputational, and strategic risk. Modern or enterprise approach facilitates the strategic plan and optimizes the correlation between risk and profitability. Use of instruments, tools and terminology, as well as company global vision assist in enhancing the organizational risk management process on systems, cells and humans (Culp, 2002). Traditional approach on risk management, as a management function, is limited to only threats and losses, so relatively few organizations see risks as potential earning-generated opportunities. Many managers with a traditional view of risk avoid any opportunity to be involved in making decisions about winning opportunities. This is caused by their attempt not to get beyond the proper scope of their authority.

Table no. 3: Comparative Analysis between Traditional Risk Management and Enterprise Risk Management

Traditional Risk Management	Enterprise Risk Management
risk is considered an individual hazard	risk is part of the strategy
risk identification, analysis and reduction	risk portfolio development, risk optimization
risk random quantification	risk monitoring and measurement
target individual risk	target critical risk
risk limits	risk strategy
risks without individual tasks, individual responsibility	determination of risk responsibilities, collective responsability

Source: adaptation from The Nexus of ERM and Value Creation: A Systemic Literature Review (Verena Kraus & Othmar Lehner, 2012)

Traditional risk management is applicable to financial risk and accidental risk because they are transferable risks. Enterprise risk management is especially applicable to strategic and operational risk. In other words, traditional risk management requires accounting skills, while the global (enterprise) one requires strategic planning, innovation and marketing skills (Banham, 2003).

While the traditional view focuses on pure risks separately visualized and analysed, the modern (enterprise) view encompasses all types of risk facing the organization: pure and speculative risks. Pure risks are those random events that can be minimized by performance of insurances. Speculative risks are the result of decisions made by the organization and may positively, negatively or neutrally affect the company's value.

5. In Conclusion

Risk management process is not radically changed. Enterprise risk management is an improved version of the traditional risk management, created by expanding its scope. The new risk management model, adapted to the complexity of current economic situation confers a global vision to prepare the organization to face the adverse effect of any event or series of events. Identification and understanding the risk nature is a factor that must be known by all company personnel because an effective risk management minimizes the adverse impact on the organization, i.e. reducing losses and eliminating the danger of bankruptcy.

However, implementation of an enterprise risk management cannot anticipate all key risks that may negatively affect the value of the organization. In this case, it is necessary to have a crisis management plan ready to be implemented when unknown risks materialize and affect the functioning of the business. In some cases, these unknown risks can turn into opportunities, and therefore they need to be used at the appropriate time.

6. Acknowledgements

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ENTREPRENEUR OR EMPLOYEE IN THE CONTEXT OF THE ECONOMIC CRISIS?

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Abstract
The changes triggered by the economic crisis did not spare our country either since 2009. Its effects, with impact on the social, economic, ecological, technological and political level, reflected also on each and every individual. Less working places, available qualified staff, the diminishing purchasing power, wiser expenses, etc, were perceived by some people as luck of keeping a job beyond any compromise, while others considered them as opportunities. Some researchers associated this fact with personality (Covin & Slevin, 1989; Cromie, 2000; Johnson, 1990; Davidsson, 2000; Cromie & Johns; 1983; Brockhaus, 1980; Caird, 1991), *others with personal values* (Combs, Richards & Richards, 1976, apud Beukman, 2005; Hofmeister-Tóth & Simanyi, 2005)*, while others with the level of knowledge in the chosen entrepreneurial field or with the perception of opportunities.*
The present work aims at identifying options for the residents of the Western region of the country, under the effect of the economic crisis, for entrepreneurship as an opportunity or for maintaining the employee status from the perspective of their personality or their values, bearing in mind at the same time the reduced experience, of less than 25 years, that our country's residents have on the business market.

Keywords: entrepreneur, employee, personality, values, economic crisis

JEL classification M21 Business Economics

1. Introduction

Entrepreneurship refers to an individual's ability to transform his/her ideas into actions with definite economic and social finality. Researchers preoccupied with studying entrepreneurship start from the following question: why, under similar circumstances, certain individuals start their own business and others don't? The answer these researchers give is that those individuals who start their own business have a distinct personality. Falling into the perspective of the entrepreneur's personality, a few models were launched, among which we mention the following: the features model, the situationist model, the social learning model and the cognitivist model.

The situationist model emphasizes the importance of taking into account the situation and context for the manifestation of the entrepreneurial behavior. According to this model, it is not enough for the individual to present certain personality traits in order to assert oneself as an entrepreneur. These features will reflect in entrepreneurial behaviors only if the individual attaches to certain situations an emotional charge meant to determine an entrepreneurial behavior.

It is to such a situation that we associate the economic crisis and its effects, both on a macrosocial and on an individual level.

In the present work we attempt to identify the option that the residents of the Western region of the country have for making their entrepreneurial debut as compared to maintaining the employee status in the context of the economic crisis affecting our country since 2009.

2. Personality and entrepreneurship

„If you have a good personality profile, you will become an entrepreneur earlier or later". This is what Shaver & Scott (1991) call a „personological" approach, but which seems to have proven to a great extent unproductive in estimating decisions for starting up a business by natural persons (Liñán & Santos, 2007).

Although some statistically significant relations have been identified between certain personality features and being an entrepreneur, the anticipation ability has been very limited (Reynolds, 1991).

Having certain entrepreneurial personality traits does not automatically mean that the individual will develop an entrepreneurial behavior. Becoming an entrepreneur is a complex process. The entrepreneurial personality traits, as well as the required abilities and financial resources or a business idea only represent an entrepreneurial potential. As Krueger & Brazeal (1994) show, in order for this potential to develop into an entrepreneurial behavior a triggering and precipitating event is required, such as losing one's job or perceiving a market opportunity. This event practically generates the entrepreneurial intention and highlights the connection with the situation.

3. Values and the entrepreneurial behavior

Common sense has it that whoever wants to understand a person's behavior must first of all understand his/her values. Personal values are fundamental beliefs about good and evil, while the value system represents a hierarchy of values according to their intensity and importance for the individual. Values have a special influence on human attitudes and behaviors, because, being relatively stable in time, these can better predict an individual's behavior in a particular situation.

Over the time, the measurement and analysis of the functions of personal values has represented one of the most dynamic research fields in social psychology. Due to the omnipresent role of values in all aspects of individuals' lives (Rokeach, 1973), behavioral sciences consequently studied personal values and the value system as predictors of individual and group behaviors: of consumerist behavior (Pitts & Woodside, 1984), of organizational behavior (Clare & Stanford 1979; Munson & Posner, 1980), of political attitudes and behaviors (Rokeach, 1979; Tetlock, 1985), of charitable contributions (Manzer, & Miller, 1978), of mass-media usage (Becker & Conner, 1981), of drug dependence (Toler, 1975), of cross-cultural differences (Schwartz & Bilsky, 1990; Hofstede, 1980/2003).

According to Schwartz (1990), values mould the individual's motivational objectives.

In the present work we attempt to highlight the role of personality and values in choosing the entrepreneurial activity, in the context of the economic crisis.

4. Research on the option of starting an entrepreneurial career or maintaining the employee status in the context of the economic crisis

4.1 Purpose of the research

Identifying the impact of the global economic crisis on Romanian entrepreneurs;

Analyzing the characteristics of startup entrepreneurs, as well as their beliefs and perceptions as a consequence of the economic crisis.

4.2 Hypotheses

$H_{I.1}$ – There are significant differences between the personality traits of startup entrepreneurs and those of employees.

$H_{I.2}$ – There are significant differences between the personal values of startup entrepreneurs and those of employees.

4.3 Participants

The entrepreneurs who started a business during the crisis (startup entrepreneurs), namely 39 persons and 56 employees. The intention was that the two groups should be balanced from a formational perspective.

4.4 Research tools

The analysis of the values resulted from the research hypotheses implies the use of specific psychological diagnosis tools. The subjects' personality structure will be assessed by means of 5 personality dimensions, resulted from the BigFive Plus personality inventory, while the personal value system results from the factors of the Schwartz personal values survey.

4.4.1 The BigFive Plus personality inventory

The BigFive Plus personality inventory (Constantin & Macarie 2012) is based on Costa and McCrae's theory and represents a test meant to assess 5 personality dimensions, each dimension including 6 factors (facets) and each factor being measured by 8 dichotomous items (Costa & McCrae, 2003). Extraversion, Agreeableness, Neuroticism, Conscientiousness and Openness are the five personality dimensions assessed by the BigFive Plus questionnaire.

4.4.2 The Schwartz Value Survey (SVS)

This value measurement scale, developed by Schwartz, has known several development stages. The initial assessment study for this tool was performed based on the data gathered from subjects (students and teachers) in 38 countries (Schwartz, 1992); later, the model's structure was confirmed by a replica-study including 1993 additional samples (Schwartz, 1999). The Schwartz model is supported also by the results of more recent studies (Fischer et al., 2010).

During this research we used the 57-item SVS version, translated into Romanian. It is a tool meant to assess 10 personal values (conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement, power and security) both as fundamental, general life principles and as guidelines in personal life.

4.5 Variables

4.5.1 Dependent variables are represented by the „*personality structure*" operationalized by means of personality factors measured with a personality inventory (BigFive Plus), and the „*personal value system*" was outlined by the indicators of a value measurement tool (the Schwartz value grill).

4.5.2 The independent variable „startup entrepreneur" is dichotomous and distinguishes between Romanian entrepreneurs in economic organizations who started up a business in the Western region during the economic crisis and the employees who kept their employee status before and during the economic crisis, these being the components of the research sample.

4.6 Data analysis

The data analysis was performed by using the IBM SPSS application for Windows, version 22. After designing the data base and introducing the variables, the analyses begin with the study of the distributions because, according to these, certain statistical techniques can be used.

Table 1 Results of the nonparametric U Mann-Whitney test related to personality dimensions

	Type of entrepreneur	N	Mean of ranks	Sum of ranks
Extraversion	Startup during crisis	39	60.92	2376.00
	Employee	56	39.00	2184.00
	Total	95		
Agreeableness	Startup during crisis	39	52.60	2051.50
	Employee	55	43.88	2413.50
	Total	94		
Neuroticism	Startup during crisis	39	41.40	1614.50
	Employee	55	51.83	2850.50
	Total	94		
Conscientiousness	Startup during crisis	39	57.55	2244.50
	Employee	54	39.38	2126.50
	Total	93		
Openness	Startup during crisis	39	54.94	2142.50
	Employee	54	41.27	2228.50
	Total	93		

	Extraversion	Agreeableness	Neuroticism	Conscientiousness	Openness
Mann-Whitney U	588.000	873.500	834.500	641.500	743.500
Wilcoxon W	2184.000	2413.500	1614.500	2126.500	2228.500
Z	-3.823	-1.532	-1.829	-3.210	-2.417
Sig.	**.000**	.126	.067	**.001**	**.016**

From the perspective of personality dimensions, we notice that a number of three factors differentiate the employees from the entrepreneurs who started up a business during the crisis. Therefore, the entrepreneurs who started up a business during the crisis are characterized by a significantly higher level of extraversion (Z=3.823; p<0.01) as compared to the employees. Conscientiousness (Z=3.21; p<0.01) and openness (Z=2.41; p<0.01) are also significantly higher in the case of the entrepreneurs who started up a business during the crisis as compared to the employees.

Table 2 Results of the nonparametric U Mann-Whitney test related to personal values

	Type of entrepreneur	N	Mean of ranks	Sum of ranks
Conformity	Startup during crisis	39	61.41	2395.00
	Employee	77	57.03	4391.00
	Total	116		
Tradition	Startup during crisis	39	57.92	2259.00
	Employee	77	58.79	4527.00
	Total	116		
Benevolence	Startup during crisis	39	67.04	2614.50
	Employee	77	54.18	4171.50
	Total	116		
Universalism	Startup during crisis	39	63.28	2468.00
	Employee	77	56.08	4318.00
	Total	116		
Self-direction	Startup during crisis	39	71.09	2772.50
	Employee	77	52.12	4013.50
	Total	116		
Stimulation	Startup during crisis	39	73.74	2876.00
	Employee	77	50.78	3910.00
	Total	116		
Hedonism	Startup during crisis	39	69.83	2723.50
	Employee	77	52.76	4062.50
	Total	116		
Achievement	Startup during crisis	39	70.26	2740.00
	Employee	77	52.55	4046.00
	Total	116		

Power	Startup during crisis	39	70.76	2759.50
	Employee	77	52.29	4026.50
	Total	116		
Security	Startup during crisis	39	60.92	2376.00
	Employee	77	57.27	4410.00
	Total	116		

	Conformity	Tradition	Benevolence	Universalism	Self-direction
Mann-Whitney U	1388.000	1479.000	1168.500	1315.000	1010.500
Wilcoxon W	4391.000	2259.000	4171.500	4318.000	4013.500
Z	-.666	-.132	-1.952	-1.092	-2.878
Sig.	.506	.895	.051	.275	.004
	Stimulation	**Hedonism**	**Achievement**	**Power**	**Security**
Mann-Whitney U	907.000	1059.500	1043.000	1023.500	1407.000
Wilcoxon W	3910.000	4062.500	4046.000	4026.500	4410.000
Z	-3.483	-2.593	-2.690	-2.802	-.554
Sig.	**.000**	**.010**	**.007**	**.005**	.580

At the value level, we notice that entrepreneurs who started up a business during the crisis, as opposed to the employees, tend to appreciate self-direction (Z=2.87; p<0.01) to a significantly higher extent; they consider stimulation (Z=3.48; p<0.01) and hedonism (Z=2.59; p<0.05) as important values, emphasize achievement (Z=2.69; p<0.01) and power (Z=2.80; p<0.01).
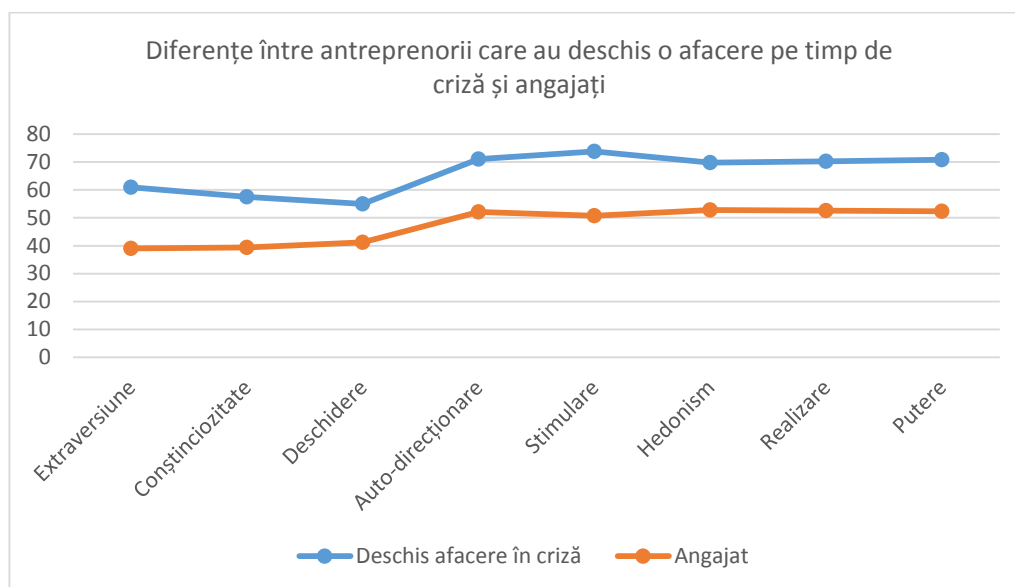
Fig. 1 Graphic representation of the differences between the entrepreneurs starting up a business during the crisis and the employees

5. Conclusions

As no normal distributions were registered for none of the analyzed variables, we investigated the characteristics of passing from the employee status to that of an entrepreneur by using the nonparametric U Mann-Whitney test.

The accuracy of the prediction resulted from the logistic regression is better for entrepreneurs (89.5%) as compared to employees (23.6%). In other words, starting from the value structure and the personality factor, we may predict more accurately an entrepreneurial career as opposed to an employee attitude.

The analysis of the data concerning the *employees/entrepreneurs who started up a business during the crisis (startups)* relationship confers the following aspects:

From the perspective of personality dimensions, we notice that a number of three factors differentiate employees from the entrepreneurs who started up a business during the crisis. Therefore, the entrepreneurs who started up a business during the crisis are characterized by a significantly higher level of *extraversion* ($p<0.01$) as compared to the employees. Extroverts enjoy the company of others, are full of energy and often have positive emotions. They tend to be enthusiastic, action-oriented, ready to take advantage of opportunities.

Conscientiousness ($p<0.01$) (high scores are registered by individuals who avoid risky situations and who, by planning and persisting in their tasks, manage to succeed in their actions. They are generally seen by others as intelligent, as persons one can count on, sometimes „workaholic") and *openness* ($p<0.01$) (distinguishes between imaginative, creative individuals and realistic, conventional individuals. High scores are registered by curious persons, who appreciate art and who are sensitive to beauty. They tend to be more conscious of their emotions. They tend to think and act in individualistic and nonconformist ways) are also significantly higher in the case of the entrepreneurs who started up a business during the crisis as compared to the employees.

At the value level, we notice that entrepreneurs who started up a business during the crisis, as opposed to employees, tend to appreciate self-direction ($p<0.01$) to a significantly higher extent (independent thinking and action), consider stimulation ($p<0.01$)

and hedonism (p<0.05) as important values, emphasize achievement (p<0.01) and power (p<0.01).

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THE ENTREPRENEURIAL INTENTION BETWEEN PERSONALITY AND VALUES

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Abstract
Young and restless, full of initiative, eager for action, wishing and determining change, or on the contrary, examining the context, waiting and assessing the risk or expecting another offer. Who might influence their behavior? Their personality? Their values? Their education or some model?
These are questions we attempt to answer by studying the entrepreneurial intentions correlated with the personality and values of a sample of 300 MA students at the West University and the Politehnica University of Timişoara.

Key words: *entrepreneurial intentions, personality, values, economic crisis, young people*

1. Entrepreneurial intentions during the entrepreneurial process

In researchers' opinion (Baron, 2007), the entrepreneurial process begins with the entrepreneurial intention, the starting-up of the business being mainly influenced by the consistency of the psychological development and by the cognitive ability to anticipate the entrepreneurial tasks.

The entrepreneurial behavior might be considered a planned type of behavior for which the intention models are ideally convenient (Krueger & Carsrud, 1993; Krueger, Reilly, & Carsrud, 2000). The entrepreneurial intention will therefore represent a prior and determining element for the entrepreneurial behavior (Bird, 1988; Kolvereid, 1996).

Peterson and Roquebert (1993) described in detail the way in which family and community values influence beliefs related to entrepreneurship as a vehicle for achievement.

The studies carried out so far highlighted the importance of psychological factors, of factors related to social and observational learning, of cognitive factors, but there still remains a deficit of information about the study of the entrepreneurial behavior in a hostile context. This is why we believe it is suitable to launch a research on the entrepreneurial behavior during the global economic crisis, in the hope of obtaining additional information about the entrepreneurial intentions in the Western region of Romania.

2. The context of research

2.1 General purpose

Identifying the entrepreneurial intentions of young MA students during the economic crisis

2.2 Hypotheses

H_l – The manifestation of the entrepreneurial intention is characterized by the existence of specific personality traits;
H_2 – The manifestation of the entrepreneurial intention is characterized by the existence of a specific system of personal values.

2.3 Participants

The research sample includes 300 MA students, among whom: 115 MA students at the West University Timişoara, Department of Psychology, Master in Work Psychology, Organizational Psychology and Traffic Psychology during the period 2009-2012, 115 MA students at the "Politehnica" University of Timişoara, Master in Business Administration, Quality Management for Technological Processes and Engineering and Management of Logistics Systems during the period 2009-2012 and 70 MA students at the West University of Timişoara, Department of Economic Sciences, Master in Entrepreneurial Management and Strategic Management of Organizations, during the period 2009-2012.
Differentiated according to the biological gender variable, the sample includes 224 female subjects and 76 male subjects, with an average age of 23.5.

2.4 Study variables

The analysis of the research hypotheses involves a correlational and a differential design.

2.4.1 The dependent variable:
The main dimension taken into consideration at this stage is represented by the "*entrepreneurial intention*" and operationalized by a series of indicators derived from the entrepreneurial intention questionnaire (EIQ), which form the analyzed variables.

2.4.2 The independent variable:
The general dimension „*personality structure*" was operationalized by means of personality factors measured with a personality inventory (BigFive Plus), and the „*personal value system*" was outlined by the indicators of a value measurement tool (the Schwartz value grill).
In the case of the differential plan of research, the independent variable "*type of professional formation*" was operationalized by means of the faculty attended by the subjects, as follows: 1 – Psychology; 2 – Politehnica; 3 – Economic sciences, the variable being, undoubtedly, categorical.
The research sample is aimed at students of the faculties determined by the independent variable, grouped according to its levels.

2.5 Tools

For this stage of the research the following tools were used:

2.5.1 The Entrepreneurial Intention Questionnaire (EIQ) is a tool translated and adapted after Liñán & Chen, 2009; Liñán & Moriano, 2007; Moriano, et al., 2007, in collaboration with the research group "SMEs and the Economic Growth" of the University of Seville, aims at identifying the entrepreneurial intentions of young people, grouped into the following assessment scales: entrepreneurial activity, entrepreneurship-based social values, entrepreneurial habits/abilities, education and experience, knowledge on entrepreneurship, assistance sources for entrepreneurs, entrepreneurial objectives, personal data, education level and occupation of parents, monthly income.

2.5.2 The BigFive Plus personality questionnaire (Constantin & Macarie 2012) is based on Costa and McCrae's theory and represents a test meant to assess 5 personality dimensions, each dimension including 6 factors (facets) and each factor being measured by 8 dichotomous items (Costa & McCrae, 2003). Extraversion, Agreeableness,

Neuroticism, Conscientiousness and Openness are the five personality dimensions assessed by the BigFive Plus questionnaire.

2.5.3 *The Schwartz Value Survey (SVS).* This value measurement scale, developed by Schwartz, has known several development stages. The initial validation study of this tool was performed based on the data gathered from subjects (students and teachers) in 38 countries (Schwartz, 1992); later, the model's structure was confirmed by a replica-study including 1993 additional samples (Schwartz, 1999). The Schwartz model is supported also by the results of more recent studies (Fischer et al., 2010).

During this research we used the 57-item SVS version, translated into Romanian. It is a tool meant to assess 10 personal values (conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement, power and security) both as fundamental, general life principles and as guidelines in personal life.

2.6 Research development procedure

In order to start the research procedure, the tools mentioned in the previous section were prepared. The MA student groups were selected according to their access to the theoretical formation in the entrepreneurial field (courses included in the curriculum) from different faculties, in order to obtain a relevant picture of the young people's entrepreneurial intentions in the context of the economic crisis.

The survey application time being rather long, this action took place on several occasions during seminars, in group sessions.

2.6.1 Checking the research hypotheses

The analysis of the research hypotheses involves a correlational and a differential design.
Characteristics of the research sample

Table 1 Structure of the research sample according to faculty type

		Frequency	Percentage	Valid Percentage	Cumulated Percentage
Valid	Economic Sciences	70	23.3	23.3	23.3
	Politehnica	115	38.3	38.3	61.7
	Psychology	115	38.3	38.3	100.0
	Total	300	100.0	100.0	
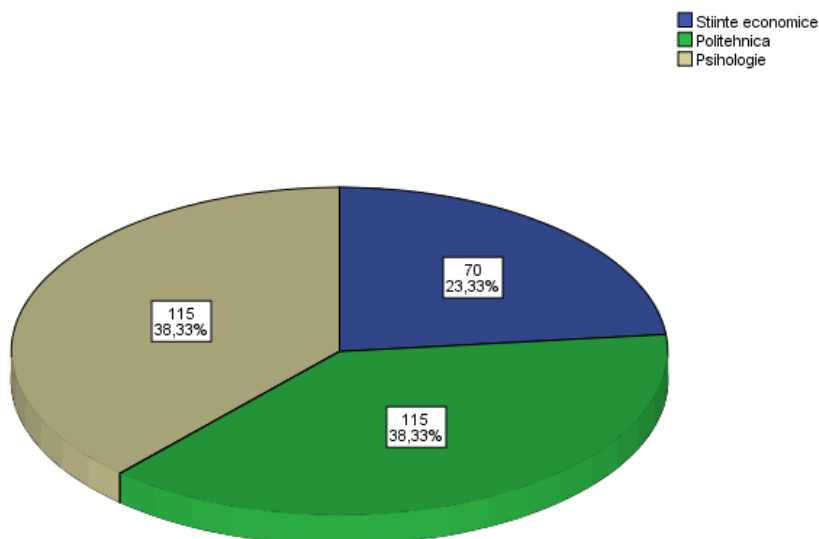
Fig. 1 Structure of the research sample according to faculty type

According to the independent variable "faculty type", the research sample includes 300 students, the ones from Politehnica and the ones from Psychology having equal shares of 38.3% (115 persons), while the subjects from the Faculty of Economic Sciences are reduced in number – 23.3% (70 persons). We notice that from the perspective of the subjects' number, the latter is enough for using the parametric data analysis, the law of large numbers being fulfilled.

Hypothesis 1 **(H**I**)** – **The manifestation of the entrepreneurial intention is characterized by the existence of specific personality traits;**

Since the distributions of the five dimensions of the BigFive Plus personality inventory do not present the characteristics of a normal distribution, the use of the Student's t-test in order to see which dimensions differentiate the subjects is not recommended. This is why we shall resort to the nonparametric test comparing the two populations from which the samples are drawn, namely the U Mann-Whitney test.

Table 2 Results of the nonparametric U Mann-Whitney test related to personality dimensions

	Entrepreneurial intention	N	Mean of ranks	Sum of ranks
	Yes	170	138.29	23509.50
Extraversion	No	125	161.20	20150.50
	Total	295		
	Yes	171	161.48	27612.50
Agreeableness	No	123	128.07	15752.50
	Total	294		

	Entrepreneurial intention	N	Mean of ranks	Sum of ranks
Neuroticism	Yes	164	125.00	20500.50
	No	124	170.29	21115.50
	Total	288		
Conscientiousness	Yes	165	140.85	23241.00
	No	121	147.11	17800.00
	Total	286		
Openness	Yes	168	148.44	24938.00
	No	127	147.42	18722.00
	Total	295		

	Extraversion	Agreeableness	Neuroticism	Conscientiousness	Openness
Mann-Whitney U	8974.500	8126.500	6970.500	9546.000	10594.000
Wilcoxon W	23509.500	15752.500	20500.500	23241.000	18722.000
Z	-2.284	-3.337	-4.579	-.635	-.102
Sig.	**.022**	**.001**	**.000**	.526	.918

For three personality dimensions we notice the existence of significant differences between subjects who intend to act as entrepreneurs and those who don't pursue the same thing. It is the case of *extraversion* (z=2.28; p<0.05), subjects who don't intend to become entrepreneurs present a higher level of extraversion (m_r=161.20) as compared to those who wish to become entrepreneurs (m_r=138.29), the latter being rather introvert. Similarly, *agreeableness* manages to differentiate significantly the subjects (z=3.33; p<0.01). Subjects wishing to become entrepreneurs have significantly higher scores for agreeableness (m_r=161.48), they are more agreeable as compared to those who don't have the same intention (m_r=128.07). The highest differentiation capacity is however registered in the case of neuroticism (z=4.57; p<0.01). Subjects who don't wish to become entrepreneurs are characterized by significantly higher scores for *neuroticism* (m_r=17.29) as compared to those who have this intention (m_r=127). The other two dimensions, conscientiousness and openness, do not differentiate the two categories of subjects.
Indeed, the manifestation of the entrepreneurial intention is characterized by the existence of certain specific personality traits, such as reduced neuroticism, high agreeableness and propensity towards introversion.

Hypothesis 2 (H$_2$) – **The manifestation of the entrepreneurial intention is characterized by the existence of a specific system of personal values;**
The same characteristics of the distributions of the 10 personal value indicators make us use the nonparametric U Mann-Whitney test for the analysis.

Table 3 Results of the nonparametric U Mann-Whitney test related to personal values

	Entrepreneurial intention	N	Mean of ranks	Sum of ranks
	Yes	173	145.74	25212.50
Conformity	No	127	156.99	19937.50
	Total	300		
	Yes	172	145.97	25107.50
Tradition	No	126	154.31	19443.50
	Total	298		
	Yes	173	152.94	26458.50
Benevolence	No	126	145.96	18391.50
	Total	299		
	Yes	172	145.90	25095.50
Universalism	No	127	155.55	19754.50
	Total	299		
	Yes	173	151.11	26141.50
Self-direction	No	127	149.67	19008.50
	Total	300		

	Conformity	Tradition	Benevolence	Universalism	Self-direction
Mann-Whitney U	10161.500	10229.500	10390.500	10217.500	10880.500
Wilcoxon W	25212.500	25107.500	18391.500	25095.500	19008.500
Z	-1.113	-.826	-.690	-.954	-.142
Sig.	.266	.409	.490	.340	.887

	Entrepreneurial intention	N	Mean of ranks	Sum of ranks
	Yes	173	158.46	27413.50
Stimulation	No	127	139.66	17736.50
	Total	300		
	Yes	172	152.82	26285.50
Hedonism	No	126	144.96	18265.50
	Total	298		

Achievement	Yes	172	163.29	28086.00
	No	127	132.00	16764.00
	Total	299		
Power	Yes	173	161.42	27926.50
	No	127	135.62	17223.50
	Total	300		
Security	Yes	173	150.98	26120.00
	No	127	149.84	19030.00
	Total	300		

	Stimulation	Hedonism	Achievement	Power	Security
Mann-Whitney U	9608.500	10264.500	8636.000	9095.500	10902.000
Wilcoxon W	17736.500	18265.500	16764.000	17223.500	19030.000
Z	-1.860	-.781	-3.104	-2.550	-.113
Sig.	.063	.435	.002	.011	.910

Only two personal values differentiate students who want to become entrepreneurs from those who don't have the same intention. These are *achievement* (z=3.10; p<0.01) and *power* (z=2.55; p<0.05), meaning that students with entrepreneurial intentions consider achievement and power as personal values (m_r=163.29, m_r=161.42 respectively) in a more significant way as opposed to those who don't display such intentions (m_r=132, m_r=135.62 respectively).

Hypothesis 3 (H$_3$) – The type of university formation exerts a significant effect upon the entrepreneurial intention.

The analysis of the way in which the type of faculty attended influences the entrepreneurial intention, although it was done based on a differential research design, can be equally approached correlationally by means of the contingency tables method, similar to the one used for the analysis of the first two hypotheses.

Table 4 Contingency concerning the relationship between the studies attended and the entrepreneurial intention

| | | Entrepreneurial intention | | Total |
		Yes	No	
Research Group	Economic Sciences	45	25	70
	Politehnica	65	50	115
	Psychology	63	52	115
Total		173	127	300
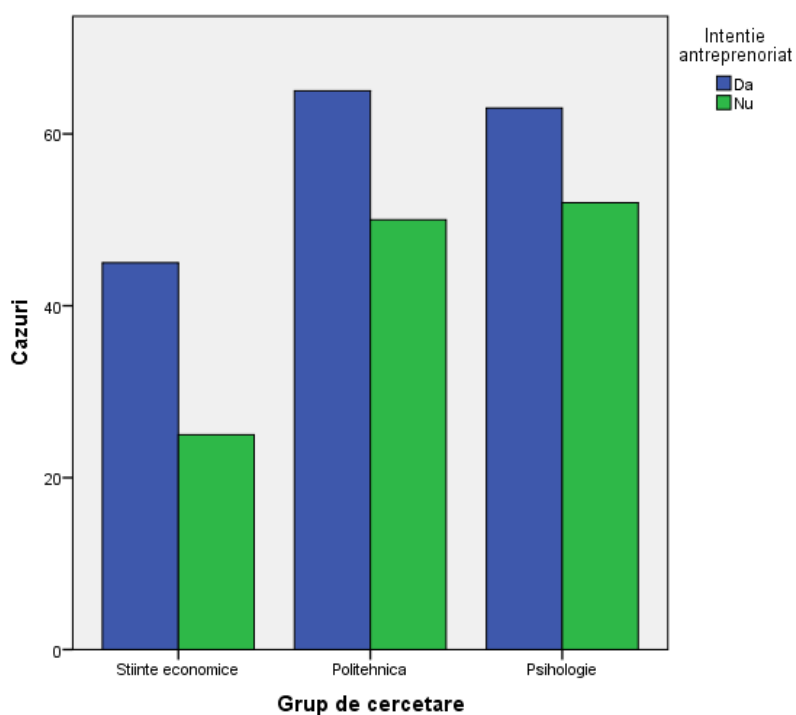
Fig.2 Research group

Table 5 Contingency coefficients concerning the relationship between the entrepreneurial intention and the studies attended

	Value	df	Sig.
Pearson Chi-Square	1.710	2	.425
Likelihood Ratio	1.729	2	.421
Linear-by-Linear Association	1.448	1	.229
N	300		

It is impossible to detect the existence of a relationship between the entrepreneurial intention and the studies attended by the students, no significant connection existing between the two variables.

By using the stepwise regression (Backward) we obtained the following formula:

$$P_{(int.ant|student)} \frac{1}{1 + e^{-(-0,147-4,959 \times Nevr+5,113 \times Agre+0,150 \times Reali-1,141 \times Extr+0,048 \times Puter)}}$$

3. Conclusions

Out of the 300 MA students participating in the present research, 74.67%, namely 224 are girls and 25.33% - 76 boys. Girls are predominant both in the Faculties of Psychology (115 subjects) and Economic Sciences (70 subjects), and in the master programs with an entrepreneurial component organized by the Politehnica University of Timişoara (115 subjects). An excessive feminization of the research sample can be noticed, which could affect certain aspects of the research.

For three personality dimensions we notice the existence of significant differences between subjects who intend to act as entrepreneurs and those who don't pursue the same thing. It is the case of *extraversion* (p<0.05), subjects who don't intend to become entrepreneurs display a higher level of extraversion as compared to those who wish to become entrepreneurs, the latter being rather introvert. Similarly, *agreeableness* manages to differentiate significantly the subjects (p<0.01). Subjects wishing to become entrepreneurs have significantly higher scores for agreeableness, they are more agreeable as compared to those who don't have the same intention. The highest differentiation capacity is however registered in the case of neuroticism (p<0.01). Subjects who don't wish to become entrepreneurs are characterized by significantly higher scores for *neuroticism* as compared to those who have this intention. The other two dimensions, conscientiousness and openness, do not differentiate the two categories of subjects.

Indeed, the manifestation of the entrepreneurial intention is characterized by the existence of certain specific personality traits, such as reduced neuroticism, high agreeableness and propensity towards introversion.

Only two personal values differentiate students who want to become entrepreneurs from those who don't have this intention. They are *achievement* (p<0.01) and *power* (p<0.05), meaning that students with entrepreneurial intentions consider achievement and power as personal values in a more significant way as opposed to those who don't display such intentions.

The accuracy of the classification is better for students who decide to become entrepreneurs (82.5%) and poorer for those who don't decide for this (50.8%) when we use all five predictor variables (extraversion, agreeableness, neuroticism, achievement, power).

After the data analysis in the first phase, we were able to notice that, on an intentional level, the decision to become an entrepreneur is not influenced by the studies attended, but by a certain personality structure and the presence of certain values belonging to subject's own value system. Extraversion and neuroticism reduces the probability of becoming an entrepreneur, while agreeableness, power and achievement increase it, as previous analyses also indicated. A student determined to become an entrepreneur should, first of all, not be neurotic, and secondly he/she should be agreeable, should consider achievement as a value, should not be too extrovert and should value power.

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COMPARISON BETWEEN ONLINE AND OFFLINE TOURISM USING ASSOCIATION TECHNIQUES

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Abstract:
Travel and tourism is one of the most dynamic and successful sector in the globalising world. The accelerating and synergistic interaction between technology and tourism in recent times has brought fundamental changes in the industry and on our perceptions of its nature. Several studies show that the Internet has become one of the most important information sources for travel information acquisition. The present paper is focused on a better understanding of tourist behaviors in online versus offline. For investigations it was used exploratory research through qualitative approach. The word association technique from projective techniques it was considered appropriate for this research. It was used Chinese portrait technique to explain deeply the difference between traditional tourism and online tourism and the reasons of preferring mostly use a form or another. The study reveals that the personality of the respondents is almost identical with the constructed profile of online tourism. Interestingly, the remaining associations are found between those assigned to offline tourism. This result was expected because in the sample are even persons that use only offline tourism. These identified profiles have many implications both for further scientific researches, but especially for all actors involved in tourism activities. After consulting the main sources of literature references the present study can be considered one of first researches on online tourism in Romania. The study provides empirical support for identifying features and motivations of online customers and behavioural characteristics of users of online tourism products. The results offer managerial implications for business environment, travel destination areas, services, and facilities and also for tourism organizations.

Keywords: online tourism, behavioural differentiation, Chinese portrait technique.

JEL classification: L83

1. Introduction

The accelerating and synergistic interaction between technology and tourism in recent times has brought fundamental changes in the industry and on our perceptions of its nature. Bringgs (2001:30) suggested that holidays and leisure services are usually bought without experiencing them first, so buying them online is not so different from offline experience. The Internet-based electronic commerce has evolved considerably. Physical goods, digital products and services have been sold online increasingly (Peng, XU, Chen, 2013). The revolutionary development of information technology has dramatically changed society and people's everyday lives, including the way travellers search for information and plan trips. Several studies show that the Internet has become

one of the most important information sources for travel information acquisition (D.-Y. Kim et al. 2007).

Travel and tourism products are ideal for marketing on the Internet because of their intangibility. Online tourism has successfully emerged as a platform that enables direct bookings, electronic payments, Business to Business (B2B) and Business to Consumer (B2C) trading among product marketers, travel agents, resellers and customers. Internet and related developments have been quite instrumental in growth of online tourism and online economy (Dixit, Belwal, Singh, 2006).

The growing acceptance and use of the Internet as an increasingly valuable travel tool has tourism and hospitality businesses taking a critical look at their business-to-customer online environments (Mills and Law, 2004). Christou and Kassianidis (2002) study indicated that the advantages and disadvantages of physical efforts and time pressure related to traditional in-store travel agency shopping positively influence consumer's perception of the characteristics of e-shopping. Consumers' perception of the relative advantage and compatibility of electronic travel shopping positively influence their intention to adopt e-shopping. In 2011 Sigala pointed out that Web 2.0 technologies are having a tremendous impact on the decision-making process, consumer behaviour and buying power and influence of Internet users.

Buhalis and Law (2008) made a review on the transformation on tourism globally because of the developments of Information Communication Technologies (ICTs). The main changes comparing to offline tourism are: ICTs enable travellers to access reliable and accurate information; assist in the improvement of the service quality; the "new" tourist is becoming knowledgeable and is seeking exceptional value for money and time; changed tourism consumer behaviour dramatically; i*nformation search* is a significant part of the purchase decision process and was revolutionised as a result of the Internet; not only reduce uncertainty and perceived risks but also enhance the quality of trips; the Internet have changed travellers' behaviour; tourists who searched on the Internet tended to spend more at their destinations as compared to those who consult other information sources; virtual communities are gradually becoming incredibly influential in tourism as consumers increasingly trust better their peers, rather than marketing messages; introduced the concept of social networking/virtual communities and applies it to the tourism industry; increased the number of choices for consumers; provide a very effective mechanism for consumers complaints; lead to better personalisation, customisation, and interaction between consumers and tourism organisations; changed dramatically the market conditions for tourism organisations; provide new tools for tourism marketing and management; re-engineer the entire process of developing, managing and marketing tourism products and destinations.

In the article *of Yoo* and Gretzel (2011) personality has been found to be a particularly influential trait that predicts behaviour. The results indicated that travellers' personality traits significantly influence perceived barriers to content creation, motivations to engage in creation behaviours. *The increasing presence of the Internet as an instrument for advertising travel destinations and travel-related services highlights its importance as a factor in travellers' decision-making processes. The investigation suggested that Internet "users," when compared with "nonusers," are more educated, have higher household incomes, use commercial lodging accommodations while travelling, tend to travel by air, and spend more money on travel-related expenses on a per diem basis (Bonn et al. 1998).* Significant differences between females and males in terms of attitudes toward travel Website functionality and scope as well as actual online information search behaviour (D.-Y. Kim et al. 2007).

The recently published yStats.com reports highlights that in 2015, there are expected to be nearly 3 billion Internet users worldwide, up from 2 billion in 2011 (http://ystats.com/en/reports/preview.php?reportId=887). Central Europe and Western

Europe are advanced B2C E-Commerce market. In Eastern Europe, there is huge potential for growth. Czech Republic, Poland and Russia all recorded double-digit growth rates in B2C E-Commerce between 2009 and 2010. According to Eurostat (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_ec_ibuy&lang=en), nearly 60% of Internet users in Europe shopped online; the proportion of e-shoppers among Internet users ranged from 79% in the United Kingdom to 9 % in Romania. Even during economic instability, the online trading industry has kept a growing rate of two-digit and remains a developing market, exceeding 150 million euro per year in Romania. Understanding tourist behaviors in online tourism is a key to understand target marketing. The purpose of the study is to find connection between respondents' features and online and offline tourism characteristics using Chinese portrait. *The results of the paper have implications for target marketing strategies designed for business environment, travel destination areas, services, and facilities and also for tourism organizations. The study leads to a deeper understanding of customers' features, behaviour and attitudes.*

2. RESEARCH METHODOLOGY

The present study is focused on a better understanding of tourist behaviors in online versus offline. For investigations it was used exploratory research through qualitative approach. It was considered appropriate for research projective techniques using word association technique. Data were collected by means of primary and secondary sources. Secondary data were obtained through published and statistical studies and extensive web sites analysis. Primary data were gained through survey conducting personal (face to face) interview based on a questionnaire. The questionnaire was structured in two parts. The first one contains eleven questions which offer specific information. There were used structured questions for basic information for the research and unstructured questions for Chinese portrait technique of online versus offline tourism and respondent features. The second part include questions used for the classifications of the respondents (the age of the respondents; the gender; their education; their occupation; their monthly average income; residence).

Because the aim of a study is primarily explorative, qualitative and descriptive, the research uses snowball sampling that offers practical advantages (Hendricks, Blanken and Adriaans, 1992) such as social networks of identified respondents to provide a researcher with an ever-expanding set of potential contacts. Snowball samplings is a more formal methodology for making inferences about a population of individuals who have been difficult to enumerate through the use of descending methods such as household surveys (Snijders, 1992; Faugier and Sergeant, 1997).

The authors used an online research portal in order to collect the data. iSondaje.ro is a popular web site support created to sustain research in different academic fields. For data collecting the authors chose to encourage students to respond and use their social network to fill in the online questionnaire including friends and relatives to assure the age and gender, personality different buying habits and behavioural diversity. The research was conducted during the period of November 2011 – November 2013. A number of 346 valid questionnaires were collected using this sampling technique.

3. FINDINGS

For a deeper understanding of online tourism customers the authors have used association technique. A Chinese Portrait, also called personification technique is a projective technique using an abstract artistic depiction of a person. Respondents complete several sentences of the form "If I were a(n) X, I would be..." to provide insight into the way they feel. This technique is used mostly in creative thinking, being

appropriate for perceptual mapping, attitudinal/motivational, focused/depth or image testing. The authors have chosen this technique because it can explain customer decision and behaviour based on his/her personality.

Responses to these questions were grouped in Table 1. Because of the diversity of answers, particular to qualitative research, the authors retain for the present research only the answers with the highest frequency from each category. It was possible to consider only those answers because interesting was that the following answers were at considerable distance from other. The results can be considered the main features of online/ offline tourism from the respondents point of view. In plus, the research reveals important features and behavioural attitudes of tourists.

Table 1: Chinese portrait results and interpretation. Respondents versus Chinese portrait for online/ offline tourism

Online tourism	Offline tourism
Colour: blue (sensitive, emotional and lonely)	Colour: green (personalities 'green' love to help others)
Animal: dog (friendly, vigilant, hunted)	Animal: cat (beautiful, can be dangerous, flattery)
Season: summer (warm, happiness, holiday)	Season: winter (cold, stay home)
Education: higher education (knowledge, credibility)	Education: secondary education (yes or no answers)
Destination: Europe (hope, better life)	Destination: Romania (mediocrity, safety)
Part of the body: hand/ arm (helpful tool)	Part of the body: leg (stability, reality)
Punctuation: ! (surprised, astonished)	Punctuation: ? (interrogation-answer)

Respondents
Colour: blue/green (sensitive, emotional and lonely/ love to help others)
Animal: dog/lion/cat (friendly, vigilant, hunted/ lion – powerful/ beautiful, can be dangerous, flattery)
Season: summer (warm, happiness, holiday)
Education: higher education (knowledge, credibility)
Destination: Europe, Romania (hope, better life/ mediocrity, safety)
Part of the body: head/ brain (independent, make decisions on their own)
Punctuation: ! (surprise, astonished)

Source: made by authors

The study reveals that the personality of the respondents is almost identical with the constructed profile of online tourism. Interestingly, the remaining associations are found between those assigned to offline tourism. This result was expected because in the sample are even persons that use only offline tourism.

The profile of the respondents is given in Table 2. Information about demographic characteristics was correlated with percentage of online tourism products consumed in the last 3 years from total of tourism products consumed. For example those using 25-

50% online tourism products consume 50-75% offline tourism products. Characteristics presented in Table 2 shows that there are respondents from almost all categories (except those over 65 years) which assure an appropriate balance and more representativeness of the used sample.

Table 2: Respondents profile and share of using the online for tourism products

Characteristics	nonusers	< 25%	25 – 50 %	50– 75 %	> 75%
Age	17 (4.91%)	19 (5.49%)	39 (11.27%)	160 (46.24%)	111 (32.09%)
<20 4.62%	2	4	1	7	2
20-35 57.81%	15	4	26	95	60
35-50 26.02%	-	10	8	30	42
50-65 10.69%	-	1	4	25	7
>65 0.86%	-	-	-	3	-
Gender	17	19	39	160	111
F 53.18%	7	12	26	88	51
M 46.82%	10	7	13	72	60
Education	17	19	39	160	111
Basic 7.8%	3	-	4	8	12
High school 32.66%	8	11	11	40	43
College 6.65%	2	1	2	8	10
University 44.79%	4	7	20	78	46
Post university 8.10%	-	-	2	26	-
Income	17	19	39	160	111
< 500 lei 21.39%	3	4	7	33	27
500-1500 lei 35.84%	5	14	10	54	41
1500-2500 lei 24.56%	7	1	14	38	25
>2500 lei 18.21%	2	-	8	35	18
Residence	17	19	39	160	111
Rural 18.50%	2	2	9	25	26
Urban 81.50%	15	17	30	135	85

Source: made by authors

As can be seen from the above table, the majority of the respondents (approximately 90%) use more online tourism products (between 50%-100%) than offline tourism products.

Regarding the classification date for chose sample, online users are young, the majority between 20-50 years old (83% of the total), almost equal male and female (F 53.18% and M 46.82%), almost half (44.79%) of them having higher education studies (university graduates), most of them earning around Romanian average incomes and live mainly in urban areas.

4. CONCLUSIONS

After consulting the main sources of literature references the present study can be considered one of first researches on online tourism in Romania. *The results offer managerial implications for business environment, travel destination areas, services, and facilities and also for tourism organizations.*

Using of the projective technique led to shape personality of the respondents. Romanian tourists are friendly, but can be flattery, pleasant, documented, informed, hoping for a better life, independent, involved in decisions they take, surprising. The study shows that personality profile of respondents overlaps with the identified profile of online tourism. This explains the preference of respondents for online tourism products than for offline. Online tourism is perceived as lonely, but consumption is emotional, using involves vigilance, is associated with leisure, is rich in information, leads to a better standard of living, is a helpful tool and offers surprises. Offline tourism is used when you need help, do not involve risky decisions, but it requires attention, can represents equally a positive or negative version, is safety, more realistic, offers the chance to ask questions and receive answers in real time.

From the demographical point of view main online users of tourism products are young, with no gender differentiation, educated, with average incomes and live in urban areas. These identified profiles have many implications both for further scientific researches, but especially for all stakeholders involved in tourism activities. Limitations of the present study refer to representativeness of the sample, being a qualitative approach.

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DARK TOURISM, ROMANIA AND DRACULA. THE PERCEPTIONS OF POTENTIAL AMERICAN TOURISTS

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Abstract: *From a touristic point of view, Romania is a country with an extraordinary potential. In terms of consumers of touristic products, the United States of America (USA) is a country with a tremendous potential. If analysing the actual tendencies in the film industry and a part of mass-media in the last years, it is possible to identify the interests of movie fans, but also of a certain market segment with its own characteristics, for vampires. Moreover, people have always shown a high interest in the mystic or dark aspects of life, namely related to death. Which could be the connection between these elements? The answer seems simple: Dracula. Transylvania is known as the land of vampires or, better said, the birthplace of Dracula, the most popular vampire of all times, and this reputation can be a touristic opportunity possible to exploit in the current trend on the USA market, the land with the most successful screen adaption of the vampire legend. The current paper presents the results of an empiric research, which aims to identity the degree of interest shown by Americans for a touristic product specific to "dark tourism" build around Dracula's myth. The study was conducted on a sample of 254 respondents from the U.S.A, using as data collection means the questionnaire. Results have shown that over 70% of the persons interviewed agree that Romania is the land of vampires and the home of Dracula. Almost the same percentage considers attractive or very attractive a holiday in Romania for exploring the local myths and legends, visiting the land of vampires, respectively Dracula's house. The current study offers a valuable perspective on the way in which dark tourism is perceived, on Romania and on a thematic tourism product build around the myth of Dracula. An important contribution to the research is brought by the main characteristics of such a package tour, from the American consumers' point of view, information that could be used by almost any operator or tourism organization on the local or American market.*

Keywords: dark tourism, Dracula's myth, Romania, tourism product.

JEL classification: M31; M38; L83.

1. Introduction

In terms of marketing, any touristic product is conceived as an answer to tourists' preferences expressed or the intentions anticipated. Thus, before the benefits of a touristic product meet consumers' needs and desires, it is necessary to analyse, understand and adapt the product (Kolb, 2006).

Since a touristic product must ensure a memorable experience (Kotler et al., 2009), and tourists are more and more sophisticated, experienced, looking for rather unusual attractions, niche tourism and its component, dark tourism (Novelli and Robinson, 2005), can be a solution in this sense. Despite the growing attention given by specialty literature to the concept of dark tourism, its study and understanding from the point of view of the consumer are limited (Stone and Sharpley, 2008). One of the areas of Romania that could be successfully associated with dark tourism is Transylvania, a region that in the popular/collective perception is not just an area at the periphery of Europe, but a kingdom where antic superstitions and rituals are still widely spread (Walker and Wright, 1997; Light, 2007). Today, one of Transylvania's main attractions is Bran Castle, rated as one of the most visited touristic objectives "artificially" known as Dracula's Castle and associated with souvenirs that promote the legend of the famous vampire (Light, 2007). Numerous authors strongly support the idea according to which popular culture, including literary creations, as autonomous external sources of information (Gartner, 1996; Pike, 2002) have a significant positive impact on the process of formation of the image of a touristic destination and then on the travel intentions of potential tourists (Butler, 1990; Bolan and Williams, 2008; Kim and Richardson, 2003; Morgan et al., 2003; Pratt, 2010). This is possible also for Transylvania, where a large number of tourists travel every year to discover the myth of Dracula, eager to live with all their senses the story, to create a connection between the real landscape and the image they formed based on the book or the movie (Reijnders, 2010).

Although, along time, authorities and institutions directly responsible with the development and promotion of tourism at a regional and national level have failed to successfully capitalize both the fiction and the historical facts regarding on the castle or the Prince Vlad Dracul, associations between the character Dracula and the Bran Castle are tolerated due to tourists' arrival and the incomes they generate (Pratt, 2010). And, because at a first sight there isn't a domestic demand for the touristic product build around Dracula's myth (Muresan and Smith, 1998; Iordanova, 2007), the alternative would be attracting foreign tourists.

This study focuses on the U.S market, because a travel agency in New York was among the first organizations in tourism that noticed the potential of Dracula's myth of attracting tourists and created for the American market the touristic package "Spotlight on Dracula: An adventure in Transylvania" (Light, 2007). Also, in specialty literature the expression "the Hollywood-style Dracula" was born (Banyai, 2010), a proof in this sense being also the television series "Dracula" which the American television station NBC launched on the 25th 2013.

Film and literary creations of the last decade with vampires attracted thousands of millions of consumers and fans in the USA (e.g. novels and movies from the series "Twilight", television series "True Blood", "The Vampire Diaries" etc.), creating the ideal content for exploiting and valorising any product and services on this theme, including the touristic ones. Thus, the desire to visit a particular destination can be determined by reading a novel, watching a movie or both (Banyai, 2010; Bolan and Williams, 2008).

Thus, the main objective of the research presented in this article aims to identify the degree of interest and American consumers' perceptions on spending a holiday in Romania, having as main motivation discovering Dracula's myth.

The information obtained would allow the development of a niche touristic product in the "dark tourism" category, either by tour operators or by authorities and institutions responsible with tourism development at a national or regional level.

2. DARK TOURISM CHARACTERISTICS

The phenomenon of travelling to places associated with death, sufferance, disasters, mysticism, has diversified and spread very much in the last century (Stone and Sharpley, 2008). However, only relatively recent travels generically called "dark tourism" have captured the attention of researchers (Foley and Lennon, 1996a; Lennon and Foley, 2000). Foley and Lennon (1996b) were the first to use the term « dark tourism », referring to the relation between tourism and places or experiences associated with death and defining the concept as "supply and consumption (by visitors), of places associated with death or natural disasters. Most definitions of "dark tourism" focus on sites or objectives that represent attractions for the tourists rather than on their motivation (Uzell, 1992; Rojek, 1993; Ryan and Kohli, 2006; Stone, 2006).

The diversity of attractions associated with death is extremely vast, including elements such as "Dracula Experience", "Ground Zero", Normandy beaches, Auschwitz etc. thus making it difficult to formulate a typology (Stone and Sharpley, 2008). Regardless, sightseeing places former places of deaths, sufferance or real or simulated tragedies, where tourists pay or not for having access represent attractions of dark tourism (Stone, 2005). Attempts to classify touristic objectives specific to dark tourism have been made by Dann (1998) or Stone (2006). The latter includes in his classification as a component «entertainment factories of the darkness», where there are included attractions and experiences that highlight imaginary or real death, macabre events, but are focused on entertainment and the commercial side (Stone, 2006). To exemplify the category, the author mentions also the project "Dracula Park". In order to support the benefits brought by the association of various cultural or historical touristic objectives with the legend of Conte Dracula, Muzaini et al. (2007) claims the fact that dark tourism favours "the visual" and "the experimental" in confront to the need for historical rigor.

Bittner (2011) argues that some of the attractions of dark tourism are represented by touristic objectives that fall in the category of cultural tourism. Moreover, such representative touristic objectives can bring their contribution to building a national identity and the message received by tourists contribute to the image of the destination (White and Frew, 2013). Two aspects that cannot be neglected by the management of destinations specific to dark tourism are the place's authenticity in tourists' view and the manner in which they interpret the events that occurred here (Miles, 2002). The analysis of consumers' perceptions related to touristic objectives and the experiences associated to them allow site management to create and promote interpretations that can attract tourists (White and Frew, 2013).

As for the demand of dark tourism, Dann (1998) identifies 8 motivations that could determine tourists to visit these places or experiences associated with death, among which can be mentioned "bloodlust", desire for novelty, nostalgia.

Stone (2012) claims that tourists are driven by the desire to visit attractions of dark tourism either for a new life experience or for an adventure that would help them understand certain things. Anyway, an aspect that definitely characterizes dark tourism is tourists' experience in interpreting the events that took place at the site visited (Miles, 2002).

A very interesting study is the one made by Stone and Sharpley (2008) that analyze the relation between the socio-cultural perspectives on death and the potential of dark tourism as means of confronting or accepting death in today's modern society. The purpose of the study has been materialized in a pattern/model for dark tourism consumption in a thanatological context. Also, it should not be overlooked the fact that "black" sites and experiences are often promoted or provided for political and educational purpose, for entertainment or for economic gain (Ashworth and Hartmann, 2005).

3. DRACULA, TOURISM AND ROMANIA

In 1897, Bram Stoker published the novel Dracula. This tells the story of a vampire from Transylvania who travels to England with the intention of spreading his vampirism cult. Dracula enjoyed a high popularity since its publication and determined an extraordinary spread of the "vampire subculture" in the second half of the 20th century (Melton, 1999). More than 200 movies that featured Dracula as main character, more than 1000 books on vampires or Dracula, numerous television programs, comics (Light, 2007), social networks, video games etc. contributed to building the popular culture (Bolan and Williams, 2008) around this character.

Even though there aren't any concrete data available, mass media influence upon tourism is unquestionable (Reijnders, 2011). After the fall of communism in Romania, the number of foreign tourists in search of "Dracula's myth" increased (Banyai, 2010). However, even though Dracula's image attracted numerous tourists since then, the Romanian state has been reluctant to supporting and developing this image (Huebner, 2011). So, "Dracula Tourism" (the phrase "Dracula Tourism" is used by authors such as Light (2007), Hovi (2008), Banyai (2010), Reijnders (2010), Huebner (2011)) represents a determined form of tourism or created by demand, form that is, to some extent, in discordance with the manner in which the Romanian state perceives itself or wants to be perceived by others (Light, 2007).

At the moment, the exploitation of Dracula's myth is done by tourism operators and private travel agencies. There are few tourism packages, which vary between 3 and 7 nights, offered by tourism agencies such as J'info Tour or Fabiola Turism, but that mostly focus on the Prince Vlad Ţepeş and historical reality. However, the Minister of Tourism, Maria Grapini and local authorities from 6 counties in Transylvania seek to promote Dracula's myth through a tourism product as excitant as possible for those fascinated by vampires, respectively by dark tourism. In this category falls also the "Dracula Tour", a tourist circuit of 7 days by car through various places in Romania, package offered by a tourism agency from the United States of America that is specialized on the segment called "terror tours" (Reijnders, 2010).

Nobody can dispute the fact that tourism based on Dracula's myth has a tremendous impact on Romania's international image and on the local touristic industry (Reijnders (2010). Huebner (2011) suggests - the current study suggests this as well, that the entire region (especially Transylvania) should try to capitalize, from an economic and cultural point of view, Dracula's myth. Dan Matei Agathon, former Minister of Tourism and the current President of the Federation of Enterprises in Tourism and Services in Romania claims that "the Dracula Project for promoting Transylvania represents the most profitable development strategy for regional tourism and must be managed without reservation or prejudice" (Negrescu, 2013).

4. RESEARCH METHODOLOGY

The successful development of tourism around Dracula's myth requires relevant market researches. Among these, cannot be overlooked the one regarding the expectations of potential tourists, which then allows the creation of a market segmentation strategy, target and positioning as efficient as possible. Thus, at this moment, the study on American consumers' perceptions on the possibility of spending a holiday in Romania for discovering Dracula's myth seems highly appropriate.

The premise of the study assumes the existence of a connection between Americans' attraction towards dark tourism, vampires and a travel to discover Dracula's myth. Its verification would allow a clear positioning of the tourism product created. Thus, the objectives of the market research conducted aimed:

- to identify consumers' perceptions regarding dark tourism and Romania as mythic space, land of vampires;
- to determine the main characteristics of an attractive tourism product, build around Dracula's myth.

As data collection method, the survey was chosen, using the questionnaire research instrument. Survey sample was represented by American citizens, who have travelled at least once in the last 3 years. The sampling method was a non-probabilistic one, mixt, combining sampling by convenience with the snowball sampling method. Questionnaires were performed online, using a site specialized in survey polls. The questionnaire was available on social networks such as facebook.com, couchsurfing.org, tripadvisor.com, respectively was send directly by email to the employees of a resort in Wisconsin (Mt. Olympus Resort), who, at their turn, were asked to pass it on, including to tourists accommodated in the unit.

Sample size, after the validation of the questionnaires, was of 254 de respondents. As for the sample structure, most respondents (approximately 60%) are female, aged between 22 and 35 years. Approximately 50% of those who filled in the questionnaires have a weekly income between 300$ and 799$, and as an occupation, most of them are students and specialists in various fields such as engineers, doctors, economists, etc.

5. STUDY RESULTS

In order to test the degree of openness and the nature of American consumers' touristic motivations, in the first phase the terms "unusual holiday" and "destination with a different culture" were used and a 5-points scale, starting from "not at all" to "very much". The answers allowed the characterization of potential American tourists as innovators. Thus 80% of them said that they would be very interested in spending the next holidays in a destination with a culture different from the American one, and 67% of them want very much "an unusual holiday".

Then, by using an open question there have been identified the main associations of the concept of dark tourism in the view of the respondents. For most of them (14%), dark tourism is either "something that has to do with death", or "something scary". Approximately 11% of the persons interviewed first thought of "danger", namely "medievalism and castles". "Sufferance", "adrenaline", "unknown", accounted for approximately 8% of the answers. Among other notions associated with dark tourism, respondents mentioned also: evil, fear, vampires, Dracula. Thus, for most respondents, dark tourism primarily symbolizes strong emotional feelings.

Next, respondents were presented the definition of dark tourism as shown in the studies of Foley and Lennon (1996b) and Stone (2005), and they were asked to mention whether they have ever taken such a travel. More than half, precisely 55% said that they have done at least one travel that can fall in the category of dark tourism. The emotions experienced during these travels were measured with a 5-point scale, respondents being presented a number of 13 factors for evaluation (Table 1). These were partially taken from the studies of Rojek (1993), Seaton and Lennon (2004), Stone (2009), White and Frew (2013).

Table 1. Intensity of emotions lived in places specific to dark tourism

Emotion	Average (scale 1-5)		
Curiosity	4.44	Contempt	2.46
Reflection	3.97	Fear	2.33
Empathy	3.54	Uncertainty	2.31
Revelation	3.46	Superiority	2.30
Content	3.24	Fury	2.10

Nostalgia	3.23	Joy	1.94
Compassion	3.20		

While visiting attractions specific to dark tourism, most interviewed persons experienced curiosity towards the place visited (the only item with an average above 4, on a scale from 1 to 5). The following sets of emotional feelings, in order of intensity were reflection, empathy and revelation. A single item had an average under 2, namely "joy", and other feelings less felt were anger, superiority, insecurity, fear and contempt. The relevance of the results obtained for American respondents is sustained by the research of the authors quoted earlier on the behaviour of the tourist who practices dark tourism, especially for the superior part of the ranking. So, it would seem that experiences that fall in the category of dark tourism are born out of curiosity and enhance individuals' introspective side.

The next theme of the questionnaire was the degree of interest shown by American citizens regarding vampires and Romania's image associated with various myths. By using a dichotomous question was determined the interest towards vampires of 78% from the respondents, due probably in a significant proportion to popular culture. Regarding the degree of association of Romania with a legendary land, birthplace of vampires, it has been identified the fact that in Americans' perception this connection is very strong (Table 2).

Table 2. Romania's image, vampires and Dracula

Type of association	Average
Romania is a country with an authentic medieval heritage	4.16
Romania is a country of legends and myths	4.02
Transylvania, a region of Romania, is the land of vampires	4.37
Romania is Dracula's house	3.95

So, 89% of the respondents agree that Transylvania is the land of vampires, and 75% have the same opinion on the fact that Romania is Dracula's home. The 4 statements confirm the fact that Romania could easily valorise, from a tourism point of view as well, the perception according to which it is a land of vampires, Dracula's home, a legend place and the guardian of an authentic medieval inheritance. Based on these pillars, it could be possible to build Romania's image as a tourism destination, at least for a well-defined segment on the market of American consumers. Creating, promoting and supporting an image in correspondence with the knowledge and the expectations of consumers, would then allow the development of attractive tourism products, based on the image's essential components. This statement is supported also by the questions to the answer regarding the degree of interest of respondents in spending a holiday in Romania for discovering or exploring the attractions mentioned before (Table 3).

Table 3. Attractivity of a holiday in Romania

	Average
Visiting Romania for the medieval authentic inheritance	3.86
Visiting Romania for discovering legends and myths	3.70
Visiting Transylvania for discovering the land of vampires	4.17
Visiting Romania because it is Dracula's home	4.05

So, at least 70% of the respondents consider attractive or very attractive a holiday in Romania for discovering medieval attractions, for knowing local legends and myths, visiting the land of vampires, respectively Dracula's Castle. It can be concluded that tourism products build around these theme, designed for a market segment specific to dark tourism and properly promoted can record a real success on the American market.

The results of the previous analysis can be explained also by the presence of scenes from movies with vampires, internationally promoted, which talk about the place where Dracula or vampires live/lived, this place being located in Transylvania. Numerous movies, as well as television series mention Romania in the same context.

The last theme of the study aimed to investigate the tourism behaviour, the services and facilities expected by American tourists for a holiday in Romania with the occasion of discovering Dracula's myth. The information obtained this way would allow creating a tourism package as close as possible to the needs and the expectations; consequently, there would be the premises of obtaining a degree of high satisfaction, with important consequences on the intentions of revisiting and recommending both the destination and the tour operator that implements it.

As for the factors that would determine them to travel in a country with a different culture, for example, Romania, (using a question with multiple answer), 76% of the respondents opted for "activities available at destination", 56% for "price", 37% for '"tour operator", 32% for "destination reputation", 19% for "distance". Consequently, Romania as a tourism destination could count on competitive advantages represented by the originality and the diversity of recreational activities, respectively attractive prices.

Promotion should be made over the Internet, the source of information that would be used by 91% of the respondents in planning a holiday in Romania. Only 18.9% would contact a travel agency from the US for obtaining information on holidays in Romania, and 18,6% a travel agency from Romania. Using the internet allows touristic consumers to gather a lot of information, diversified, from different sources, at any moment and in almost any place. Of course this prior information could be obtained from the sites of online Romanian travel agencies or from sites, travel blogs, pages of social networks specially conceived to promote Romania as the land of Dracula.

As for the persons they would like to travel in this thematic holiday, 78% would prefer to be accompanied by friends, 12% by girlfriend/boyfriend, 6% by family and the rest by colleagues or business partners. The period for taking the holiday would be during summer (48%) or for Halloween (46%). Considering the fact that for international tourism, guide services play a very important role, potential American tourists would like in a proportion of 70% to be made by a Romanian local, with the experience required by such an activity. Only 20% would like very much for the guide to be a professional from Romania, and 10% would choose a guide from the US. The budget that most respondents would allocate (65%) for a holiday of this type in Romania ranges between 1500 and 2000 dollars. 14% would be willing to spend between 2000 and 2500 dollars and 14% would spend 1500 dollars for such a package tour. 7% of the respondents would pay more than 2500 dollars.

Next, the survey tested a series of concepts and ideas that would enhance the originality and the authenticity of the tourism product created and the degree of personalization of the tourism services provided. Of course, this information could be used in the communication and positioning strategy of the tourism product. Thus, for accommodation services, from the 4 types of rooms presented to respondents, the preferred type of room was the one with a "coffin" bed (average 4.53 on a scale from 1, meaning "at all" to 5, meaning "very much"). The room type "cave" ranked second (average of 3.37), followed by the medieval room (average of 3.38) and then gothic (average of 3.07).

Table 4. The degree of interest for unusual activities on vampires and Dracula

Type of activity	Average
"Vampire hunting" in the mountains	3.74
Torture rooms	3.60
Vampire themed party	3.80
"The road without return" - a night in the city of Dracula	3.90

Battle with medieval warriors	3.76
Bonfires at Castle Dracula	4.05
A night with a descendant of Dracula	3.70
Visit the places where Dracula lived and interaction with local people	4.10
Night with Dracula movies in the castle's basement	3.81

Given the unique experiences that could significantly enrich the tourism experience, in addition to the plus of originality they bring, it has been evaluated also the degree of interest of respondents for a series of activities specific to a holiday having as main motivation discovering Dracula's myth (Table 4). The most interesting activities, the only ones with an average above 4.00, are visits to the places where Dracula lived and interaction with local people and organizing bonfires at Castle Dracula. Also the activity on the third position, a day in Dracula's city, is characterized, as the previous ones, by the highest degree of truth or realism compared with the other variants. Over 80% of the respondents show high and very high interest for the three activities and over 60% feel the same for the other activities proposed.

The last set of items measured the degree of attractiveness of a number of 7 touristic objectives, connected to some extent to Dracula, in the right of the name being mentioned the significance of these connections (Table 5).

Table 5. The degree of interest for tourism objectives related to Dracula

Poienari Castle	4,41	Evangelical Church in Sibiu	4,06
Bran Castle	4,41	Tihuţa Step	3,88
Sighişoara	4,35	Snagov Monastery	3,81
Hotel Dracula Castle	4,21		

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The degree of interest for these tourism objectives turned out to be higher than the one for entertainment activities, with the exception of Tihuţa Step and Snagov Monastery, all the other attractions having an average, on a scale from 1 to 5, of over 4 (before calculating the averages, have been excluded from the sample respondents who opted for the variant "I don't know"). Almost 70% of the persons interviewed said that they wanted to visit very much Sighişoara (Vlad Ţepeş home town), Poienari Castle (the castle where Vlad Ţepeş, known as Dracula, lived), respectively Bran Castle (Dracula's Castle, after the description made by Bram Stoker).

6. CONCLUSIONS

This study aims to identify the opportunity of creating and promoting a thematic tourism product, centred on the myth of Dracula and positioned in the category of dark tourism, on the market of American consumers. The idea of the research resulted from the popularity and the attention around Dracula and vampires in the last years, both in the film industry and in popular culture. Transylvania and, consequently, Romania, as land of the most famous vampire, should use this competitive advantage and create at least one tourism product centred on this myth with international visibility.

As a form of tourism, this package tour would probably fall in the category of dark tourism, a niche that has won more and more fans in the last years. As main launching market, the most inspired one would be the American one, considering the success Dracula has, the movies that feature Dracula as main character, namely the characters represented by vampires. Also, they were the first to notice the potential of Dracula's myth to attract clients and they created a tourism package on this theme. This was also the reason of choosing the market for conducting this research. The results of the study also verify the hypotheses, American tourists falling in the category of tourists open to new, eager of new

experiences, contact with a different culture. Then, more than half of the respondents made at least one travel that could be called dark tourism, determined first by curiosity and that mainly triggered the introspective side of the individuals.

As for Romania's image, over 70% of the respondents agree that Romania is the land of vampires and the home of Dracula. So, it seems that there would be a market ready for a tourism product of this kind having as destination Romania. This conclusion is also supported also by the fact that at least 70% of the respondents consider attractive or very attractive a holiday in Romania for knowing the local legends and myths, namely Dracula' house, elements that could be used in the positioning strategy of the tourism product.

Due to the fact that the activities performed at destination and the price are the most important factors in choosing a holiday destination for the respondents, these could be the main elements or assets used in the strategy of differentiating from competition.

As for the main characteristics of the package tour, identified for American consumers, these would be:

- As a period, it should be organized during summer or on Halloween.
- The groups of tourists that would participate would be mainly formed by friends.
- The guide should be a local, with experience.
- The Internet would be the main source of information for such a product;
- The budget for such a holiday: between 1500 and 2000 dollars.
- For accommodation, the room should have beds "coffin type" and the setting of a cave.
- Among the activities included at destination there should be also visits to the places where Dracula lived, interaction with locals, organizing bonfires at Dracula's castle or visiting Dracula's home town.
- In the list of tourism objectives included in the circuit should be Bran Castle, Poienari Castle and Sighişoara.

Although the information obtained from this study have a high degree of uniqueness and applicability, however, they should be checked through a more extensive descriptive research, which would test the level of interest for such a tourist circuit, on a representative sample of consumer from the US and that would later on allow market testing of the tourism product created.

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DETERMINANTS OF ENTREPRENEURIAL ACTIVITY IN TIMES OF CRISIS: AN EMPIRICAL STUDY

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Abstract: *In the context of the present economic crisis, entrepreneurship has re-emerged as a topic of interest both for policy makers worldwide as well as for academic research. A wide range of psychological, economic and sociological factors influencing entrepreneurial activity is presented by the existing literature. The aim of this paper is to identify the economic and institutional factors that influenced entrepreneurial activity both before and during the crisis. Data for 27 countries worldwide from Global Entrepreneurship Monitor, World Bank World Development Indicators and World Bank's Worldwide Governance Indicators international databases were collected for the years 2007, 2009 and 2012. A three stage empirical research was conducted: a comparative analysis of the distribution of the selected variables for the three years, principal components analysis in order to provide an image of the intensity and direction of the relationship between the variables and to characterize the statistical units and econometric modelling to describe the variation of entrepreneurial activity in relation with its economic and institutional determinants. Contrary to expectations, the research findings show that before the crisis, the variation of entrepreneurial activity is explained by the negative influence of the perceived confidence in the rules of society and during the crisis it is negatively influenced by the perceived government effectiveness. The limitations of the research are also presented.*

Keywords: entrepreneurial activity; total early-stage activity (TEA); crisis; Principal Component Analysis method (PCA); econometric model.

JEL classification: C10; L26; M13; O40.

1. Background

In the context of the present economic crisis, entrepreneurship has re-emerged as a topic of interest both for policy makers worldwide as well as for academic research. The existing literature provides evidence on a wide range of factors influencing entrepreneurial activity. These can be grouped into three main categories: psychological or individual traits, sociological or institutional factors and economic characteristics (Vidal-Sune and Lopez-Panisello, 2013; Giannetti and Simonov, 2004).

The psychological approach takes into account the individual traits as mainly determinants for entrepreneurship. Empirical studies show that age, experience, origin, religion, employment status, level of education etc. have an important role in individual's decision to become self-employed (Baron, 2000; Blanchflower *et al.,* 2001).

From sociological side, individuals' entrepreneurial decisions are determined by a wide range of institutional and socio-cultural factors (Manolova et al., 2008). On the demand side, institutional environment influences opportunities for entrepreneurship. On the supply side, institutions play a significant role in stimulating entrepreneurial capabilities and preferences (Wennekers *et al.*, 2002). Formal institutions such as educational system, competition, regulation, the tax system, social security, legislation etc. are proven to influence individuals' options for entrepreneurship (Reynolds et al., 2000). Also, there

are studies exploring the relationship between cultural dimensions and entrepreneurial behaviour (Lee and Petersen, 2000).

The economic perspective brings forward the idea that the economic factors are the ones which mostly influence entrepreneurial activity (Wennekers *et al.*, 2005). The relationship between variables of the macroeconomic environment and the rate of entrepreneurial activity has been extensively explored in literature. The burden of regulations such as, high costs of entry, and bureaucracy costs were proven to be obstacles to entrepreneurial activity (Klapper *et al.*, 2004). Institutional features such as, the tax environment, government size, the level of trust, corruption, the level of financial development (Giannetti, 2003), market conditions such as size and growth (Davidsson *et al.,* 1994) also impact upon the level of entrepreneurship development. The relationship between unemployment and entrepreneurship is an ambiguous one: some researchers argue that unemployment has a positive effect on entrepreneurship (Martinez-Granado, 2002) while others demonstrate that higher unemployment levels are associated with low entrepreneurial activity (Storey and Johnson, 1987).

The aim of this paper is to identify the economic and institutional factors that influence entrepreneurial activity both before and during the crisis. Section 2 describes the research design and methods and in Section 3 we present and discuss the research results. The last part of the paper briefly summarizes the conclusions.

2. Data and methodology
2.1. Data

To measure the level of entrepreneurial activity this paper *uses Total Early-Stage Entrepreneurial Activity* (TEA) from Global Entrepreneurship Monitor (GEM) (http://www.gemconsortium.org/key-indicators), as the dependent variable. The variable describes *the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business.*

Data for the independent variables describing the economic context – *GDP growth* (RGDP, annual percentage growth rate of GDP at market prices based on constant local currency), *Total tax rate* (TTR, the amount of taxes and mandatory contributions payable by businesses after accounting for allowable deductions and exemptions, as a share of commercial profits), *Unemployment* (UR, the share of the labour force that is without work but available for and seeking employment) and *Inflation* (IR, the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services) – were collected from the World Bank, World Development Indicators (WDI) database (http://data.worldbank.org/indicator) .

The data for the institutional environment – *Government effectiveness, Voice and accountability, Control of corruption, Regulatory quality* and *Rule of Law* – were retrieved from the World Bank's Worldwide Governance Indicators (WGI, http://info.worldbank.org/governance/wgi/index.aspx#home) database. They reflect (Kaufmann *et al.*, 2010):

- Government effectiveness (GEF): *perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.*
- Voice and accountability (VA): *perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and a free media.*
- Control of corruption (CC): *perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.*

- Regulatory quality (RQ): *perceptions of the ability of the government to formulate and implement sound policies and regulations which permit and promote private sector development.*
- Rule of Law (RL): *perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.*

Data are registered at the level of years 2007, 2009 and 2012. Data are processed in SPSS (Jaba and Grama, 2004: 98-111, 232-259).

2.2. Sample

Our sample includes 27 countries worldwide, selected based on data availability for the three years mentioned above: Argentina, Belgium, Brazil, Chile, China, Colombia, Croatia, Denmark, Finland, France, Greece, Hungary, Israel, Italy, Japan, Latvia, Netherlands, Norway, Peru, Romania, Russia, Slovenia, Spain, Switzerland, United Kingdom, USA, Uruguay.

2.3. Methods

The empirical research has three stages. The first step is to *analyse the distributions of the considered variables* followed by testing the equality of the average level of a phenomenon between the considered moments in time. The analysis of the distributions of the considered variables consists in identifying the outlier points using box-plot diagram and checking normality of distribution, which is a prerequisite of many methods and statistical techniques. Student-t test is most often used to check the equality of the average of two paired samples (Bluman, 2004: 431-492). Applying this test is appropriate if the distributions of the sample are normal or approximately normal. The normality of the sample is observed if certain conditions are met: i) the population distribution is normal; ii) the sample data are symmetric, unimodal, without outliers, and the sample size is less than 15 observations; iii) The sample data are slightly skewed skewed, unimodal, without outliers, and the sample size is 16 to 40 observations; iv) sample size is greater than 40 observations. We also use the nonparametric Wilcoxon test (Siegel, 1991: 99). Wilcoxon test is less restrictive than Student-t test, assuming only the following conditions: i) the analyzed variables are continuous; ii) there are no restrictions on the distribution of deviations between the values of the two paired samples; iii) subjects may belong to different populations.

The second part of the research is *Principal Components Analysis (PCA method).* Considering data dimensionality, a synthetic image of the intensity and direction of the relationship between them can be obtained with PCA (Pintilescu, 2007: 30-109). The results obtained by applying PCA for the three years show that the application of this method is adequate for analysing the considered variables.

The last part consists in *elaborating an econometric model* to describe the variation of Total Early-Stage Entrepreneurial (TEA) in relation to the independent factors identified by correlation analysis and using the information obtained with PCA. The model will be validated by testing the significance of the regression parameters and of statistical hypotheses (Maddala, 1999: 197-291; Gujarati, 1995: 319-446; Jula and Jula, 2010: 163-250): the normality assumption (Kolmogorov-Smirnov test), absence of autocorrelation (Durbin Watson test), errors' homoscedasticity (Correlogram squared residuals), multicollinearity hypothesis (VIF and TOL indicators).

3. Empirical results
3.1. The analysis of the distributions of the considered variables
The comparative analysis of the distribution of TEA for the three years (Figure 1) highlights the following aspects: there are differences in the average level of the phenomenon, with increases from 2007 to 2012; the distributions for 2007 and 2009 display outliers and all distributions are positively skewed.
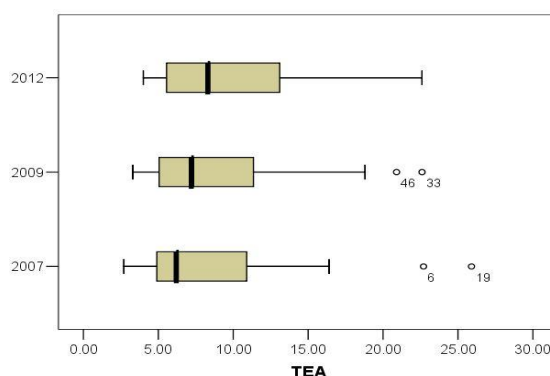
Figure 1: The comparative representation of the distribution of TEA in 2007, 2009 and 2012

The normality of the distribution of TEA is checked with Jarque Bera test. The results are presented in Table 1.

Table 1: The results of Jarque Bera test applied to TEA distribution

Variable	JB	Probability	Decision
TEA_2007	15.925	0.000	Hypothesis H_0 is rejected
TEA_2009	5.622	0.060	Hypothesis H_0 is not rejected
TEA_2012	3.892	0.143	Hypothesis H_0 is not rejected

TEA follows a normal distribution only in 2009 and 2012. In 2007, the distribution is affected by strong outliers, leading to failure of normal distribution law.

Further, we check whether the differences between the average level of TEA for the years considered are statistically significant. Student-t test is most often used to check the equality of the average of two paired samples.

The assumptions of Student-t test are met by the distributions of TEA for 2009 and 2012, but not for 2007, which displays outliers and a strong positive skewness.

Consequently, the Student test can be applied to check the equality of the average level of TEA for 2009 and 2012. For the other comparisons we can use the nonparametric Wilcoxon test.

The results of Student and Wilcoxon tests are presented in Table 2.

Table 2: The results of the tests on the equality of the average levels of two paired samples, for TEA, in 2007, 2009 and 2012

Variables	Statistic test	Decision
TEA_2007 & TEA_2009	Wilcoxon Z*	Hypothesis H_0 is not rejected
	-1.194 (0.233)**	
TEA_2007 & TEA_2012	Wilcoxon Z	Hypothesis H_0 is rejected
	-2.273 (0.023)	
TEA_2009 & TEA_2012	Student t	Hypothesis H_0 is rejected
	-2.006 (0.055)	
	Wilcoxon Z	Hypothesis H_0 is rejected
	-2.185 (0.029)	

* For samples greater than 25 observations, the distribution of Wilcoxon statistic tends to the normal distribution Z.

** In parentheses are shown the probabilities attached to the calculated values of the tests.

The distribution of TEA shows no statistically significant variations between 2007 and 2009. The differences are significant between 2009 and 2012 and, more pronounced, between 2007 and 2012.

We check if the variables considered registered significant variations between the moments "before and after" the economic crisis. The results for the five variables (RGDP, CC, GEF, RL and VA), the most representatives for the present research, are presented. In the same manner as presented above for the analysis on TEA, we check if the independent variables meet the normality assumptions required by Student-t test. With the exception VA variable, which does not follow a normal distribution, displaying outliers, negative (figure 3) and having the value of JB statistics higher than the critical value $\chi^2_{\alpha,2}$

, all the other variables are normally distributed.
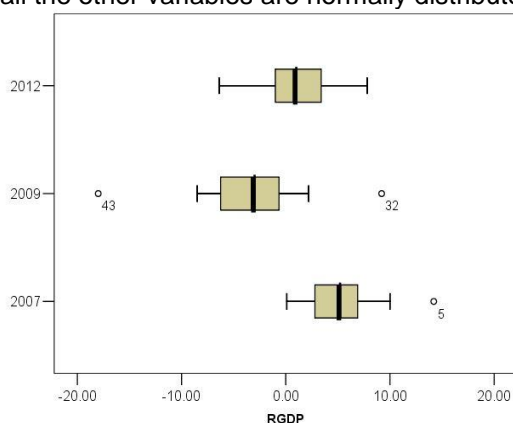
Figure 2. The comparative representation of the distribution of RGDP, in 2007, 2009 and 2012
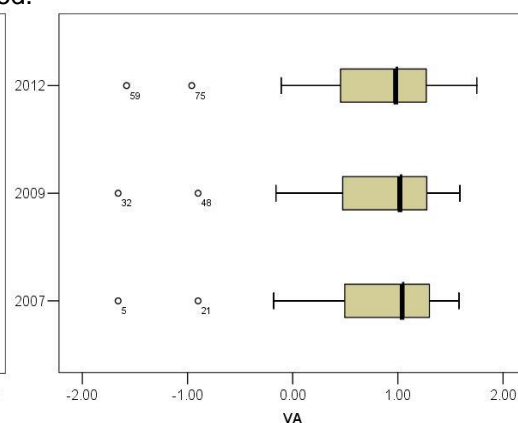
Figure 3. The comparative representation of the distribution of VA, in 2007, 2009 and 2012

Testing the equality of the average levels of the independent variables considered, corresponding to the paired samples 2007-2009, 2007-2012 and 2009-2012, shows

significant differences only for economic growth rate, which can be also visualised in the box plot diagram above (figure 2).

3.2. Principal Components Analysis (PCA method)

The value of the Correlation Matrix determinant is close to zero and shows that there are strong relations between the statistical variables.

The computed value of χ^2 statistic and its associated probability (

$$\chi^2_{2007} = 261.201, \Pr ob_{2007} = 0.000; \ \chi^2_{2009} = 260.962, \Pr ob_{2009} = 0,000;$$

$$\chi^2_{2012} = 2685.109, \Pr ob_{2012} = 0.000)$$ allows us to reject the null hypothesis and accept the existence of significant relations between variables.

The same results are indicated by the value of KMO test-statistic which shows that PCA is adequate: $KMO_{2007} = 0.789; KMO_{2009} = 0.800; KMO_{2012} = 0.793$.

The share of the variance of the variables extracted by factorial axes shows the correlation of the variables with the axes. For all variables we obtained high values for the extracted variances. The values of the extracted variances of TEA are satisfactory:

$$\sigma^2_{extr, \ 2007} = 0.374; \sigma^2_{extr, \ 2009} = 0.623; \ \sigma^2_{extr, \ 2007} = 0.567.$$

The first two factorial axes meet the Kaiser criterion and cumulatively explain an important share of the total variance: 2007 – 74.1227%; 2009 – 73.607%; 2012 – 73.879%. We made an option to keep only the first two factorial axes for an easier interpretation of the results.

The representation of variables on the two first factorial axes allows us to identify the direction and the intensity of the relation between them (figures 4 and 5).
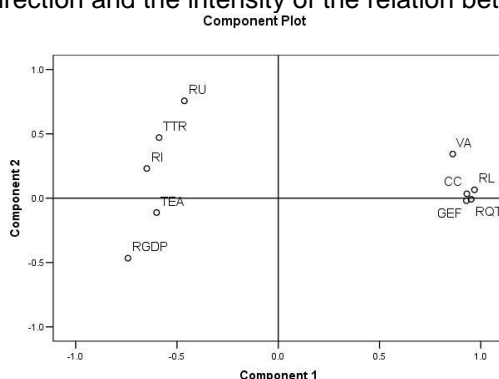
Figure 4: Variables' positions on the first two factorial axes, 2007
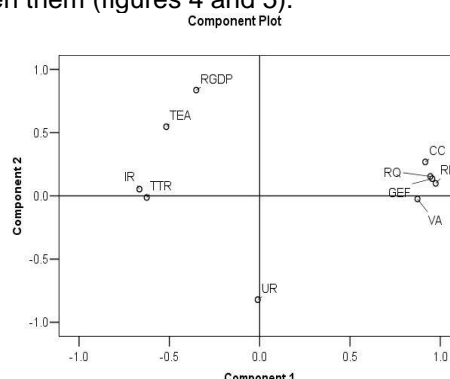
Figure 5: Variables' positions on the first two factorial axes, 2012

Analysing the contribution of the variables X_j, $j = \overline{1,10}$, to the formation of the factorial axes, we found the following:

- In 2007, the first factorial axis is explained by all the analysed variables; the second factorial axis is explained by unemployment rate (UR), total tax rate (TTR) and economic growth rate (RGDP);
- In 2012, the first factorial axis is explained by all institutional factors, which are situated in the opposite quadrant with unemployment rate (UR) and total tax rate (TTR); the second factorial axis is explained by economic growth rate (RGDP), TEA, UR and CC.
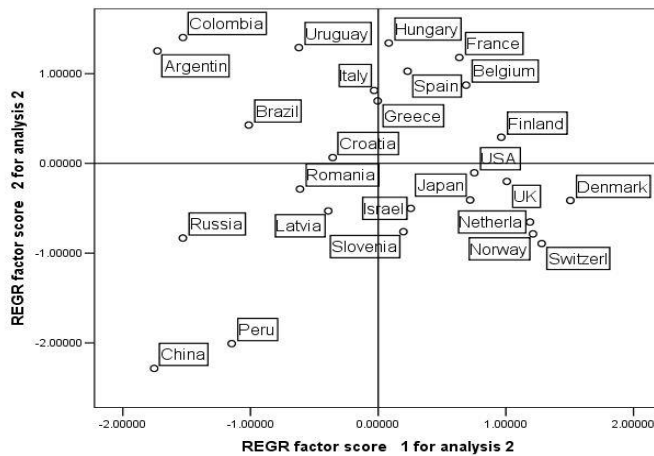
Figure 6: Countries' position on the first two factorial axes, 2007

TEA and the institutional factors are situated in opposite quadrants, being negatively correlated. TEA and RGDP are situated close to each other, so they are strongly positively correlated. Between 2007 and 2012, the institutional factors have slightly modified their position on the map while the macroeconomic indicators (UR, IR, RGDP) and TEA register significant modifications.
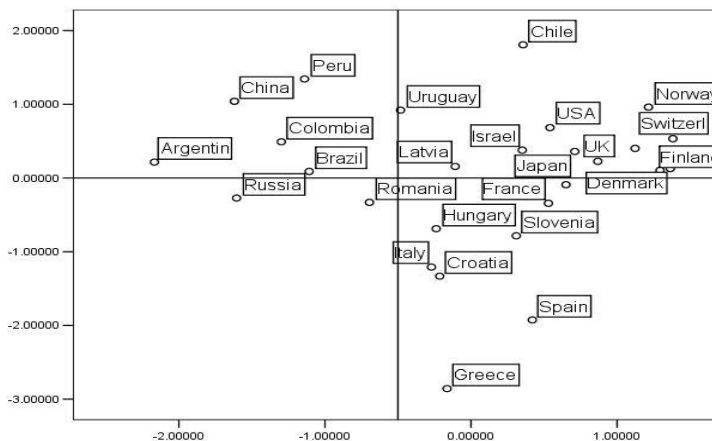
Figure 7: Countries' position on the first two factorial axes, 2012

Countries' position on the first two factorial axes highlights the following aspects: i) on the right side of the map we notice mostly the developed (ex. Norway, Sweden, Finland), with good institutions (high values for the institutional factors) ii) the developed countries register low values for TEA; iii) on the left side of the map there are the less developed countries, with high level of TEA showing that entrepreneurship is supported and it is seen as a factor of development; iv) in 2012, compared to 2007, countries' positioning indicates their migration towards the institutional factors, which shows a positive trend of these indicators.

3.3. Econometric modelling

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The first step in elaborating an econometric model to explain the variation of TEA consists in identifying the independent variables which influence it. We applied Pearson correlation analysis and we considered the results obtained above with PCA.

Taking into account the significance of the correlation coefficient, for the years considered, TEA is negatively correlated with all institutional indicators and positively correlated with economic growth rate. This aspect was also noticed in the maps obtained in Figures 4 and 5 with PCA. TEA is not correlated with unemployment rate, inflation and total tax rate. We estimate the regression model using Backward method.

The estimated equations of the three models are:

2007 - $TEA_i = \beta_0 + \beta_1 RL_i = 10.981 - 3.384 RL_i$

2009 - $TEA_i = \beta_0 + \beta_1 RGDP_i + \beta_2 GEF_i = 13.349 + 0.539 RGDP_i - 2.966 GEF_i$

2012 - $TEA_i = \beta_0 + \beta_1 RGDP_i + \beta_2 GEF_i = 10.695 + 0.981 RGDP_i - 2.129 GEF_i$

At the level of 2007, the variation of TEA is explained by the negative influence of the variable *rule of Law* (RL). The regression model has the same form for 2009 and 2012, the predictors of TEA being the *economic growth rate* (RGDP) with positive influence and *government effectiveness* (GEF), with negative influence.

The coefficients of the regression model are statistically significant for a significance level of 5%, except for the coefficient of GEF which, in the model for 2012, is significant if accepting a risk of 10 %.

The standardised regression coefficients from the multiple models corresponding to 2009 and 2012 allow establishing a hierarchy of the variables within the model. So, in both models, the variable RGDP has a stronger influence on TEA than the variable GEF.

The coefficient of determination (R-squared) shows that, in 2007 the variation of TEA is explained to a small extent by our model (28.6%). In 2009 and 2012, 51.5% and, respectively, 44.4% of the variation of TEA is explained by the cumulative variation of RGDP and GEF.

The validation of the regression model is done by testing the hypotheses of the regression errors.

According to Kolmogorov-Smirnov test, the regression errors display a normal distribution: $(\mathrm{Pr}ob_{2007} = 0.910) > (\alpha = 0.05)$; $(\mathrm{Pr}ob_{2009} = 0.953) > (\alpha = 0.05)$ $(\mathrm{Pr}ob_{2012} = 0.937) > (\alpha = 0.05)$, for a risk of 5%.

The absence of autocorrelation is checked with Durbin-Watson test. The computed values for each of the three models ($dw_{2007} = 1.593$; $dw_{2009} = 1.913$; $dw_{2012} = 2.011$) are located in the range where the null hypothesis can be accepted and, consequently, the errors are not autocorrelated.

The homoscedasticity assumption is checked with Correlogram squared residuals (Figure 8 and 9). It can be noticed that the autocorrelation function does not display significant peaks. The squared residuals, representing their dispersions, are not autocorrelated and the homoscedasticity assumption is accepted. The Correlogram squared residuals for the model corresponding to 2009 has the same characteristics.
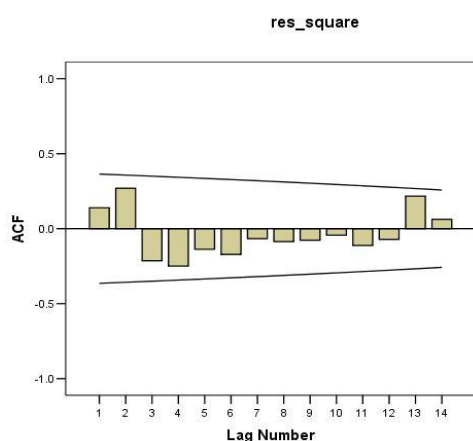
Figure 8: The Correlogram squared residuals, 2007
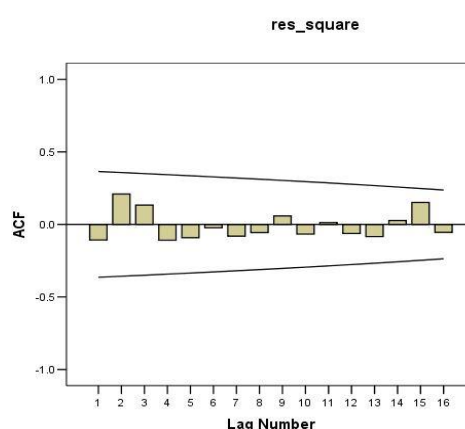
Figure 9: The Correlogram squared residuals, 2012

The multicollinearity of the independent variables from the regression models is verified by analyzing the indicators VIF (Variation Inflation Factor) and TOL (Tolerance). All the values registered for VIF, corresponding to the independent variables in the models for 2009 and 2012 are low (VIF2009=1.043; VIF2012=1.050), and the values for TOL are high (TOL2009=0.959; TOL2012=0.953). This leads to the acceptance of the null hypothesis that is there is no collinearity of the independent variables.

To conclude, the regression models are validated. TEA dynamics is significantly, but to a small extent, explained by variables such as economic growth rate, rule of law and government effectiveness.

4. Conclusions

This paper aimed at identifying the factors which influence entrepreneurial activity in times of crisis. Statistical analyses were performed for several moments in time, in order to provide an image of these factors and their dynamics before and after the appearance of the economic crisis.

Entrepreneurial activity, measured with *the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business,* shows no statistically significant variations between 2007 and 2009. The differences are significant between 2009 and 2012 and, more pronounced, between 2007 and 2012. We can say that the crisis has impacted upon entrepreneurship development.

Out of the independent variables only economic growth rate registers significant variations in the analysed period. The results reflect the reality of the crisis which hampered the possibilities for economic growth and brought significant decreases in the GDP growth rate at its beginnings and slight increases starting with 2010.

Entrepreneurial activity is positively correlated with economic growth rate. Also, between 2007 and 2012, the institutional factors have registered only slight variations while the macroeconomic indicators, unemployment rate and inflation rate, registered significant variations.

When characterizing the countries included in the sample, we notice that the developed countries (Norway, Sweden, and Finland) register low levels of entrepreneurial activity and high values for institutional quality. The opposite situation characterizes the less developed countries. This result can be explained if taking into consideration the fact that the countries with very good governance impose heavy taxation.

Contrary to expectations, the findings show that in 2007, before the crisis, the variation of entrepreneurial activity is explained by the negative influence of the Rule of law, i.e. the perceived confidence in the rules of society and the quality of contract enforcement, and property rights. In the same manner, in 2009 and 2012, entrepreneurial activity is negatively influenced by the perceived government effectiveness.

When interpreting the results we should be aware of the limitations of the research which come from the sample size and representativeness due to data availability.

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COMPETITIVE INTELLIGENCE ANALYSIS - SCENARIOS METHOD

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Abstract*: Keeping a company in the top performing players in the relevant market depends not only on its ability to develop continually, sustainably and balanced, to the standards set by the customer and competition, but also on the ability to protect its strategic information and to know in advance the strategic information of the competition. In addition, given that economic markets, regardless of their profile, enable interconnection not only among domestic companies, but also between domestic companies and foreign companies, the issue of economic competition moves from the national economies to the field of interest of regional and international economic organizations. The stakes for each economic player is to keep ahead of the competition and to be always prepared to face market challenges. Therefore, it needs to know as early as possible, how to react to others' strategy in terms of research, production and sales. If a competitor is planning to produce more and cheaper, then it must be prepared to counteract quickly this movement. Competitive intelligence helps to evaluate the capabilities of competitors in the market, legally and ethically, and to develop response strategies. One of the main goals of the competitive intelligence is to acknowledge the role of early warning and prevention of surprises that could have a major impact on the market share, reputation, turnover and profitability in the medium and long term of a company. This paper presents some aspects of competitive intelligence, mainly in terms of information analysis and intelligence generation. Presentation is theoretical and addresses a structured method of information analysis - scenarios method – in a version that combines several types of analysis in order to reveal some interconnecting aspects of the factors governing the activity of a company.*

Keywords: competitive intelligence; intelligence analysis; structured analytic techniques; multiple scenarios analysis

JEL classification: L25

1. Introduction

Market is a social creation and not an automatic or natural mechanism. Even the pure and perfect competitive market is a fiction modelled according to the positive classical theory; this theory is, in its turn, a theoretical creation of those who created the classical school of political economy.

Market is a social phenomenon, and like any social phenomenon, exists and operates based on rules and regulations. Most are converted into legal or customary rules, accompanied by public or private organizational structures, which provide more accurate market operation.

Market has become gradually the central institution that directly or indirectly reflects any human action. In such a perspective, market is the main communication channel through which all economic agents and primarily the supply and demand agents obtain information, submit and receive messages, on which base they make decisions aimed to their own operating conditions. As a communication channel, the market helps connecting and interacting knowledge, resources and behaviours of millions of different agents. Market helps coordinate people, activities and economic agents, coordination mediated through information and incentives or penalties it provides.

Information and rewards are received and interpreted or compared by their beneficiaries: prices, profits, wages, statistical data, media, etc. They reflect the status of the various areas of activity and specific markets on which base decisions on what and how much to produce, where to invest, the HR policies, etc. are grounded, checked and revised. This is the meaning in which Adam Smith considered that the free market, by the price mechanism and other information, is the "invisible hand" that performs communication, cooperation and, consequently, consistency of millions of individual decisions generated by specific interests.

Competitive market is the central institution that makes from the price a messenger and instrument underlying the choice, selection and, of course, discrimination between those who have access and those who do not have access to economic goods.

Arising from the human nature and essence of business interests, but somewhat limited to the dimensions of the human mind and dominant interests, the market institution has so far proved the best adjustment factor and voluntary interpersonal cooperation, essentially spontaneous.

Adjustment achieved by the market it is not perfect, its limitations arising from various circumstances, of which the following are relevant: *genetic limits* (ignoring externalities, lack of foresight information provided by the market, information asymmetry, influence of public goods), *pre-capitalist constraints* (cooperation is achieved through force, aggression or subordination) and *excessive state intervention*.

Within the genetic limitations, information and economic power asymmetry between the market agents is the support that allows the market state and prospects to be the result of decisions made by the strong and informed ones.

For the "invisible hand" of the market to work properly, it is necessary that the rules of free competition to be the same for all, and contextual conditions relatively similar, conditions fulfilled only in a market with perfect competition.

At least four conditions must be met for existence of the perfect competition: *atomicity* (a large number of sellers and buyers, such as remote exchanges are insignificant in the volume of total exchanges), *free entry* (allow the emergence of new producers, who may enter or exit the market at will), *homogeneity of goods* in the same industry (so that for the customer it is the same from what seller it buys) and *complete information* (companies and buyers know all products and prices on the market at the same time).

The problem occurs in the fourth criterion, which requires that all economic agents (buyers and sellers) have all information on price and quality of the existing products in the market at a given time. Ideally, if this condition could be met, a single price would quickly form, sellers aligning to it instantly.

This condition is virtually impossible to fulfil, because not all market players have the resources needed to hold, process and exploit the same information. Therefore, those who are informed correctly and in time, have a competitive advantage and manage, in principle, to defeat those uninformed or misinformed.

The stakes for each player is to predict/know the actions of competition, to always be at least one step forward. Therefore, they need to know as early as possible, the others' strategy in research, production and sales. Information is the means by which goals in international economic competitions are achieved. In order to survive, each player must protect its information assets and, at the same time, to strive to know information of its competition.

With new developments in information and communication, the blind spot of a company moves from product or service to information that could enable keeping the competitiveness of such product/service. Often, competition can be gained by knowing and preparing the ground from the human factor perspective, prior to receiving the commercial proposal itself, the ability to determine and set strategic goals, to promote their development, and to make use of all possible means to urge them to take a decision in the desired direction. There is no economic competition that is not influenced anymore. Influence of private and public factors. States need information to maintain their position on the international arena and to help their businesses.

In an age where information supply has increased enormously, power belongs to those who manage to collect, analyze and synthesise timely and the fastest all available information in the competitive environment. Almost 90% of this stock is accessible through databases, press, specialized publications, colloquia or Internet. The rest of 10%, considered to be particularly important and sensitive, are generally obtained from sealed sources and dishonestly (gray information) or illegally (black information). The fierce battles between international players are on these 10%.

2. Competitive Intelligence

Most standard macroeconomic analyzes and forecasts – mainly based on quantitative methods – have not helped significantly in dealing early with the recent financial crisis (2008-2010), although there were relevant signals in some areas, mainly in the academic area. Unfortunately, information about the private sector loans and spending are less accessible than those about the capital movement in the public sector, and in a world where private capital flows have increasing importance, its monitoring and supervising is costly and with inaccurate results. I recall here the fact that an important feature of the market economy is assuming that dispersed information is aggregated by price and information creates a certain predictability that encourages planning of the economic activity.

Qualitative analysis approach is less practiced, although the circumstances in which we have to develop forecasts without reliable data and models are increasingly frequent. It is stated that the qualitative approach has its origins in the 50s of the last century, in the works of Herman Kahn (Stochastic – Monte Carlo – Attenuation Analysis – 1949, Techniques of System Analysis – 1956, War Gaming – 1957, Game Theory –1957, etc.). Followers of the qualitative methods are inclined to be distrustful in the quantifying value, believing that the thoughtful assumptions and hypotheses can be more useful than the sophisticated mathematical analysis methodologies. They argue that the future involves an infinite number of variables and values, and to try to pick a few and to calculate the implications it is meaningless (Thaleb, 2008). They entrust themselves thus to the intuition and value of an integrative and holistic approach. They are aware that the ability to predict somehow the future is low and believe that the best way forward is to make intuitive forecasts, structured around trends known and possible themes of coherent perspective on the future.

Competitive intelligence is defined as the amount of operations used to collect and analyze data and information and, finally, to generate intelligence that is disseminated to beneficiaries, mostly people in the top management of organizations. Roukis, Charnov and Conway (1990:95) examine the competitive intelligence in terms quite familiar to those familiar with the government's intelligence: collection, analysis, intelligence, counterintelligence and security of information systems.

Hulnik (2002) finds similarities between the two fields. He presents three aspects of the government's intelligence easily transferable to the business world: data collection, data analysis and security of operations and information.

In the private sector, intelligence managed to penetrate in various fields, the business environment being the most avid of information leading to reduced risk in decision-making. Although intelligence activities in the economic field are conducted probably from the first exchange between people, after 1982, the private intelligence in the economic field was named *competitive intelligence*. Information analysis in this area is considered as "the process of taking information – often seemingly unconnected – and turning it into intelligence using specific methods" (Kahaner, 1997:96).

One of the main goals of competitive intelligence is to acknowledge the role of early warning and prevention of surprises that could have a major impact on the market share, reputation, turnover and profitability in the medium and long term for a company. Regardless of the strategic approach or the framework chosen by a company for business management, no single element is fundamental to the competitive strategy as information about competition. Information about competition has a clear objective - to develop tactics and strategies necessary to transfer the advantages and consistency of the common market from competitors to your own company. Basically, to reduce the informational asymmetry for your own company.

A company that does not analyze or monitor rigorously the main competitors it is not able to develop and implement a strategy of strong competition. Competitive intelligence supports management decisions on positioning of a business to maximize the value of capabilities that make it stand out from its competitors.

In a functional and operational approach, the intelligence concept corresponds to the "intelligence process", with the objective of knowing, preventing and counteracting vulnerabilities and threats against a protected entity that, in the economic field, can be a company, a group of companies, a sector or an economy as a whole.

Any intelligence process requires some cyclicality. The classical model of competitive intelligence cycle involves the following steps:

   a. *identification of the information needs -* through analysis of data and information available in the organization, concerning the objectives to be supported by intelligence;
   b. *planning* - identifying the environments and places from where the necessary data and information can be collected;
   c. *obtaining data and information* - required and available through ethical and legal means and methods;
   d. *processing of data and information obtained* - in terms of source qualification and content truthfulness;
   e. *information analysis and intelligence generation* - by using analysis techniques specific to the type of data and information available and completing the picture of the situation analysed;
   f. *information product development -* by using the analysis results and their formalization according to the purpose and scope of access of the beneficiary;
   g. *dissemination and feedback* - submission of the final information products to consumers and taking their feedback.

3. Information analysis and intelligence generation - scenarios method

3.1 Information analysis

Information analysis is a phase of the intelligence process with many and varied definitions. Correlating the latest definitions, we consider that *information analysis is the activity through which analysis techniques are applied to an existing set of information, depending on the nature of information and intended purpose.*

The analyst, as a manufacturer of intelligence, receives unprocessed or poorly processed data and information (raw intelligence), which are transformed by adding real value and adapting to the beneficiary's requests, into information products.

Data can come from a number of disparate and uncoordinated measurements or observations, while the information is based on coordinated, organized and coherent data, which usually have a certain meaning. Another opinion (Devlin, 1997:21) considers data as what the components of information systems create, store and provide. Data that were processed by adding or creating new meanings or useful knowledge become information.

Intelligence generation, although it has a pronounced operational specific – characterized by fast handling, operations being facilitated by the contribution of databases, expert programs and performing computers, with beneficial effects in terms of decision-making, efficiency and cost – it is constituted, in substance, in the component or analytical side of informative activities. The result of intelligence generation materializes in information products for decision makers.

Analysis requires competence and experience to use the right tools and techniques, to structure the information according to its relevance, removing uncertainty and analyzing the information according to the situational logic, requiring the analysis to focus on the cause-effect and means-purposes relationships. Information products must comply with all relevant legislation, codes of practice, standards, protocols, procedures and guidelines of the organization.

Analysis involves selection, separation, comparison with other data and integration, resulting in the transformation of the primary data and information into usable intelligence product. Analysis is a part of intelligence that expresses the added value.

During the analytical process, connections are highlighted, as well as the missing information, weaknesses and what should be done to remedy the shortcomings.

Analysts' task is to integrate single data/information into a unified product, to evaluate the information according to a particular context and to achieve the final product that includes consideration of events, developments or judgments about the possible implications.

Richards J. Heuer (2008), one of the most prominent theorists of information analysis, presented in his paper entitled "Taxonomy of Structured Analysis Techniques", four general methods of data analysis: quantitative methods using empirical data, quantitative methods using data generated by experts, method of the unassisted judgments and method of the structured analysis. The first two groups consider the quantitative analysis and the other two the quantitative analysis. It is also worth noting that quantitative methods using empirical data and intuitive analysis are performed under low uncertainty, while the quantitative methods using data generated by experts and structural analysis are performed under increased uncertainty and predominantly predictive-oriented.

Quantitative methods using empirical data - are based on accurate data collected from the reference environment or resulted from the activities of various systems (social, economic, etc.).

Quantitative methods using data generated by experts - are based on opinions and judgments of the experts in the field. Their collection and use are subject to clear rules concerning the author and the context in which his/her opinion was expressed. There is also the possibility of consulting the experts asking them to formulate opinions/judgments, predominantly with quantitative content in terms of the analyzed subject. This method includes dynamic modelling, simulation, etc.

Method of unassisted judgments - or intuitive analysis (phrase disavowed by Heuer for its lack of rationality from the definition of intuitive) - includes judgments based on: evidence; critical thinking; historical experiences (prior); case study; analogy. This method usually involves an individual effort and ideas remain in the analyst's mind until development of analysis. That is, basically, the distinguishing feature of the method.

Structured analysis - Uses structured techniques to mitigate the adverse impact caused by the cognitive limitations and pitfalls known in the analysis. The distinctive feature is that structured techniques externalize and break mental processes in a way that allows their review and criticism by other analysts.

Structural analysis can be performed in relation to the context and data held by a number of specific techniques, grouped in *Imagination Tehniques* (Structured Brainstorming, Simple Scenarios, Alternative Futures Analysis, Quadrant Crunching and Multiple Scenarios Generation), *Diagnostic Tehniques* (Key Assumptions Check, Cronologies & Timelines, Delphi Tehnique, Multiple Hypotetheses Generation, Analysis of Competing Hypotheses, Colaborative Analysis of Competing Hypotesis, Indicators Validator and Risk Analysis) and *Reframing and Challenge Tehniques* (What If? Analysis, Outside-in Thinking, Red Hat Analysis, The Pre-Mortem Assessment, High Impact/LowProbability Analysis, Deception Detection, Team A/B Analysis and Devil's Advocacy).

3.2 Scenarios method - alternative

Scenario analysis serves three important purposes: sees into the future and tries thereby to anticipate events and to understand the risks; it is a source of original ideas, identifying strategic options to which no one may have thought; helps managers to leave the routine mentality circle and to acknowledge the existence of possible futures, other than those derived by simple extrapolation of the present.

The following eight-step methodology for the analysis through scenarios is based on the qualitative approach. It is centred on the need to generate possible future scenarios, each representing a coherent vision, expressed as a theme (such as "demographic decline", "staff professionalization" etc). It uses two central concepts to generate scenarios and their application to the company concerned, namely, "determinant factor" and, accordingly, "determined factor".

Determinants are predictable and expected or predictable and unexpected future events in the economic reality. Determined factors reflect possible changes in the external or internal environment of a company created by the determinants. For example, a determinant factor that could be an interest rate increase would generate a determined factor that could be the increased cost of capital, probably doubled by a decrease in demand and a decline in investment.

Determinant and determined factors do not have a bi-univocal relationship. A determinant factor may affect the company in many ways and a determined factor can vary as effect of action of multiple determinants. Thus, the increase in interest rates will have an impact on at least three determined factors – such as increased borrowing costs, reduced investment and lower demand - and several determinant factors - such as economic growth, lower taxes and changes in the consumer preferences - can influence only one determined factor - the demand, in our case.

Step 1 – "Analysis of the environment in which the company operates" – first step in the analysis using multiple scenarios is to develop a broader characterization of the environment in which the company operates. Although the approach is qualitative, the macroeconomic performance of the state and region, estimates of the GDP, statistics on the macroeconomic developments and economic sector in which the company operates are considered. Rating agency assessments for the country and those made among other investors in the field in question, are also subject of interest. A comprehensive analysis at this level can be achieved by using the PEST analysis (acronym of Political, Economic, Social and Technological).

Thus, the following are considered: the *policymakers* that can influence economic activities (economic legislation, tax policy, labour law, political stability, legislative stability, etc.), *economic factors* (economic cycles, trends in GDP, interest rates, liquidity in the market, inflation, unemployment, energy costs, etc.), *social factors* (demographics, income distribution, social mobility, education, consumerism, attitude to work, etc.) and *technological factors* (level of research, grants for innovative technologies, the rate of technology obsolescence in the sector concerned, the speed of technology transfer, etc.).

Step 2 – "Analysis of market and competition" – knowledge of the market environment is essential to identify opportunities and constraints faced by the company.

Analysis of the market in which the company operates can be achieved by using the model of five forces proposed by Michael Porter (1980). Forces proposed for consideration are the following:

- *rivalry between existing firms* – concentration, increase, differences between products, fixed costs relative to value added, market exit barriers;
- *barriers to those seeking to enter the market* – economies of scale, brand identity, differences between products, access to distribution, government policies;
- *bargaining power of buyers* – concentration of bargaining power of buyers, the awareness of buyers, product substitutes, the ability to produce their own product, price compared to the total expenditure for procurement;
- *bargaining power of suppliers* – concentration of bargaining power of suppliers, the volume of suppliers' production, product differences, brand identity;
- *threat of substitute products/services* – number of alternatives, economic efficiency of alternatives, forwarding costs, customer price sensitivity.

The main benefit of applying this technique is that it provides a framework for the analyst's thinking in the competitive environment. Some issues may be particularly more relevant to that sector than others. It might prove useful that two or more teams of analysts to make independent assessments and subsequently to adjust them by contradictory talks.

It can also be useful to do more analysis with reference to the market as a whole, then by specific sections, and subsequently introducing variables with predicted future development.

For correct positioning, a detailed and specific analysis of the category of "rivalry" in the field of the five forces must be undertaken, by drawing an accurate profile of each of the company's major competitors. Analysis at this level will aim to understanding the strategies, predicting the likely reactions and assessing the capacity to collect, process and analyze, in turn, information to increase the competitive advantage.

Step 3 – "The diagnostic analysis of your own company" – even if the scenario analysis is focused mainly on the external environment and not on the company, before developing scenarios it is still important to prepare a profile of the company business. The person developing the scenarios has thus the opportunity to have the most relevant determinant factors. Company profile should contain at least: cost analysis by company activities and connections both upstream and downstream, i.e. suppliers and customers; identification of the company competences; financial, technological and marketing data; data concerning the human resources; major strategies, organizational culture and leadership style; mission and objectives.

Step 4 – "Development of scenarios" - it is advisable to develop at least three scenarios. One of them shall be based on the implications of the current economic trends. The other should describe possible alternative visions of the future. Thus, the scenarios are described in terms of determinant factors as they were revealed in the first three steps. A list of determined factors is developed for each scenario - correlated with the determinants - and their strength is estimated as probability of occurrence and strategic importance. Each determined factors a designation that could be the first letters of the alphabet (A, B, C, D. ..).

It is important not to choose three scenarios characterized as optimistic, neutral and pessimistic because these titles are merely placing an error range around the neutral scenario. The scenarios are derived from determinants and we can vary the estimates for their evolution on a scale as broad as possible.

Step 5 – "Estimating the determined factors for each scenario" – involves the development of a matrix that has the main determined factors in the first column (may be cost, level of competition, nature of competition, market prices, opportunities for expansion, demand for a particular product/service, etc.) and on the first row the name of the scenarios developed, numbered from 1 to "n". At the intersection of each row with a column it is recorded the analyst's estimate on the evolution trend (increases slowly, constantly, decreases rapidly, etc.) for that determined factors in the scenario in question.

Step 6 – *"Scenario matrix"* – it is a graphical transposition of the estimates already made. On the abscissa is the strategic importance and on the ordinate the likelihood of occurrence, with values from low to high. We raise perpendicular lines from the two points with the "high" value and results in a rectangle. We divide this rectangle into four quadrants, we number them (I-IV) clockwise from the one with the highest values and we obtain the basis of scenario matrix.

Take each factor in the context of each scenario and place it on the chart. Let's say that we take the determined factor "A" in the context of the scenario "1". We estimated at Step 4 what happens (increases slightly, decreases fast, remains constant, etc.) in this context, and the analyst must now assign a value to this information, between "low" and "high" on the "strategic importance" axis and one on the "probability of occurrence" axis. Afterwards, place the item "A1" in the scenario matrix. Resume for each pair and place in the matrix.

Step 7 – *"Choosing the most likely scenario"* – the factors considered as applying to the most likely scenario and with the highest level of strategic importance are in the rectangle numbered "I" and in the area immediately adjacent. The factors in this rectangle will certainly be a combination of factors of two or more original scenarios. List the factors in the rectangle "I" and they are the basis for further processing. Practically, a new scenario is outlined, which may contain contradictions, but this is not unusual given that, at this level, we already have the prospect of a futures and not a likely future.

Step 8 – *"Development of contingency plans"* – means virtually development of plans including measures to be taken in the event of simultaneous or concurrent occurrence of the problems that are found in quadrant "I".

In addition, the factors appearing in quadrant "II" should not be neglected. They are not seen as likely, but if they manifest, their strategic importance can lead to serious consequences.

There can be no assurance that the deviation from the chosen scenario will necessarily go towards the contingency plans, but development of such plans creates favourable conditions to a favourable reaction for addressing a situation that can be catastrophic.

4. Conclusions

Competitiveness by intelligence assumes that companies are able to develop effective competitive strategies only if they benefit of analysis, estimates and evaluations made through processes that add value to the raw information, usually publicly available.

Understanding the forces that influence the future is crucial for an analyst who is interested in improving his/her technique in order to prevent strategic surprises.

Scenario analysis method represents a challenge to the traditional methods, managing to bring on the final list matters that hardly would have been met by other means. Once identified the determinant and determined factors, they can be monitored regularly, and the analysis repeated to update their relations. In addition, alert thresholds can be set, so that, when exceeding preset values to automatically apply sectoral or contingency plans. From the perspective of intelligence analysts, the method presents the advantages of the structural analysis, the analysis process being available for confrontation and evaluation in all its stages.

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THE ROMANIAN CONSUMER PROFILES IN ONLINE BOOKING EMPLOYMENT

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Abstract: *Tourism is considered (WTTC) one of the top three industries as importance in the global economy of the 21st century. With the development of information technology and electronic commerce, the electronic (online) booking seems to be a popular way to facilitate access to certain goods and tourism services via the Internet.*
The literature clearly indicates that online booking vacations, transportation and other services related to tourism package developed and diversified nearly at the same degree with advances made in Information Technology and Communication (ITC).
However, "there are wide variations in online usage levels between different countries … Australian's online usage is 44 % and Spain's online usage is 14% from all transactions" (online-booking from CWT).
Regarding the consumer profile using 'online booking ', the literature does not provide a generally accepted set of evaluation attributes.
In the world is talking today about "Generation Y", in other words about those who have reached maturity in the early millennium. Basically it's about consumers born between 1980 and 1995, hence with ages between 18 and 33 years.
In this context, in our exploratory research we conducted a statistical study on students, tomorrow's economic specialists with knowledge in ITC from minimal to advanced levels.
The hypothesis of the study are: a. Humans with advanced computer skills using the Internet for booking holidays; b. Humans with low ITC skills choose the classical method of booking holidays by contacting a tour company.
The results of our survey showed that the choice of online tools for booking holidays becomes an increasingly used method in Romania but consumers still lack confidence in the online environment. This phenomenon often motivates the consumers to contact a tour company regardless of their ITC skills or travel experience. We also proved that there is no strong connection between people with good ITC knowledge and the employment of online booking as well as between the tourism experts and booking through tour companies.
Our study shows that: on-line booking for Y Generation is not an independent process, but is considered a stage of the process of making reservations for travel packages.

Keywords: online booking; travel website; holydays booking; tourism

JEL classification: L86; M15; M31

Introduction

Tourism is considered (WTTC, WTO, CWT) one of the top three industries as importance in the global economy of the 21st century. This fact is proved by the situation at world tourism economic sector in recent reports WTTC (WTTC). According to this study, the latest annual research from WTTC produced with our research partner, Oxford Economics, shows that 2013 was another successful year for the Travel & Tourism sector

off the back of an improving economy. The importance of this sector as a means of economic growth is argued by the study through a set of key findings:

- In 2013 it directly contributed to the world economy growth by 3.1%, bringing US$2.2 trillion to world gross domestic product (GDP); it also generated 101 million jobs.
- Considering its broader impact, like on various related supply chains, Travel & Tourism contributed to a 3.0% growth within the global GDP, which is higher than the overall economic growth rate, for the third consecutive year. It also overcame global sectors like public services, financial and business services as well as manufacturing, retail and distribution.

The access to tourism services is increasingly facilitated by online booking software, leading to new customer behavior patterns when buying travel services. The development of the information technology and communication (ITC) and the e-commerce, online booking proves to be one of the most popular means of reserving travel services through the Internet.

The online booking software systems are highly utilized in travel related businesses like hospitality, airlines, rent-a-car and others. The online booking services are provided in conformity with specific legal constraints, which generally derive from laws that regulate Internet and e-commerce services, online contracts and payment the electronic signature and online marketing.

Online booking provide its followers with several advantages like: high availability of the service, automatic response for service requests, the ability of comparing different types of service or different service providers and others.

In this work we conducted a statistical study on students with knowledge in ITC from minimal to advanced levels. The hypotheses of the study are: a. Humans with advanced computer skills use online booking for reserving their holidays; b. Humans with low ITC skills choose the classical method of booking holidays by contacting a tour company.

The results of our survey showed that the choice of online tools for booking holidays becomes an increasingly used method in Romania but consumers still lack confidence in the online environment. This phenomena often motivates the consumers to contact a tour company regardless of their ITC skills or travel experience.

The remainder of this paper is structured as follows. In Section 1 we give the background of our work, in Section 2 we formulate the hypotheses of our study, in Section 3 we present the results of the conducted statistical study and finally conclude in Section 4.

1. Background

The literature (Rach et all,2003; Ansah et all,2012; Buhalis et all,2010) clearly indicates that online booking vacations, transportation and other services related to a tourism package developed and diversified nearly at the same degree with advances made in Information Technology and Communication. Nowadays we can find many software systems that allow online booking of tourism-related services, like portals, tour platforms, mobile applications and social networks that integrate online booking facilities.

The share of the potential tourists that use online booking is still relatively low, though increasing. In report from CWT online-booking "there are wide variations in online usage levels between different countries … Australian's online usage is 44 % and Spain's online usage is 14% from all transactions".

In Romania there is no accurate and publicly available centralized and structured information regarding the number of travel service packages sold through online booking per service providers (online revue turismmarket.com). The online booking in the Romanian tourism is still underdeveloped and confronts with various issues. However, for developing such systems with functionalities that answer specific needs implies

accurate knowledge regarding the potential customer's profiles. To the best of our knowledge, the literature and online revue does not provide a profiling of the Romanian potential customers in the tourism sector regarding the online bookings.

Regarding the online booking customer profiles there is no generally employed set of attributes to characterize the profile. In (legi-internet.ro) the authors divide for their study the potential customers of touristic services that use online booking in the following categories:

- Pupils and students, which very often use the information technology in general and represent a consistent share of the specific market;
- Customers with ages between 25 and 50 that use the information technology due to professional reasons;
- Customers with ages greater than 50 which exhibit a low employment of the information technology in general.

In the online revue turismmarket.com the authors use a segmentation of the customers in the tourism sector based on the age at which they gained access to and became familiar with the Internet. More exactly, they refer to a *generation Y*, containing individuals that reached maturity at the beginning of this millennium. Hence, these people were born between 1980 and 1995 and now have ages between 18 and 33. More, the individuals born in this millennium, also called *digital natives,* for which the Internet was always available do not constitute the subject of the present study.

In our approach, accessing online service booking in general regards two dimensions:

- Providing online booking services by organizations like governments and touristic companies and
- The capacity of accessing and using the services by the potential customers.

Within the first dimension there have been made significant progresses (revue online incomemagazine.ro) regarding the improvement of the online booking services. However, regarding the capacity of the customers to access and really use these services, the customers take individual actions to improve their skills of using ITC in general, not especially for making online bookings.

Starting from the described context, in this paper we test the hypothesis of a correlation between the ITC skills of customers that aim at accessing touristic services and the preference of using online bookings.

2. Hypotheses development

In this research we used the structured interview method (Shahzard,2010), more precisely a questionnaire tool. The questionnaire was used to identify the profile of the student that fits mostly the online system for reservation and planning of holidays in Romania.

In our study we achieve through three phases:

1. Exploratory study;
2. Empirical study;
3. Defining requirements / need.

The purpose of this statistical study was the challenge of comments, opinions, suggestions and idea developed in other studies by practitioners and theorists in the field of economic computer science. The study focused on collecting as many ideas and suggestions as possible from the experts participating in the study who were encouraged to express their ideas and opinions freely. At the end of this phase we developed a questionnaire to be completed in a brainstorming session. The ideas of the specialists participating in the meeting were concentrated in items of the questionnaire. In the phase of empirical study we applied the questionnaire.

Table 1: Materials and methods

Type of study	method	Number of participants	Type of who attend	Number of participants
Exploratory study	Brainstorming	4	IT specialists	3
			travel specialists	1
Validation of survey	Poll	107	students	107

The statistical processing of data was performed using SPSS software (version 16.0) and Excel.

The testing of the differences significance among the three groups of participants for a given variable was performed using non parametric tests, a decision determined by the criterion of normality of data variables distribution. Testing the normality of the distribution was made apriori by viewing the histograms of distribution, completed with the Shapiro - Wilks test. To estimate the reliability of the questionnaire, based on the data gathered, we used the following statistical analyzes:

- split-half method - calculating the reliability coefficient of the entire test, we obtained the value $r = 0.80$, and a confidence level $p < 0.04$;
- internal consistency analysis method based on which we calculated Cronbach α internal consistency coefficient, (0.79) which reveals the unitary structure of the employed instrument.

We affirm: the questionnaire should not be modified to test the hypothesis of the study. We remind the hypothesis of the study are:

- H_1. Humans with advanced computer skills use online booking systems to reserve their holydays;
- H_2. Humans with low ITC skills choose the classical method of booking holidays by calling a tour company.

3. Statistical study

The questionnaire was applied to 107 students of the Faculty of Economics and Business Administration, of which 28% men and the remaining of 72 % women. The subjects on whom we conducted the research, are distributed on age groups as follows:

1. 97.2% with ages between 21-30 years;
2. 0.9% with ages between 31-40 years;
3. 1.9% with ages between 41-50 years;

The participants in this study are:

1. 28% students of the Department of Economic Computer Science, thus we suppose that they have advanced IT knowledge and minimum knowledge of tourism; In this group, the subjects studied on average 3.9 years the use of computer, respectively 4.67 years computer programming.
2. 43.9% students of Department of Management, environmental economy so we assume that they have advanced knowledge of IT and minimum knowledge of tourism; In this group, the subjects studied on average 3.64 years the use of computer, respectively 0.51 years computer programming.
3. 28 % students of the Department of Tourism Economy, so we assume they have minimum IT knowledge and advanced knowledge in tourism; In this group, the subjects studied on average 3.5 years the use of computer, respectively 1.20 years computer programming.

The participants in the study say they have a rate of 99.1% knowledge of computer and only 16.8% were certified ECDL, of which 44.4% achieved a very good score, 44.4 % good score and the rest of 11.1% average score.

The participants in the study say that for booking holidays, 52.3% use travel websites, 16.8% travel agencies, 23.4 % other physical methods and 7.5 % other virtual methods. The study continued with the testing of an association between the training of the participants and the instruments chosen for booking holidays. For this purpose, we applied the Shapiro-Wilks test (p=0.000), thus rejecting the hypothesis that the data are normally distributed and we decide to apply the nonparametric test, Kurskal-Wallis test, according to which, in the study

1. There are no significant differences in the way the planning of holidays is made among the study groups (χ^2=3.800, p=0.150). The behavior noticed is that IT specialists and the group of non-specialists in any area prefer electronic instruments for booking holidays, while tourism experts prefer the traditional method, more exactly, they call on a travel agency, but at the same time, they use virtual methods.

2. There are significant differences in the manner in which the assessment of knowledge about tourism web-sites browsing among the three study groups (χ^2= 11.223, p=0.004) is made. In this context, we applied the Mann-Whitney test (U=197.67, p=0.04) according to which there are differences between the group of IT experts and the group of specialists in tourism.

3. There are significant differences in the manner in which the assessment of knowledge about internet browsing among the 3 groups studied (χ^2=28.746, p=0.000) is made. The specialists in computer science have the best knowledge in this field, followed by the specialists in tourism. The analysis continued with the application of the Mann-Whitney test, according to which we obtained significant differences between the group of computer specialists and the group of experts in tourism, namely (U=189, p=0.000).

4. There are significant differences regarding the most convenient method of booking holidays among the 3 groups studied (χ^2=9.223, p=0.04). The specialists in computer science believe that the most convenient method of booking holidays is the websites, and the experts in tourism believe that both virtual and classical method are convenient. In this context, we applied the Mann-Whitney test (U=197.67, p=0.04), according to which there are differences between the group of IT experts and tourism experts.

The study shows that people with advanced knowledge of ITC use virtual instruments for booking holidays, but they also call on agencies. So, the hypothesis of the study is partially fulfilled, namely that people working in IT are tempted to use the internet to find the best deal for their holidays, but do not give up on specialists in the field, namely the travel agencies. The behavior of the specialists in tourism is that they prefer the combined method, more exactly they call on travel agencies, but at the same time, they use travel web-sites to book a holiday. Non-specialists in any field have no behavior to draw attention; they often identify with tourism experts and IT experts.

Conclusions

In this work we proposed a profiling of the Romanian customer that aims at accessing touristic services through online booking.

The conclusion of our survey reveals that the choice of online tools for booking holidays becomes a method increasingly used in Romania but still lack confidence in the online environment.

This lack of confidence will cause often call a tour company regardless of their IT knowledge and / or travel.

We cannot conclude strongly that people with good knowledge of IT use only the Internet and tourism experts use tourism companies, is a situation means that a minimum level of ITC skills will allow virtual instruments along with the services provided by Travel Company.

This work represents a start-point in the effort of better profiling the Romanian customers that use the online booking software systems in the tourism and travel sector.

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DETERMINANTS OF TOURIST INFLOWS TO ROMANIA: EVIDENCE FROM AUGMENTED PANEL GRAVITY MODEL

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Abstract: The strategic importance of tourism sector for economy is well appreciated. Compared to the direct competitors, the Romanian tourism is not very successful. As a transition economy, Romania tries to stop the deterioration of the tourism sector and seeks the ways to reach a rigorous position in the international tourism market. Therefore, in order to develop the sector in a most planned and controlled manner, it is important to determine the factors which have impact on Romania's tourist inflows. In this paper, it is aimed to investigate these effective factors based on a panel gravity model framework for the period of 1993-2013. Though the results are sensitive to the specification of the model both in terms of the significance and sign of the coefficients, all variables (i.e. the economic size, distance and dummies) seem to have significant effect on tourist inflows to Romania.

1. Introduction

Even though it is an ancient phenomenon, it is widely accepted that as an economic activity tourism begun to attract more attention in the second half of the 20th century, more precisely after World War II. It seems that increasing economic prosperity, quick development of transport and some other factors (such as, improvement in working condition and communication, change in labor-leisure preferences) contributed to this case (Matias, 2004; 4). Tourism is one of the most rapidly growing sectors in the world. Global tourism flows and tourism receipts show a stable increase in recent years.

Despite the fact that global tourism demand fallen significantly under the influence of an extremely volatile world economy (financial crises, commodity and oil price rises and sharp exchange rate fluctuations)for many developing countries it is still one of the main income sources and the number one export category, creating much needed employment and opportunities for development (UNWTO, 2009). According to World Tourism Organization (UNWTO) data, with an additional 39 million international tourists, up from 996 million in 2011, international tourist arrivals surpassed 1 billion (1,035) for the first time in history in 2012. On the other hand, international tourist arrivals to Europe, the most visited region in the world, were up by 3% in 2012 and total arrivals reached 534 million. The sub-region of Central and Eastern Europe (7%) experienced the best result (UNWTO, 2013; 7).

Tourism can be considered as an invisible export item which has considerable impacts on the balance of payments. In this respect, tourism is a good and service exporting activity done in retail prices. Automation and mechanization ability of the sector is quite low while employment/investment ratio is high in general. Tourism, because of its stimulant effects, also causes to production, employment and income enhancement in

other sectors directly or indirectly (Kozak *et al.*, 2000). Micro and macro externalities which tourism had and its growth potentials urge most countries to obtain bigger part from the global tourism market. This makes it crucial to determine the factors those effective on tourist inflow in a country.

The recognition of the power of tourism as a driver of economic growth, a tool for development and a provider of employment, is raised the importance of the sector especially for developing countries, and Romania is not an exception. As revealed by Zaman *et al.* (2010) as the finding of an input – output analysis, tourism has a great impact on the national economy in Romania.

Table 1. Tourist inflow and tourism revenue of Romania and nearby countries.

Country	Tourist inflows (Million persons)			Tourism revenue (Billion USD)		
	2011	2012	% Change	2011	2012	% Change
Turkey	34,654	35,698	2,7	25,054	25,916	3,3
Austria	23,012	24,151	4,9	19,860	18,894	-5,1
Russian Fed	22,686	25,736	13,4	11,328	11,187	-1,3
Ukraine	21,415	23,013	7,5	4,294	4,842	11,3
Greece	16,427	15,518	-5,5	14,623	12,879	-13,5
Poland	13,350	14,840	11,2	10,683	10,938	2,3
Hungary	10,250	10,353	1,0	5,580	4,845	-15,2
Czech Rep	9,019	8,908	-1,2	7,628	7,035	-8,4
Bulgaria	6,328	..	..	3,967	3,748	-5,8
Slovenia	2,037	2,156	5,8	2,717	2,577	-5,4
Romania	*1,515*	*1,653*	*9,1*	*1,418*	*1,467*	*3,3*
Slovakia	1,460	1,511	3,4	2,429	2,299	-5,6
Serbia	764	810	6,0	992	906	-9,5
Bosnia&Herzg	392	439	11,9	643	603	-6,6
Belarus	116	119	2,3	487	664	26,7
Rep Moldova	75	89	18,6	195	213	8,5

Source: United Nations-World Tourism Organization (UNWTO), 2014.

Romania is considered by both Romanian and foreign specialists a country with high tourist potential, which could compete with any other country in the world in what concerns the wealth of tourist resources. Romanian tourism sector, however, witnessed a sharp deterioration in recent decades. In order to stop this negative process National Tourism Authority – NTA, launched a strategy project for 2007 – 2013.

This paper aims to investigate the determining factors of tourism demand based on a panel gravity model framework in the case of Romania in which the economic size, population and distance are considered as key variables. This is not the first attempt for the empirical evaluation of the demand for Romanian tourism sector. In a recent paper Surugiu *et al.* (2011) investigated the determinants of the tourism demand towards Romania in a similar manner. This paper, however, differs from their analysis in several aspects: the time span is longer (from 1993 to 2013), the sample is larger (36 countries) and the set of explanatory variables is richer.

The paper is organized as follows. A brief description of Romanian tourism sector is given in the next section. Employed methodology, data and variables used are described in

Section 3. Empirical findings are presented in Section 4. The paper concludes in Section 5.

2. Tourism Sector in Romania

There is nearly an agreement upon the idea that Romanian tourism sector has been in a recession for a long time. Okech and Nedelea (2010) assert that the deterioration started with the communist national isolation and its collapse has not brought the supposed good changes and today the Romanian tourism sector falls behind the neighboring countries. Romanian tourism industry passed through its ups and downs, tourism demand being strongly affected by the economic, social, political, environmental factors (i.e. fall of communism, transition period to the market economy, poor image abroad, environmental phenomena as floods or heat wave, avian fluenza). Starting with the 90's, Romanian tourism industry entered in a new era, mostly marked by significant decrease in tourism demand. Romanian tourism market became volatile and tourism demand more sensitive to market changes. The slow process of privatization, low investments, decreasing in standard of living and purchasing power, poor management, lack of tourism policies, strong competition of other tourist countries (i.e. Bulgaria, Turkey, Greece, Austria, Italy), low standard in services which do not satisfy the tourists' expectations, insufficient promotion were other causes that have reduced substantially Romanian tourism activity and tourism demand (Surugiu et al., 2011; 135). Moreover after 1989 due to low income level, a restructuring of the consumption priorities took place and this was not in favor of tourism (Okech and Nedelea, 2010; Gina-Ionela and Florina-Iuliana, 2011). The strategy to promote Romania's tourism offer was not strongly enough to overcome the weakness of the already formed image of potential travelers. The important tour operators oriented to other tourism markets due to the low quality of services and the unbalance between prices and quality of tourism packages. (Surugiu et al., 2011; 135)

Mazilu (2010) points to the some structural problems such as, the lack of a coherent and stable action program regarding the development of tourism, the lack of funds for the investments for development, modification and rehabilitation of the infrastructure and the inexistence of facilities in the field of bank loans. Also, reformation of the tourism sector started very late and tourism field has not been proved too attractive for the foreign investors.

Travel and tourism in Romania had a different journey for the past 10 years, expressed in international arrivals. Beside a slight increase in 1999 – 4.5 million tourists – arrivals have had a continuous decline until 2001- 2002, when 1.5 million tourists arrived. This was also due to the global economic downturn after the events of September 2001, which negatively affected entire world tourism. After this period there was an impressive growth in 2003, with more than 16%, reaching in 2004 6.7 million tourists, growth that was sustained in 2005 the number increasing by 500 thousand over the previous year. The vast majority of international arrivals in Romania were from 2000, about 95% if the visitors from mainland. Of these, 75% are arrivals from five countries: Ukraine, Moldavia, Bulgaria, Hungary, Yugoslavia. In 2006 the number of tourist arrivals was 6 million while in 2008 it rose to 8.8 million tourists (Florentina et al., 2011; 188).

Florentina et al. (2011) points to three main trends in Romanian tourism: sustainability, ecotourism and the increasing presence of cultural tourism. A quantitative examination reveals that there is an increase in Romanian tourism whereas qualitative concerns point to a setback in the last years. The strategy project for 2007 – 2013 issued by the NTA draws the attention upon the fact that Romania has stopped being an attractive tourist destination in terms of the quality – price ratio. The Romanian government has established that it is extremely necessary to draw-up a tourism development plan for laying the bases for implementing a sustainable approach of tourism development in Romania, by concluding a contact with World Tourism Organization for this action. The Master Plan

includes a 6-years action plan (2007-2013) and financial support through the structural funds to which Romania has access due to its integration in the EU, but refers to tourism development for a period of 20 years, until 2026 (Gruescu *et al.*, 2008).

Table 3. Top-10 tourist sender countries to Romania (as of 2013)

Source	Tourist Number	Source	Tourist Number
1. Hungary	1,443,000	6. Italy	332,000
2. Bulgaria	1,136,000	7. Yugoslavia	322,000
3. Moldova	995,000	8. Poland	300,000
4. Ukraine	794,000	9. Turkey	254,000
5. Germany	448,000	10. Austria	200,000

Source: Romanian National Institute of Statistics.

3. Empirical Model, Method and Data
3.1. Gravity Model Approach
The gravity model belongs to the class of empirical models concerned with the determinants of interactions. In its most general formulation, it explains a flow (of goods, capital, people etc.) from an area to another area as a function of characteristics of the origin, characteristics of the destination and some separation measurement. Customarily the model is estimated in log-linear form (Porojan, 2000; 2).

The gravity model has its origin in Newton's law of gravitation in seventeenth century. Newton's law of gravity in mechanics states that two bodies are subjected to a force of attraction force that depends positively on the product of their masses and negatively on the distance between them. Social scholars, in nineteenth century, applied this law to social phenomena of quite different nature the common character of which was transfers or flows between two or more entities or sources. Thus migration or traffic laws (vehicles, information, tourists etc.) were examined using this "law" (Simwaka, 2006; 6).

Following a specification reminiscent of Newton's gravitation theory, gravity models relate bilateral trade to the mass of these two countries (commonly measured as the size of the countries involved) and the distance that separates them. This standard formulation of the model, which is consistent with standard models of international trade, is commonly extended to include other factors generally perceived to affect bilateral trade relationships. Indeed, the notion of distance does not only relate to the geographical distance (i.e. transportation costs), but also to other factors affecting transaction costs. Besides or instead of distance variable some other variables also can be used, such as a dummy variable for each of the variables of having common language, common border, being in same territory and same free trade arrangement (Bussiére and Schnatz, 2006; 14).

The simplest form of the gravity model can be stated as below,

$$T_{ij} = A \frac{(Y_i \times Y_j)^{\alpha}}{D_{ij}^{\gamma}}$$

(1)

where, T_{ij} is the trade volume between country i and j; A is proportionality constant; Y_i ve Y_j are economic sizes of country i and j (with respect to GNP, GDP or per capita GDP); D_{ij} is the distance between countries. Equation (1) is the core gravity model equation where bilateral trade is predicted to be a positive function of income and negative function of distance. When applied to predict trade flows, population size of both exporter and importer country are often included as variables in the equation, assuming larger populations support and promote larger trade volumes:

$$T_{ij} = A \frac{(Y_i \times Y_j)^\alpha (P_i \times P_j)^\beta}{D_{ij}^\gamma} \qquad (2)$$

After a simple arrangement equation (2) can be written as follow:

$$T_{ij} = A \frac{(Y_i \times P_i)^\alpha (Y_j \times P_j)^\beta}{D_{ij}^\gamma} \qquad (3)$$

If for the both side logarithms are took, the equation becomes linear:

$$T_{ij} = A^* + \alpha \log(P_i \times Y_i) + \beta \log(P_j \times Y_j) - \gamma log D_{ij} + \varepsilon_{ij} \qquad (4)$$

where, A^* is *log A*, and α, β, and γ are parameters to be estimated. ε_{ij} is a white noise error term with constant variance and zero mean, and stands for to represent the random factors those effect bilateral trade.

Now trade flows are defined as a function of per capita GDP in two countries and the distance between these countries. Since there is no deviation in ($P_i \times Y_i$) with respect to the various importer countries, thus it cannot be a source of explanation for trade deviations to those importer countries, and hence can be dropped from the equation (Bos and van de Laar, 2004; 5). The estimable model can be written as;

$$T_{ij} = A^* + \alpha \log Y_i + \beta \log P_i - \gamma log D_{ij} + \varepsilon_{ij} \qquad (5)$$

Trade theories based upon imperfect competition and the Hecksher-Ohlin model justify the inclusion of the core variables – income and distance. Most studies have however, included additional dummy variables to control for differences in geographic factors, historical ties and at times economic factors like the overall trade policy and exchange rate risk (Batra, 2004; 4).

Aforementioned gravity type models have achieved increasing recognition in the analysis of economic phenomena related to the flow of goods and services. In this respect it was also applied to the various aspects of tourism (see for example Durbarry, 2000; Batra, 2004; Matias, 2004; Gil-Pareja *et al.*, 2007).

The vast majority of the empirical papers on international tourism in the literature are divided into two main types. The first consists of papers that use modern time series and co-integration techniques in an attempt to model and forecast the dependent variable, between one or several pairs of countries. The second type includes papers that estimate the determinants of international tourism flows using classical multivariate regression framework (Halıcıoğlu, 2004; Eita and Jordaan, 2007). The gravity model approach used in this paper can be counted in the second class.

3.2. Model, Variables and Data

The models encompass the core explanatory variables of gravity model that is economic size, population and distance. It should be said something about the variables.

The variables that best measure the economic size are GDP and GDP per capita. With respect to the economic size of the origin country it seems evident that, the wealthier the country the larger the number of tourists. Additionally, since international tourism is a normal good in consumption (and, for most people, a luxury one) per capita income of the origin country should also have a positive effect (Gil-Pareja *et al.*, 2007). Assuming that tourism is an individual activity, it may be more plausible to use the per capita GDP instead of GDP itself. Because the former reflects the purchasing power more. Nevertheless, we have set two separate version of the model whether GDP or per capita GDP is used accordingly.

The most controversial part of gravity model is, probably, the determination of geographical distance. Some claim that this distance would preferably be the one between commercially important cities of the countries or the distance between capital cities. But, at global scale this choice does not make so much difference. Definition of the distance is also problematic, due to its time invariant nature. Although it is not a problem in cross sectional analysis, when time dimension entered in the analysis (i.e. time series regression) the variable causes to trouble. In order to overcome this difficulty and to make the distance a *varying variable* over time, various approaches have been suggested in the literature. These approaches suggest weighted definitions of distance. Following Head and Meyer (2002) the distance we adopt in this paper is defined as;

$$WDIST_{ij} = \sum_{k \in i}(POP_k/POP_i) \sum_{l \in j}(POP_l/POP_j)DIST_{kl} \qquad (6)$$

where, *WDIST$_{ijt}$* is the weighted distance between the countries *i* and *j* at year *t*; *dist$_{ij}$* is the geographical distance between the countries *i* and *j*; *GDP$_{it}$* is GDP of the country *i* at year *t*; and $\sum GDP_i$ is overall sum of the GDPs of the countries for the years 1993 up to 2013.

Based on the distinction as to represent economic size and regarding the fact that a regression equation is sensitive to its content we have estimated ten alternative balanced panel-data models as below.

Model I: *ln TA$_{it}$* = α$_0$ + α$_1$ *ln GDP$_{it}$* + α$_2$ *ln WDIST$_{it}$* + ε$_{1t}$
(7)

Model II: *ln TA$_{it}$* = α$_0$ + α$_1$ *ln GDP$_{it}$* + α$_2$ *ln WDIST$_{it}$* + α$_3$D$_1$ + ε$_{2t}$
(8)

Model III: *ln TA$_{it}$* = α$_0$ + α$_1$ *ln GDP$_{it}$* + α$_2$ *ln WDIST$_{it}$* + α$_3$D$_2$ + ε$_{3t}$
(9)

Model IV: *ln TA$_{it}$* = α$_0$ + α$_1$ *ln GDP$_{it}$* + α$_2$ *ln WDIST$_{it}$* + α$_3$D$_3$ + ε$_{4t}$
(10)

Model V: *ln TA$_{it}$* = α$_0$ + α$_1$ *ln GDP$_{it}$* + α$_2$ *ln WDIST$_{it}$* + α$_3$D$_1$ + α$_4$D$_2$ + α$_5$D$_3$ + ε$_t$
(11)

Model VI: *ln TA$_{it}$* = β$_0$ + β$_1$ *ln GDP$_{it}$* + β$_2$ *ln WDIST$_{it}$* + u$_t$
(12)

Model VII: ln TA$_{it}$ = β$_0$ + β$_1$ *ln GDP$_{it}$* + β$_2$ *ln WDIST$_{it}$* + β$_3$D$_1$ + u$_t$
(13)

Model VIII:$\ln TA_{it} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln WDIST_{it} + \beta_3 D_2 + u_t$
(14)

Model IX: $\ln TA_{it} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln WDIST_{it} + \beta_3 D_3 + u_t$
(15)

Model X: $\ln TA_{it} = \beta_0 + \beta_1 \ln GDPPC_{it} + \beta_2 \ln WDIST_{it} + \beta_3 D_1 + \beta_4 D_2 + \beta_5 D_3 + u_t$
(16)

where *TA* is number of tourist arrivals from sampled countries, *GDP* (gross domestic product) and *GDPPC* (GDP per capita) are proxies for economic size of the source country, and *WDIST* is a weighted measure of the distance between source countries and Romania. In this paper, considering the data availability, we have employed a balanced panel of 36 countries and time span of 21 years (1993 – 2013). The GDP data were gathered from the World Bank's online database of World Development Indicators, tourism data from website of the Statistical Institute of Romania, and distance data from CEPII.

Additional to the core variables of the traditional gravity model, three dummy variables were also included in the regression equations. The first one (D_1) denotes the impact of ideological proximity which takes the value of unity if the host country was a member of abolished Warsaw Pact. The second dummy (D_2) denotes the impact of being EU membership, and the third one (D_3) stands for the impact of religious proximity, i.e. Orthodox Christianity, on the touristic destination choice.

4. Empirical Findings

Descriptive statistics for the variables being used are presented in Table 4.

Table 4. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Lnntour	756	10.515	1.994	4.615	14.772
Lngdp	756	11.746	1.933	7.639	16.490
Lndist	756	7.109	0.624	5.866	9.091
lngdppc	756	9.495	1.133	6.346	11.382

Levin, Lin and Chu, Im, Pesaran and Shin and Fisher unit root tests are given in Table 5 for the variables being used. Results in Table 5 show that all of the variables are stable on the level, in other words, they have no unit roots.

Table 5. Unit root tests

Variables	Levin, Lin and Chu (t stat.)	Im, Pesaran and Shin (W-t stat)	Fisher (χ^2 stat.)
Number of tourists	-4.051*	-1.872**	118.190*
GDP	-9.136*	-2.101**	128.286*
GDP per capita	-8.657*	-2.287*	124.447*

* and ** denote the significance at 1% and 5% respectively.

Table 6 presents Feasible Generalized Least Square (FGLS) estimators for the modeling of the number of tourists visiting Romania. Dependent variable is the number of tourists visiting Romania from 36 countries. Independent variables used in the panel data model are GDP, GDP per capita and distance across countries. Estimated coefficients of the model are presented in Table 6. Hausman test results in Table 6 indicate that, while

the fixed effects model that by treating the data in a time series and cross-section in the Model 6- Model 10 is suitable, random effects panel model in Model 1-Model 5 is more appropriate (see Table 6). F test reported at the bottom of the Model 6 – Model10 in Table 6 provides a formal test for the pooled model estimator against the fixed effects panel estimator. The result of the F test indicates that the fixed effects panel estimator is important. Panel data models are appropriate to determine factors on the number of tourists visiting Romania. The results of the LM test in Model 1 – Model 5 indicate that the random effects panel estimator is preferred. The Wald test statistics reject the null hypothesis that the parameters in the regression equation are jointly equal to zero in all models.

Tests for heteroscedasticity are the Levene, Brown and Forsythe heteroscedasticity test and Modified Wald test for the fixed and random effects models. The result of the tests shows that our models suffer from a heteroscedasticity problem. Therefore the null hypothesis of homoscedasticity (or no heteroscedasticity) is rejected. Modified Bhargava et al. Durbin-Watson autocorrelation and Pesaran's tests of cross sectional independence tests indicate having autocorrelation and cross-section correlation in both types of models. In both of models, because the heteroscedasticity, autocorrelation and cross-section correlation are exist, FGLS method is used in the analysis. The results of the model in Table 6 demonstrate that, while GDP and GDP per capita has a positive and important effect on tourism demand for Romania, distance variable, as expected, has a negative effect.

5. Conclusion

Although it has not been appreciated adequately until recent years, tourism has become an importance-gaining sector in Romanian economy. Therefore, in regards to develop the sector in a most planned and controlled manner it is important to determine the factors which have impact on Romania's tourist inflow. In this paper we aimed to investigate these effective factors based on an augmented panel gravity model framework in which a number of exploratory dummy variables are used besides the key variables of economic size and distance.

Based on the distinction as to represent economic size we have estimated ten alternative balanced panel-data models. Results are sensitive to the specification of the model both in terms of the significance and sign of the coefficients. If GDP is adopted as a proxy for economic size each variable has a highly significant effect on tourist inflows and its coefficient is slightly below the unit value which means that tourism is not a luxury good. It also worth to note that being a member of EU has a negative effect on tourist number in some specifications. On the other hand, if GDP per capita is used instead of GDP all variables again seem have significant effect on tourist inflows. GDP per capita positively affects the tourist arrivals and its coefficient is quite below the unit value which compared to previous model, more strongly indicates that tourism is not a luxury good. In this latter case distance becomes a significant factor in explaining the tourist arrivals. The ideological, political and religious proximities seem to have positive impact on the tourist arrivals to Romania. Results of the analysis are in accordance with findings of Surugiu *et al.* (2011).

Table 3. FGLS Estimation of the Tourism Demand for Romania

Independent Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	Coef.	z value	Prob.	Coef.	z value	Prob.	Coef.	z value	Prob.	Coef.	z value	Prob.	Coef.	z value	Prob.
LnGDP	0.898	48.000	0.000*	0.931	48.30	0.000*	0.908	51.84	0.000*	1.003	61.93	0.000*	0.994	36.18	0.000*
LnWDIST	-3.031	-54.820	0.000*	-2.797	-54.46	0.000*	-3.016	-51.26	0.000*	-2.936	-56.16	0.000*	-2.809	-34.05	0.000*
D1				1.016	13.18	0.000*							0.677	6.43	0.000*
D2							-0.170	-5.74	0.000*				-0.135	-5.95	0.000*
D3										1.087	13.91	0.000*	0.717	6.75	0.000*
Constant	21.610	88.170	0.000*	19.297	39.89	0.000*	21.518	87.67	0.000*	19.375	51.56	0.000*	18.562	23.98	0.000*
Number of obs.	756			756			756			756			756		
Number of groups	36			36			36			36			36		
Time periods	21			21			21			21			21		
Wald χ^2 test	3023.45		0.000*	8016.43		0.000*	2818.67		0.000*	4931.72		0.000*	3190.91		0.000*
Hausman test (χ^2 stat.)	3.34		0.068	2.44		0.118	1.60		0.192	1.24		0.265	0.765		0.342
LM test stat.	71.22		0.000*	68.88		0.000*	55.33		0.000*	69.06		0.000*	55.37		0.000*
Levene, Brown ve Forsythe test (W50)	7.634		0.000*	7.618		0.000*	7.590		0.000*	7.580		0.000*	7.566		0.000*
Modified Bhargava et al. Durbin-Watson	0.379			0.379			0.384			0.379			0.384		
Pesaran's test of cross sectional independence	15.931		0.000*	15.753		0.000*	14.774		0.000*	15.325		0.000*	14.033		0.000*

* denotes the significance at 1%.

(continued)

Independent Variables	Model 6			Model 7			Model 8			Model 9			Model 10		
	Coef.	z value	Prob.	Coef.	z value	Prob.	Coef.	z value	Prob.	Coef.	z value	Prob.	Coef.	z value	Prob.
LnGDPPC	0.146	2.96	0.003*	0.305	4.60	0.000*	0.113	2.20	0.028**	0.236	3.82	0.000*	0.334	4.62	0.000*
LnWDIST	-1.595	-35.73	0.000*	-1.467	-23.46	0.000*	-1.587	-35.56	0.000*	-1.643	-20.63	0.000*	-1.552	-18.10	0.000*
D1				0.785	8.98	0.000*							0.993	7.63	0.000*
D2							0.113	3.74	0.000*				0.107	3.85	0.000*
D3										0.137	1.150	0.250	-0.328	-1.73	0.083***
Constant	20.583	31.04	0.000*	17.894	36.50	0.000*	20.812	30.85	0.000*	20.019	41.63	0.000*	18.307	27.21	0.000*
Number of obs.	756			756			756			756			756		
Number of groups	36			36			36			36			36		
Time periods	21			21			21			21			21		
Wald χ^2 test	1295.81		0.000*	1398.02		0.000*	1327.47		0.000*	1177.47		0.000*	1102.25		0.000*
Hausman test (χ^2 stat.)	17.36		0.000*	13.09		0.0003*	10.17		0.006*	17.04		0.000*	7.63		0.022**
F test	307.59		0.000*	307.59		0.000*	310.58		0.000*	307.59		0.000*	310.58		0.000*
Modified Wald χ^2 test	4127.64		0.000*	4127.64		0.000*	3447.37		0.000*	4127.64		0.000*	3447.37		0.000*
Modified Bhargava et al. Durbin-Watson	0.363			0.363			0.368			0.363			0.368		
Breusch-Pagan LM test of independence	3684.43		0.000*	3684.43		0.000*	3592.77		0.000*	3684.43		0.000*	3592.77		0.000*

*, ** and *** denote the significance at 1%, %5 and 10% respectively.

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Appendix: Countries included in the sample.

Austria	Hungary	Poland	U. S. A.
Belarus	Ireland	Portugal	Yugoslavia
Bulgaria	Israel	Russian Fed.	
Czech Rep.	Italy	Slovakia	
Denmark	Lithuania	Slovenia	
Egypt	Latvia	Spain	
Finland	Luxemburg	Sweden	
France	Malta	Turkey	
Germany	Moldavia	Ukraine	
Greece	Netherland	U. K.	

THE IMPACT OF LABOUR MARKET INSTITUTIONS ON PRODUCTIVITY IN A SECTORAL APPROACH

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Abstract: *This research paper aims for an empirical validation of the impact of labour institutions on productivity growth. The main objective of this study is to analyse labour and economic growth tendencies of the period between 1980 and 2008 in various OECD countries. In our estimations we followed a specific taxonomy to identify the main features of productivity (output per capita) growth in different labour-skilled branches. Besides determining the sectoral differences of labour demand by standard comparative statistics, we used in our model specification a dynamic panel regression method.*
All in all, we conclude that the high-skilled branches achieved better economic growth performance than the lower-skilled ones in most of the OECD countries. Analysing the time series panel data of these countries we also claim that productivity growth was negatively correlated with unemployment benefits and employment legislation in the long run.

Keywords: labour market institutions, productivity changes, sectoral approach

JEL classification: E25, I23, O43

1. Introduction

The existence of labour economics is justified by the fact that, in industrialized countries, a large proportion of population is made up of wage-earners or those who aspiring to become employees (Cahuc and Zylberberg 2010). Nowadays, labour economics covers a very large range of economic and social problems, such as the causes of labour market imperfections (i.e. unduly low employment, durable involuntary unemployment, unaccepted causes of financial recessions etc.), which have played a greatening role in recent macroeconomic research.

The contribution of labour to economic growth became especially popular in historical research after the rise of human capital theories advocated by Becker (1964) and Schultz (1961) and growth theories first formalised by Solow (1954). Later, the oil-crisis of the 1980s and its consequences eventually revealed that it takes more than just physical and human capital to have economic growth (Földvári and Leeuwen 2007). This made it possible to introduce labour institutions in new theories dealing with endogenous economic growth. However, unlike the neo-classical approach long-run economic growth should be determined within the models rather than being exogenously assumed (Czeglédi 2010).

The perspective of endogenous growth theories claimed that the most important mechanisms by which labour market institutions might affect productivity growth mainly operate through capital accumulation and innovation (Barro and Sala-i-Martin 1997). Meanwhile, the empirical results found that allocation of investment only in capital, education, and technology etc. alone will not produce economic growth (Gwartney et al. 1999).

Recently, serious debates have taken place in an attempt to explain the role of institutions. Labour market institutions are system of laws, norms, or conventions resulting from a collective choice and providing constraints or incentives that alter individual choices over labour (Boeri and van Ours (2008). However, as North (1991) claimed that institutions matter, essentially no clear consensus has yet emerged to answer how they impact on productivity, and also what kind of characteristics they should have in economies.

In this study the relationship between employment and economic growth is examined in the context of new institutional economics. Basically, the structure of labour was stimulated directly by the distribution of employment and/or output growth. Thus, in our estimations the time horizon was also a key determinant. Traditionally, in macroeconomics there are three opportunities. (1) In the short run, because of price rigidity, it is generally accepted that physical and human capital are certainly not fully exploited by economic actors. However, in the long run (2) both of them are fully utilized in the case of price adjustment. However, in the very long run (3) other economic factors, such as technology or institutions, can be also changed.

The main purpose of this study is to investigate a valid relationship among labour market institutions and productivity growth in the very long run. The rest of this paper is structured as follows. In the next sections we will briefly describe the sectoral features of output and employment structure with common descriptive statistics. In our estimations we follow a specific taxonomy to identify the main features of productivity growth in different labour-skilled branches. Then we will carry out a dynamic regression analyses with cross-industry panel data in order to investigate how employment, institutions effects on economic growth per capita. The paper ends with a brief conclusion and some policy implications.

2. Industry structure analysis and taxonomy

A unique database has been constructed for the analysis of economic and employment growth by the EU KLEMS (2003) Project. This project aims to create a database, which include measures of output, productivity, employment creation, capital formation etc. at the industry level for OECD countries from 1970 onwards. The last (March 2011) release of the KLEMS database provides data up to 2008 for a limited set of variables in different industries. Hence, in our estimations we should use the given time series of gross value added (GVA) in constant (1995) prices. The gross value added is often used in economics as the value of goods and services produced in an industry or sector of an economy. Basically, GVA is equivalent to output (GDP) less intermediate consumption. The numbers of persons engaged in 56 industries were separated by the Indicators of activities for Industry and Services, based on ISIC Rev 3. In our estimations we also need the share of investment within output for each OECD country, which is available from the Penn World Table (PWT), included in Heston et al. (2006), and the data of labour market institutions from the OECD (2014) database.

A large number of variables can help to determine and explain industrial growth performance. In our estimations we followed a specific taxonomy to identify the features of productivity growth tendencies. This approach focused on general labour skills and was defined by standards of educational attainment. The skill levels in Eurostat are based on the International Standard Classification of Education - 1976 (from ISCED 0 to 6). However, our taxonomy distinguishes four groups ranging from high to low-skill intensive branches that were introduced by van Ark et al. (2003:61).

This section looks at the economic performance in the EU-15 members contrasted with other OECD countries during the periods of 1980 to 2008. Our analysis begins with an

examination of employment growth, which is one of the indicators most readily associated with increases in productivity growth.

Figure 1. Average employment growth rates (%) of OECD countries in each different labour skilled group, 1980-2008
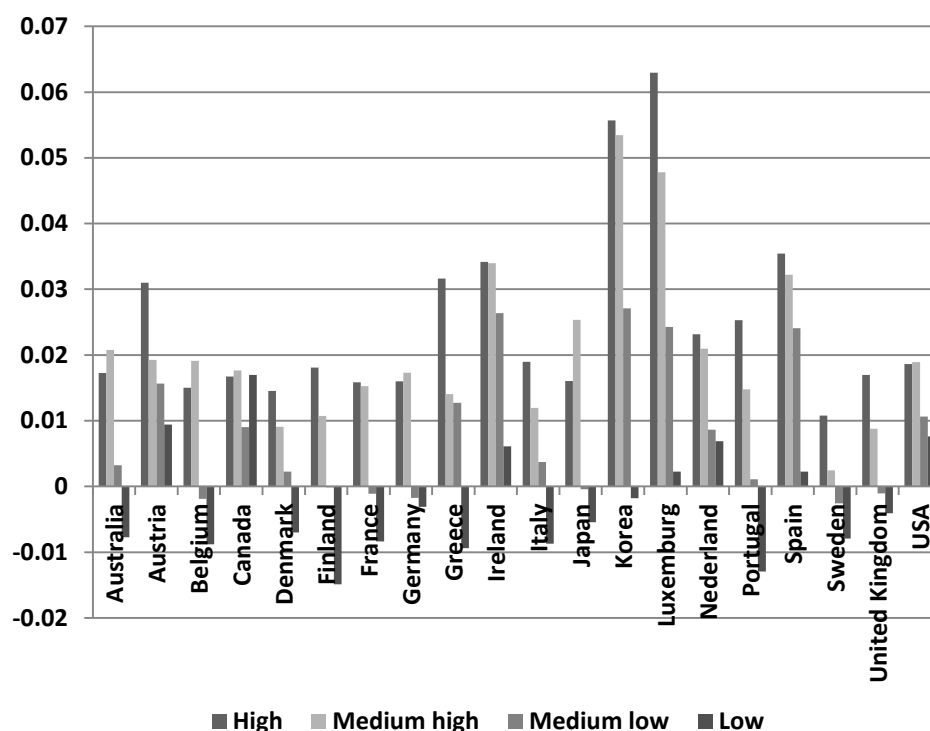
Figure 1. and 2. reflect employment growth rates in the same industries and time periods. The average annual employment growth rates in the high-skilled branches (HS and HIS) in all examined OECD countries were higher than in the lower skilled ones. This might anticipate an increasing role of human capital in labour demand. Moreover, in some smaller EU member states, such as in Cyprus and Slovenia, there was a larger proportion of employment growth in the high-skilled industries than the EU-15 averages. Furthermore, the employment growth was negative in the low-skilled (LS) sectors in several OECD countries. The only exception was Malta, in the period 1995-2008.

Figure 2. Average employment growth rates (%) of new EU countries in each different labour skilled group, 1995-2008
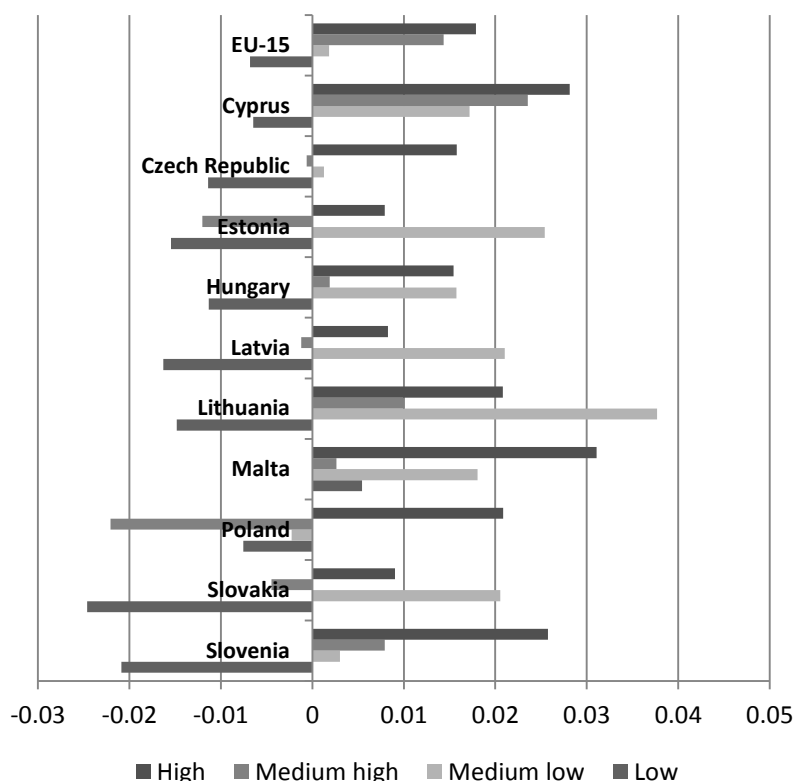
Source: own calculation based on EC KLEMS (2014).

The industry structure should be described by using the distribution of output and employment to aggregate level of OECD countries. Table 2 represents value added (GVA) and employment shares of aggregate output over three years (1980, 1997 and 2008). In 1980, the majority proportion (59%) of economic growth stemmed from the LS and LIS sectors, but particularly by 2008 it decreased to 48%. However, the total distribution position differs across the OECD, we conclude that the high-skilled branches have achieved better economic growth performance than the lower skilled ones. When we estimated employment growth, the same tendencies of sectoral shifts also seemed to appear. Though, the employment share obviously increased in the HS and HIS branches (from 40% to 47%), the decreasing labour demand for low-skilled workers was still higher than in our estimations.

Table 2. Output and employment distribution of OECD countries in each labour-skilled sector

GVA(Output)	High	Medium high	Medium low	Low
1980	32.60%	8.17%	31.87%	27.36%
1995	36.56%	9.96%	32.25%	21.23%
2007	43.39%	14.52%	24.75%	17.34%
Employment	**High**	**Medium high**	**Medium low**	**Low**
1980*	24.96%	12.24%	32.90%	29.91%
1995	28.88%	13.83%	31.65%	25.64%
2007	31.86%	15.09%	29.87%	23.18%

Source: own calculation based on EC KLEMS (2014).
Notes: *except CYP, CZE, EST, HUN, LTU, LTV, MLT, POL, SLK and SLV

3. An empirical approach of dynamic productivity changes

In the neo-classical growth models, from the 1950s by Solow (1956), no special attention was given to institutions. Basically, it was argued that the growth of physical and human capital had an effect on the growth of GDP while the unexplained residual, labelled Total Factor Productivity (TFP) could not be measured directly. TFP is a 'multi-factor' variable, which accounts for effects in total output that can be taken as a measure of technological changes of economy and also the impact of institutions.

First, we focus on a well-known economic growth model promoted earlier by Mankiw et al. (1992). Our starting point is a Cobb-Douglas production function, so production at time [t] can be written as:

$$Y_t = (A_t L_t)^{1-\alpha} K_t^{\alpha} \tag{1}$$

The notation is standard, where [Y] represents output, [A] is the variable of 'total factor productivity', [K] and [L] are capital and labour. Thus, we assume a constant return to scale and the magnitude of (1-α) should correspond roughly to the labour income share in total GDP, which is close to 2/3 in most countries.

There is an alternative way to express the role of institutions in this model, according to Mankiw et al (1992). First, denote [Y/L], as output per capita, and the logarithm of Equation (1) for the steady state level of productivity. Then, use the rate of investment in physical capital [sk] and the rate of employment growth [n]. We also assume that the technological growth [g] is constant across countries, because [g] reflects primarily the advancement of knowledge and there is no either strong reason to expect also depreciation rates [δ] to vary greatly as well. We also assume that ln[A] = [X], which is in this model a vector that capture the impact of institutions and [e] represents country-specific shocks. Hence, the log income per capita at a given time [t] equals with the following:

$$\ln\left(\frac{Y}{L}\right)_t = \frac{\alpha}{1-\alpha}\ln(s_k)_t - \frac{\alpha}{1-\alpha}\ln(n+g+\delta)_t + \frac{\beta}{1-\alpha}\ln(X)_t + \varepsilon_t \tag{2}$$

Descriptive analysis could only detect the direct contribution of structural shifts at industry level of aggregate growth performance. Nevertheless, our model specification in a sectoral approach offers an important advantage of measuring indirect effects between

labour and productivity. After having demonstrated the existence of a systematic relationship between industrial structure of labour demand and income level, we will examine the impact of labour institutions on economic growth per capita. Taking into account new endogenous growth theories our model includes the lagged dependent variables among the repressors'.

A dynamic specification requires a specific instrumentation of lagged endogenous variables, for which we used the empirically offered GMM estimators developed by Arellano and Bond (1991). These methods employ lagged levels of dependent and predetermined variables, as well as differences between the exogenous variables as instruments.

In our dynamic model specification economy tends toward long run equilibrium. The extent of economic growth generally affects the rate at which output per capita approaches its steady state value. After taking the first differences of the dependent variables of Equation (2), our model assumes the following formula:

$$\Delta \ln Y_{it} = \beta_o + \beta_1 \Delta \ln Y_{it-1} + \beta_2 \ln(s_k)_{it} + \beta_3 \ln(n + g + \delta)_{it} + \beta_4 \ln(X)_{it} + e_{it} \quad (3)$$

Note: Δvar - variable in first differences, Δvart-1 - lagged differences, ln - in logarithm.

The variables refer to the following. The independent variable [Yi,t] is the ratio of a real GVA per capita of country [i] for the period [t] at a constant price (1995). The first dependent variable is the first lag of productivity growth. [sk] is the share of investment within sectoral output and [n] is the average growth rate of labour in each branches. The rate of [g] and depreciation [δ] here assumed to be 0.05, as in Mankiw et al. (1992). We also assumed that labour market institutions were given as cross-country specific variables for each branch. Hence, [X] is a vector, which indicates the impacts of labour market institutions and [e] is the error term.

The long run GDP per capita, the investment ratio, the engaged employment [n] and the institution variables are refer to the period between 1980 and 2008. All in all, we have an unbalanced panel date of 30 OECD countries to measure the relationship between labour institutions and long run output per capita in different labour-skilled branches.

Table (3.) represents the corresponding results for the one-step GMM estimators. Although, the two-step estimator should theoretically be preferred experimentally, but both estimations appeared to produce similar outcomes and we demonstrated the first one to assess the validity of comparisons. In this table we find a valid representation of the relationship between institutions and productivity growth. At the bottom section of this table we presented the results of AR(1) and Wald tests to demonstrate the result of autocorrelation and over-identifying restrictions. The significance levels of these tests in all models suggested that the dynamic specification should be preferred.

The impact of lagged real GVA per capita, however, is not robust in the high- and low-skilled sectors, but in other branches there are significant and positive z-statistics. Moreover as theoretically expected, If we have a continuous time, an increase in the share of investment within GDP [sk] in both sectors claim a positive (pro-cyclical) impact on productivity growth (the only exception is the LS sectors). The lack of significance in this case only means that changing investment does not indicate productivity growth in this branch at a given level of output per capita and other determinants.

According to the neoclassical growth theories, in our estimations, the employment growth attainment is negatively related to the growth of output per capita in the long run. This implies that if employment increases in the high-skill intensive (HS) branches it might affect productivity least of all. Thus, the coefficients range from circa -0.3% to -0.8%.

Table 3. Dynamic panel regression of real GDP (GVA) per capita, 1980-2008

Dependent Variable	Δln(real GVA per capita)$_{it}$							
Independent variables	High (HS)		Medium high (HIS)		Medium low (LIS)		Low (LS)	
constant	−0.385	0.318	**−1.149**	**-0.725**	**−1,192**	**−1.008**	−0.075	0.016
	(-1.49)	-0.77	(-2.81)***	(-1.99)**	(-3.16)***	(-2.02)**	(-0.32)	-0.05
Δln(Y)$_{it-1}$	-0.221	-0.464	**0.479**	**0.281**	0.145	0.184	**0.562**	**0.442**
	(-0.72)	(-1.38)	(3.07)***	(1.81)*	-0.85	-1.1	(4.44)***	(2.08)*
ln(s$_k$)$_{it}$	**0.166**	-0.061	**0.418**	**0.305**	**0.423**	**0.264**	0.045	0.008
	(2.314)*	(-0.45)	(3.13)***	(2.57)***	(3.5)***	(1.66)*	-0.59	-0.08
ln(n$_i$+g+δ)$_t$	**−0.417**	**−0.267**	**−0.813**	**−0.668**	**−0.515**	**−0,509**	**−0.421**	**−0.42**
	(-1.83)*	(-1.52)*	(-5.14)***	(-4.03)*	(-3.89)***	(-3.76)**	(-3.84)**	(-2.51)**
ln(UBs)$_{it}$		**−0.075**		0.005		**−0.051**		-0.006
		(-2.61)***		(-0,23)		(-1.84)*		(-0.28)
ln(EPL)$_{it}$				**−0.725**		**−0.122**		0.049
				(-2.38)**		(-1.76)*		(-0.78)
Number of instruments	60	58	60	55	60	50	60	57
Number of countries	30	30	30	30	30	30	30	30
Wald-test	7.17*	10.48**	26.74***	21.89***	18.18***	18.49***	61.50***	19.51***
AR-test	(-2.83)***	(-2.79)***	(-2.43)**	(-2.41)**	(-3.45)***	(-3.47)***	(-3.45)***	(-3.35)***

Source: own calculation based on EC KLEMS (2014), OECD (2014) and Heston et al. (2006) databases.

Notes: * Heteroscedasticity robust z-statistics are in parentheses. Letters in the upper index refer to ***: significance at 1 per cent, **: 5 per cent, *: 10 per cent. P-values without an index mean that the coefficient is not significant even at the 10 per cent level.

Using our dynamic model specification of Equation (3) we established the impacts of labour market institutions from the available EC and OECD databases. Although the unions, minimum wages, active labour market policies (ALMPs) were tested as well, only the unemployment benefits (UBs) and employment protection legislation (EPL) have significant statistics in our model.

The impact of unemployment benefits according to the theory is not consistent. The UBs protect against uninsurable labour market risks and offer replacement income to workers experiencing unemployment after having lost their jobs. Nowadays all OECD countries have an unemployment benefit system in place. However, in each of them strict legislation and norms operate. In the labour market UBs affect outcomes via three channels (Cahuc and Zylberberg 2010). (1) They increase the reservation wage of recipients because they make workers "choosier" when deciding upon available jobs. (2) They also improve the "fall-back" option of workers and increase wage claims at bargaining. Finally, (3) they induce more people to participate in the labour market insofar as they increase the value of employment over inactivity.

In our estimates we tested the ratio of UBs divided by the sectoral output in different labour-skilled sectors to confirm whether they increase or decrease productivity growth. As we can see our results, the effect of UBs on the growth of productivity does not seem

to be large. The effect of 1% increase in the level of UBs resulted in a decrease of GDP per capita at 0.07 and 0.05 percentage point in the HS and LIS sectors. Although, there is no significant z-statistic in the LS branches, the UBs are obviously controversially correlated with productivity growth in each sector.

The employment protection legislation (EPL) is a set of mandatory restriction governing the dismissals of employees (Boeri et al. 1999). Their main purpose is to increase the volume and stability of employment. Despite this there is an intense debate of their actual effects because of the mixed empirical evidences. Essentially, the EPL regulations may affect the equilibrium level of employment and productivity in different ways. By reinforcing job security, EPL may enhance productivity performance, as workers will be more willing to cooperate with other employers in the development of production process (Akerlof 1984).To the extent that EPL leads to long-lasting work relationships, it may encourage employers to provide training to workers with potentially beneficial effects on human capital and labour productivity. A better skilled workforce may also increase flexibility and finally lead to a better functioning of production activity (Piore 1986). However, if regulation is very strict, as in many European countries, firms may become more cautious about adjusting their workforce with the ultimate effect of reducing labour turnover, e.g. movements from employment to unemployment and vice to versa (Bertola 1992). From our result we stated that an increase in EPL in the OECD countries might reduce productivity growth in both of the high and low (HIS and LIS) labour-skilled sectors.

4. Conclusion

In this paper we had two primary objectives. Our first objective was to analyse economic and employment growth tendencies for the period 1980-2008 in various OECD countries. From our results we claimed that the average annual employment growth rates in the high-skilled branches were higher than in the lower skilled ones. Moreover, from 1980 to 2007 in the HS and HIS branches the employment share obviously increased. These tendencies anticipated an increasing role of human capital over the next decades, but in spite of the decreasing demand for low-skilled workers, it was still higher than in our estimations.

The second objective was to examine the impact of institutions on economic growth per capita. Our dynamic panel regression model yields a valid negative relationship between labour and productivity growth in both sectors. All in all, we found that, the high-skill (HS) intensive branches might affect productivity growth least of all. We claimed also that the changes of unemployment benefits (UBs) and the employment legislation (EPL) is controversially correlated with productivity growth.

As a consequence, ceteris paribus, we consider the following government policies from our model representation. Given that the mainstream macro policies aimed at promoting stable and long run economic growth we could offer to aid the high-skilled employment branches if it will affect the basic economic demand structure. In particular, our analysis suggested that policy makers must try to increase the degree of competition in labour markets; i.e. by motivating the skilled workers to learn more for better productivity growth. Moreover, we believe that lower level of unemployment benefits and less regulated (strict) labour markets are needed for better economic performance.

From this perspective an additional research direction has emerged in this study. We argue that the human capital theoretical perspective is relevant since it extends the achievements and the existing frontiers of macroeconomic and growth theories. Although, these approaches stated that labour highly correlated with output growth in the long run, but they also emphasized that human capital originated resource of economic growth. Recently, serious debates have taken place in an attempt to explain the role of education as they might influence productivity. The effect of human capital on economic growth is

usually reflected by a low positive and significant coefficients {see Barro and Lee (1993), Cohen and Soto (2001) etc., except in the famous study of Benhabib and Spiegel (1994)}. However, our empirical findings could only demonstrate the relationship between only few labour institutions (UBs, EPL) and productivity growth in the long run, since there is currently no unambiguous evidence to identify the impact of other ones, such as ALMPs, labour unions, tax wedges etc. on output per capita in different labour-skilled sectors. Hence, further research in these approaches could be fruitful as well.

5. Acknowledgements

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AN INVESTIGATION OF COINTEGRATION AND CAUSALITY BETWEEN INVESTMENTS, EXPORTS, OPENNESS, INDUSTRIAL PRODUCTION AND ECONOMIC GROWTH: A COMPARATIVE STUDY FOR THE EAST EUROPEAN COUNTRIES

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Abstract: *The study of the economic growth has old implications. An analysis of relevant literature shows that there is a series of empirical studies that have analysed, tested and explained the correlation between the dynamics of exports, investments, the openness of economies and the process of economic growth. This paper examines the role of investments, export and openness in relation to economic growth for 10 East European countries using quarterly data between 2000 and 2013. Unit root tests were used in order to analyse the stationarity of variables. We have then employed the Johansen Cointegration test in order to identify the existence of a long-run relationship between the variables as well as the Granger causality test in order to test the hypotheses about the presence of causality between selected variables. At the same time VAR and VECM models were estimated for each of the 10 East European Countries; a comparative analysis of the results shows the presence, direction and intensity of the correlation and causality between investments, exports, openness and economic growth.*

Keywords: Granger causality, Economic Growth, Cointegration, VECM and VAR models.

JEL classification: C50, C59

1. Introduction
The economic growth process is one of the most debated aspects in field literature due to the major impact it has on the entire population of a country. This is the reason why the achieving or maintaining of a sustained growth rhythm represents a major objective of macro-economic policies. The concern for the study of economic growth has existed beginning with the representatives of the classical school and continuing with the Keynesists, Neo-Keynesists and the neo-classics. A series of empirical studies has tested the dynamics of the different factors and the economic growth process.

2. Literature review
In this paper we intend to offer a short round-up of the field literature dedicated to the analysis and pattern-making of the phenomenon of economic growth in different EU member countries.

The relationship between export and economic growth has long been one of those areas of international economy and development that have been given special attention in research. Based on a fundamental economic theory, the increase of exports contributes to economic growth through the element called the multiplication effect of foreign trade (Tekin, 2012, p. 869). According to economists Ben-David and Loewy (1998), Hart (1983),

Lal and Rajapatirana (1987) an increase of exports also generates an increase of the degree of economic openness, because the respective economical economies will be capable to absorb more rapidly the technology of the more developed countries. Thus, an increase in the overall productivity of the factors will positively influence the economic growth rate on the long run. At the same time, trade allows for more rapid access to technology, which represents an important factor for a sustainable economic growth (Reppas şi Christopoulos, 2005, p. 931).

Regarding investments, the neoclassical theory favours the increase of the capital stock for the countries that have an inferior level of economic development. The investment sources refer to both the growth of the saving rate and to the flux of foreign direct investment. If the flux of foreign direct investment also implies a transfer of technology, than the process of real convergence will be a sustainable one. In the case of some European Union member countries foreign direct investments sustained the process of economic growth, two of the transmission channels being represented by investments and exports (Marinaş, 2007, p. 12).

The correlation between export dynamics and the process of economic growth, but also the methods of transmitting the effects between the two variables were the subject of a series of empirical studies. Pereira and Xu (2000, p. 63) used the VAR Multivariate Autoregressive model to analyse the effects of export increase on GDP evolution. The hypothesis of growth through exports is the one best supported by the results. In accordance with their model, exports sustain economic growth, the estimation of growth being improved upon by the inclusion of exports as an independent variable. In a similar manner, the economic growth variable represents a cause for exports, if the estimation of the export variable shows a reduction of the forecast error by including the "economic growth" delayed variable. (Marinaş, 2008, p. 279).

Sultan and Haque use in their turn the Granger Causality to investigate the relationship between economic growth, investments and exports, trying to identify the long run relationship between these variables. Using the Johanson Cointegration Methodology, the studies have identified the presence of a long run relationship between investments, exports and economic growth (Sultan şi Haque, 2011, p. 226).

Another important research worth mentioning is the one belonging to Subat (2002). Subat's fundamental objective was to detect the structural characteristics which determine the orientation towards exports. He demonstrated that exports are a cause of economic convergence, the countries with a medium level of development and increasing exports having a higher growth rate than those with lower exports (Subat, 2002, p. 333).

Dritsakis also studied, using the VAR Multivariate Autoregressive Model, the relationship between exports, investments and economic growth in two countries, which were in the process of EU pre-accession, respectively Bulgaria and Romania. The results of the co-accession analysis showed that between exports, investments and economic growth there is a vector of cointegration for the two countries. The Granger Causality tests indicated a strong Granger causal relationship between both economic growth and exports and investments and exports for the two countries (Dritsakis, 2004, p. 1831).

Concerning investments, the effect of foreign direct investment on growth has been debated at large in the field literature. Li and Liu have investigated the impact of foreign direct investment on the economic growth in both developed and developing countries, using a large sample of countries. Their study indicates a strong relationship between

foreign direct investment and economic growth in both developed and developing countries. Moreover, foreign direct investment influences directly economic growth, but also indirectly through its influential factors (Li and Liu, 2005, p. 404). Likewise, Bhandari et al. examine the efficiency of foreign aid and of foreign direct investment in the Czech Republic, Hungary, Latvia, Lithuania and Poland. After the identification of the stationarity of the data series, they used the cointegration test. The result indicates that foreign direct investment, as an independent variable, represents a significant factor which positively affects economic growth in these countries (Bhandari et al., 2007, p. 4).

In the literature dedicated to economic growth, investments and the openness towards international trade have been identified as being determinant for growth. Capolupo and Celi presented the relationship between the openness for trade and economic growth in the sample of former Communist countries before and after the transition from planned centralized economy to market economy, by applying the ordinary least squares method and the panel estimation techniques (Capolupo and Celi, 2005, p. 163). McLean and Shrestha suggest that the relationship between financial openness and economic growth is, at best, weak. They also postulate that the positive impact of foreign direct investment on growth is conditioned by the existence of relatively developed internal institutions as well as of a healthy macro-economic policy (McLean and Shrestha, 2002, p. 700).

We also encounter a series of other studies from the field of economic congruence, which analyse the impact of different influential factors on growth in the Central European and East European countries, respectively comparative analyses between the Central European and East European and EU-15. The results that derive from these studies show that productivity and innovation represent important sources of conversion for both Central and East European countries and initial EU-15 countries (Ark and Piatkowski, 2004, p. 215).

At the same time, Jungmittag draws similar conclusions regarding the importance of investments and technological specialization for economic growth. He concludes, after carrying out the empirical analysis, that besides capital accumulation, the transferable technical knowledge represents a growth force in the process of catching up for candidate countries and newly admitted countries, while for developed countries in the EU the Richardian technology is more important (Jungmittag, 2004, p. 247).

3. Data and methodology

In order to investigate the causality between the nominal GDP (LGDP), direct investments (LDI), export (LEXP)/openness(LGDE) and industrial production (LIP) we used quarterly deseasonalized data in log for 2000:1 – 2013:1 collected from the Monthly Bulletins of the Romanian National Bank and the INSSE Tempo Online series, available online on the Romanian Statistics Institute's website. The general objective is to estimate the long run relationship between economic growth, foreign direct investment, exports/the degree of economic openness, respectively the industrial production in the Central and East European countries with the help of some VAR and VECM models. Based on the results obtained by applying the ADF test for the ten countries, we can deduce the order of integration of the five variables for each country separately. The results are presented in the table below:

Table 1: The order of integration of model variables

	LGDP	LEXP	LDI	LGDE	LIP
Bulgaria	I=0 (10%) I=2 (5%, 1%)	I=1 (10%, 5%) I=2 (1%)	I=2 (1%, 5%, 10%)	I=0 (10%) I=1 (1%, 5%)	I=2 (1%, 5%, 10%)
Czech Republic	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)
Estonia	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (10%) I=2 (5%, 1%)
Hungary	I=0 (10%) I=1 (5%, 1%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)
Latvia	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)
Lithuania	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)
Poland	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)
Romania	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (10%, 5%) I=2 (1%)	I=1 (1%, 5%, 10%)
Slovakia	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)	I=1 (1%, 5%, 10%)
Slovenia	I=2 (1%, 5%, 10%)	I=1 (10%, 5%) I=2 (1%)	I=1 (10%) I=2 (5%, 1%)	I=1 (10%) I=2 (5%, 1%)	I=1 (10%, 5%) I=2 (1%)

Source: drawn up by the author

According to the data in the table above, it can be observed that seven of the nine analysed countries are characterized by an order of integration of 1 for the three levels of signification. The exceptions are Bulgaria, Hungary and Slovenia whose GPD becomes stationary in the initial structure for a level of signification that equals 10% in the case of Bulgaria and Hungary, respectively as a result of applying the level 2 difference for the three levels of signification in the case of Slovenia and for the levels of signification equalling 5% and 1% for Bulgaria. In the case of the export variable, all ten analysed countries are level 1 integrated for a level of significance of 10% respectively 5%, and regarding the significance level of 1, only in the case of Bulgaria and Slovenia it is necessary to apply the level 2 differences in order to stationarize the series. In what foreign direct investments are concerned, in nine of the analysed countries we encounter a level of integration of 1, except for Bulgaria, which becomes stationary as the result of applying the level 2 difference for all three levels of signification. We have a similar situation in the case of the degree of economic openness variable. This variable becomes stationary after applying the level 1 difference, exceptions being Bulgaria, where the variable becomes stationary at its initial level for a level of 10%, respectively Slovenia and Romania, which become stationary by applying the second difference for the levels of significance of 5% and 1% for Slovenia and 1% for Romania. The industrial production variable becomes stationary through the first difference for nine countries, except for Slovenia, which becomes stationary through the second difference for the level of significance of 1%. As long as the orders of integration of the variables are the same, there is the possibility of the emergence of some cointegration relationships within the models that are to be estimated.

We will develop two models for each economy. The first will contain the following as variables: economic growth indicated with the help of the GDP, foreign direct investment, industrial production and export; the second one will contain the same variables except for export, which will be replaced by the degree of economic openness. Thus, we will continue to apply the Johansen Cointegration Test in order to identify a possible long run relationship within the models for the Central and East European countries. Depending on the results of the Johansen Cointegration Test, we may decide the convenience of applying the VEC model for each economy. This model is valid only in the situation in which the δ adjustment coefficient is negative. Should this coefficient be positive or irrelevant, we infer that the correction vector does not contribute to the achieving the balance of the dependent variable on the long run.

According to the estimations from the table above, we note that the majority of the analysed economies are characterized by the existence of a single cointegration relationship between the four variables of the model, except for Hungary, Latvia and Slovakia. According to the results obtained for Romania, it can be observed that foreign direct investments have a long run influence on the economic growth process. The highest value of economic elasticity in relation to investments is scored by The Czech Republic. Thus, an increase of the gross building up of capital with 10% will generate a 15% growth (in the model that contains exports) and respectively a 7% growth of the GDP (in the model that contains the degree of economic openness). Also, the Baltic countries are characterized by the significant influence of investments on the balance of the GDP on the long run, as these small scale economies are benefitting from high fluxes of foreign direct investments as a percentage share in the GDP.

Table 2: The results of applying the VAR Methodology

Number of cointegraration relationships	Long run relationship	δ adjustment coefficient	VAR level
Bulgaria (GDP, FDI, EXP, IP)			
1 (5%)	LogGDP = 0.07LogFDI + 0.50LogEXP + 0.79LogIP + 1.05	-0.29*	2
Bulgaria (GDP, FDI, GDE, IP)			
1 (1%)	LogGDP = 0.01LogFDI + 0.97LogGDE + 1.30LogIP + 1.95	-0.01	2
Czech Republic (GDP, FDI, EXP, IP)			
1 (1%, 5%)	LogGDP = 0.15LogFDI + 1.55LogEXP + 4.49LogIP + 5.68	-0.06*	2
Czech Republic (GDP, FDI, GDE, IP)			
1 (1%, 5%)	LogGDP = 0.07Log FDI + 0.49LogGDE + 1.54LogIP + 5.90	-0.17*	2
Estonia (GDP, FDI, EXP, IP)			
1 (1%, 5%)	LogGDP = 0.01Log FDI + 0.30LogEXP + 1.03LogIP + 0.89	-0.09*	2
Estonia (GDP, FDI, GDE, IP)			
1 (1%)	LogGDP = 0.03Log FDI + 0.77LogGDE + 1.43LogIP -2.61	-0.06	2
Hungary (GDP, FDI, EXP, IP)			
1 (1%, 5%)	LogGDP = 0.05Log FDI + 0.37LogEXP + 2.09LogIP + 3.83	-0.01*	1
Hungary (GDP, FDI, GDE, IP)			
0 (1%, 5%)	We apply a VAR with differences, its level is 1 dLogGDP = 0.25dLogGDP (-1) + 0.01dLogFDI(-1) + 0.81dLogGDE(-1) - 1.65dLogPI(-1) + 0.01		
Latvia (GDP, FDI, EXP, IP)			
0 (1%, 5%)	We apply a VAR with differences, its level is 1 dLogGDP = 0.66dLogGDP (-1) + 0.07dLogFDI(-1) + 0.95dLogEXP(-1) + 0.83dLog IP (-1) + 0.01		
Latvia (GDP, FDI, GDE, IP)			
0 (1%, 5%)	We apply a VAR with differences, its level is 1 dLogGDP = 0.17dLogGDP (-1)+0.09dLogFDI(-1) + 0.66dLogGDE(-1) +1.03dLogIP(-1) +0.02		
Lithuania (GDP, FDI, EXP, IP)			

1 (5%)	LogGDP = 0.05Log FDI +0.33LogEXP + 0.82LogIP + 2.05	-0.42*	1
Lithuania (GDP, FDI, GDE, IP)			
1 (5%)	LogGDP = 0.08Log FDI + 0.60LogGDE + 1.21LogIP +0.05	-0.31*	1
Poland (GDP, FDI, EXP, IP)			
1 (1%)	LogGDP = 0.03Log FDI + 0.04LogEXP + 1.99LogIP + 3.65	-0.53*	1
Poland (GDP, FDI, GDE, IP)			
1 (5%)	LogGDP = 0.04Log FDI - 0.21LogGDE +1.82LogIP - 8.30	-0.74*	1
Romania (GDP, FDI, EXP, IP)			
1 (1%, 5%)	LogGDP = 0,15Log FDI + 0,79LogEXP + 0,68LogIP – 0,44	-0,96*	1
Romania (GDP, FDI, GDE, IP)			
1 (1%, 5%)	LogGDP = 0,30Log FDI + 0,05LogGDE + 4,16LogIP + 9,48	-0,66*	1
Slovakia (GDP, FDI, EXP, IP)			
1 (1%, 5%)	LogGDP = 0.06Log FDI - 0.65LogEXP + 2.70LogIP + 3.50	0.10*	2
Slovakia (GDP, FDI, GDE, IP)			
0 (1%, 5%)	We apply a VAR with differences, its level is 1 dLogGDP = 0.04dLogGDP (-1) + 0.09dLog DFI (-1) + 0.38dLogGDE(-1) - 0.52dLogIP(-1) + 0.02		
Slovenia (GDP, FDI, EXP, IP)			
1 (1%, 5%)	LogGDP = 0.07Log FDI +0.66LogEXP + 3.18LogIP + 2.74	-0.05*	2
Slovenia (GDP, FDI, GDE, IP)			
1 (1%, 5%)	LogGDP = 0.07Log FDI + 0.85LogGDE +3.33LogIP +2.10	-0.08*	2

*statistically significant for a level of significance of 5%
Source: the authors' calculus

The economic elasticity in relation to investment is of 0.08 for Lithuania, respectively 0.09 for Latvia, both in the model that contains the degree of economic openness. We cannot say the same thing about Estonia, as the investments it has benefitted from have had a small influence on the balance of the GDP on the long run, according to the results obtained, namely 0.01 (in the case of the model that contains the export). Estonia, together with Bulgaria, has registered the lowest value of economic growth elasticity versus foreign direct investment. Regarding the impact of exports on economic growth, we note that the highest value of economic elasticity in relation to exports is registered in The Czech Republic, namely a 1% increase of these will generate a 15.5% growth of the GDP. According to the estimations obtained, it can be observed that the positive impact of exports on economic growth is to be found in the majority of the analysed economies, except in the case of Slovakia, where the impact is negative. This result must be interpreted with caution, as the VECM model that was obtained has a positive (δ) adjustment coefficient. This aspect involves the excluding of the export variable, because it does not insure the achievement on the long run of a balance of the dependent variable, i.e. the GDP. The error correction model is thus valid in the case of Bulgaria, The Czech Republic, Lithuania, Poland, Slovenia and Hungary, and in the case of the other economies it is considered that there is at least a variable that affects the model.

If we make a comparison between the two models obtained for each country separately we may note that in The Czech Republic, Latvia and Poland the variation of exports had a bigger impact on the economic growth in comparison with the degree of openness. In turn, in Bulgaria, Estonia, Lithuania, Hungary and Slovenia, the degree of economic openness represents the most important variable in explaining the elasticity of the GDP. It can be observed that Poland is the only country that registeres a negative elasticity of the GDP in regard to the degree of openness, all other economies being characterised by a positive and statistically significant effect on the GDP. Even though an increase of the degree of economic openness has a negative effect on the GDP in Poland, it had a positive effect on investments. In other words, the imports of capital goods increased the deficit of current account, but also generated an increase of investment rate. According

to estimations, one can observe that GDP elasticity in relation to investments is superior to the value in the model that contains the export with 0.01 percent.

Results also show that the most important increase of industrial production was recorded in The Czech Republic, Slovenia, Slovakia and Hungary. In these countries, the statistically relevant elasticity of the GDP in relation to industrial production were situated between 4.49 (The Czech Republic) and 2.09 (Hungary), this indicator having the greatest impact on economic growth in the analysed time period.

Industrial production is, in the majority of the countries, strongly affected by the decrease in foreign demand which started especially with the emergence of the economic crisis. Thus, based on the estimations made, this was demonstrated with the help of the value of the industrial production coefficients, respectively those of export and degree of openness. In the case of the countries which exhibit a higher value of the elasticity of economic growth in relation to export, a higher value of industrial production is to be observed in the model that contains the export variable and a lower one in the case of the model that contains the degree of economic openness. Latvia, Slovakia and Hungary are characterized by the absence of a cointegration relationship between the variables of the model. Thereby, in order to identify the impact which the endogenous variables have on the economic growth, we used a lagged VAR model. The results pointed out a positive impact of the three exogenous variables which were lagged by a trimester, but also of the delayed endogenous one in the case of Latvia, while in the case of Slovakia and Hungary, industrial production lagged by a trimester recorded a negative impact.

We conclude that the VECM model constitutes a suitable instrument for the studying of the long run relationship between economic growth, export/degree of economic openness, foreign direct investment and industrial production in the case of the following studied countries: Bulgaria, The Czech Republic, Estonia, Lithuania, Poland, Romania, Slovenia and Hungary. This aspect is confirmed by the adjustment coefficient, which is negative and significantly different from zero.

Table 3: Granger causality tests

Hypothesis	The country in which the hypothesis is accepted (probability)
LogFDI constitutes a cause of LogGDP	Bulgaria (0.003), Latvia (0.01), Romania (0.005)
LogGDP constitutes a cause of LogFDI	Slovakia (0.004)
LogEXP constitutes a cause of LogGDP	Bulgaria (0.01), The Czech Republic (0.002), Latvia (0.02), Lithuania (0.04), Romania (0.01), Poland (0.00), Slovakia (0.002), Slovenia (0.02), Hungary (0.04)
LogGDP constitutes a cause of LogEXP	Bulgaria (1.2E-07), Latvia (0.00), Lithuania (0.01), Poland (0.002), Slovakia (0.008), Slovenia (8.5E-07), Hungary (0.001)
LogIP constitutes a cause of LogGDP	Bulgaria (7.4E-07), The Czech Republic (3.4E-07), Estonia (8.0E-07), Latvia (4.5E-05), Lithuania (9.2E-05), Romania (0.01), Poland (0.0003), Slovakia (6.4E-05), Slovenia (3.2E-10), Hungary (0.004)
LogGDP constitutes a cause of LogIP	Bulgaria (7.0E-08), The Czech Republic (2.3E-05), Latvia (0.0006), Lithuania (0.008), Romania (0,00009), Poland (0.02), Slovakia (0.01), Slovenia (0.006), Hungary (1.6E-06)
LogGDE constitutes a cause of LogGDP	Latvia (0.0005), Lithuania (0.04), Slovenia (0.04)
LogGDP constitutes a cause of LogGDE	Hungary (0.01)
LogFDI constitutes a cause of LogEXP	The Czech Republic (0.03)
LogEXP constitutes a cause of LogFDI	Slovakia (0.01)
LogFDI constitutes a cause of LogIP	Bulgaria (0.02), Latvia (0.01)
LogIP constitutes a cause of LogFDI	Slovakia (0.03)
LogFDI constitutes a cause of LogGDE	The Czech Republic (0.003), Latvia (0.02), Slovakia (0.03), Slovenia (0.05)
LogGDE constitutes a cause of LogFDI	Latvia (0.007)

LogEXP constitutes a cause of LogIP	Bulgaria (2.0E-06), Latvia (0.05), Lithuania (0.010), Poland (0.000), Slovakia (3.6E-05), Slovenia (0.04), Hungary (8.5E-06)
LogIP constitutes a cause of LogEXP	Bulgaria (0.000), Estonia (7.0E-06), Latvia (0.002), Poland (0.000), Slovakia (0.000), Slovenia (1.2E-05), Hungary (0.002)
LogGDE constitutes a cause of LogIP	Latvia (0.01), Poland (0.01), Slovakia (0.01), Slovenia (0.03), Hungary (0.03)
LogIP constitutes a cause of LogGDE	Estonia (0.05)

Source: the authors' calculus

In the case of Slovakia we can state that the VECM model does not insure the balance of the GDP on the long run, because the adjustment coefficient is a positive one. The Czech Republic and Slovenia are the two countries characterized by a similar evolution to that of Romania. Thus, foreign direct investment, exports and industrial production positively influence the economic growth process on the long run. Further we will test the causality in the Granger sense between the five analysed variables, and for this we have kept a number of four lags (under the conditions of some quarterly data). The results are presented in the table above.

According to the results it can be noted that foreign direct investment, export and industrial production constitute those variables which improve the forecast of economic growth only in the case of Bulgaria, Romania and Latvia. Moreover, Latvia is the only country in which the degree of economic openness together with investments and industrial production constitute a cause of the GDP. The predictability of the economic growth rate is improved in all the countries from the panel by including the industrial production variable. Even though the economies become more and more dominant in the service sector, the spread of service companies is wider; the industrial sector continues to remain a fundamental sector that contributes to the well-functioning of the other sectors of national economy, continuing to be one of the most important factors of economic growth. There is a bidirectional relationship between these two variables in eight countries from the panel; the exception is in the case of Estonia, where the relationship is unidirectional, namely from industrial production towards GDP. The bidimensional direction is also present in the case of export and GDP variables. The causal relationship from GDP towards export can be explained by the fact that the increase of the GDP had as main cause the increase of GED and only after that it was conditioned by export increase. In regard to the economic openness variable, it can be noted that the predictability of the growth rate is improved by this variable only in the case of Latvia, Lithuania and Slovakia. We know that the degree of openness of a country is calculated as the sum of imports and exports in relation to the GDP. Therefore, we expect that a country that registeres a high export level to have a high degree of openness. The paradox is though, that at first sight, the very strong economies like the Japanese or the American one, have a relatively reduced degree of openness, despite the fact that they occupy the first two places in the top of the world's goods export. Regarding the analysed countries, the highest degree of openness is seen in Bulgaria, 0.97, and the lowest is in Poland, only 0.21. But if we carefully analyse the data concerning the three indicators with the help of which we calculate the degree of openness of a country, (import, export and GDP) we can observe that in the case of Bulgaria both import and export represent a large percentage of the GDP (between 70 and 80%) unlike in the case of Poland where the values are significantly lower (between 40 and 50%)(Eurostat Statistics).

Conclusions
Based on the results obtained we can state that foreign direct investments have an influence on the process of economic growth on the long run, but this is relatively reduced in the majority of the analysed countries. This is mainly due to the world economic crisis and to the restlessness which penetrated the Eurozone and which has led to a considerable decrease in investment in 2008, namely with 9% in the new member states and with 22% in Eastern Europe. The countries that have succeeded to maintain themselves at a constant level concerning investments are The Czech Republic, Hungary and Slovakia. Here foreign direct investments as capital share have been at a constant level even after the beginning of the crisis, and investments continued within export-oriented projects, in industries that suffered from important decrease in production during those times (Popa, 2009, p. 106). Furthermore, once with the admission of these countries to the European Union, the economic growth process became more sensitive to the evolution of commercial trade than to the investment rate, aspect which has also been confirmed by the results obtained within the econometric models presented above.

Due to the fact that the member states of European Union are interconnected, and the commercial trade between them is extremely strong, the effects of the crisis have spread very quickly to all these economies. The financial crisis affected the different member states differently. As our estimations show, in Bulgaria, Estonia, Hungary and Slovenia, the crisis led to a decrease of the export influence on economic growth, while Latvia, The Czech Republic, Romania and Poland seem to be less affected than the other Central and East European countries. One of the causes that determined this process can be due to the economy dependency on export. Therefore, the countries in which the export demand was high and which have reported surplus in their accounts are more exposed to the decrease of world trade, and those who have large surpluses can also be exposed to the correction effects, of the balance, regarding the financial assets of the markets (Burghelea, 2011, p. 110). In what industrial production is concerned, this is in the majority of the countries affected by the decrease in foreign demand, which also started with the emergence of the economic crisis. Industrial production in the European Union member states reached a peak in April 2008, followed by a decline of the activity which lasted for a year, time period in which production decreased with 19,1% (Dachin, 2012, p. 47). Even though in the first half of the year 2011 there were again signs of reduction of industrial production in the European Union member countries, in the 3rd trimester of 2011 Romania registered one of the biggest increases of industrial production (7.7%) compared to the same time period in 2010, bigger than that of the European Union (5.3%). Considering the results, we can affirm that in both Romania and the Central and Eastern-European countries, the process of real convergence has become more sensitive to the evolution of commercial trade and industrial production than to the evolution of foreign direct investment.

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ENTREPRENEURSHIP IN CONSTRUCTIONS SECTOR – EXPLANATORY ECONOMIC FACTORS AND FORECASTS FOR ROMANIA

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Abstract: *Entrepreneurship is an active field of study; however entrepreneurship in the field of construction has been relatively neglected in recent research. The construction sector's importance lays in its multiplier effect, through employment, consumption of materials and by providing infrastructure for further economic development. In order to maximize this effect, innovation and entrepreneurship in construction are critical factors. We have investigated the relation of several economic factors with entrepreneurship in construction and have found that the volume of construction works, the number of construction workers, building permits and the subjective opinion of the businesspersons in the construction industry, expressed through a conjecture index, have a long and medium term positive relation with it, while unemployment, Consumer Price Index, Construction Cost Index and Closure of construction companies have a negative relation with entrepreneurship in construction, taking into account different time lags for each variable. The negative relation in the case of unemployment and inflation, on the other side, have long time lags (15 and 21 months, respectively) suggesting that these economic phenomena might have long term negative consequences on entrepreneurship in construction, and by extension on the construction industry as a whole. We performed several forecasts (based on ETS (M,N,M) and ARIMA methods) and we have concluded that the level of entrepreneurship in construction in Romania for the next 2 years will remain relatively unchanged, save for intra year seasonal variances. Therefore external intervention will be required if one wants to encourage growth in this field. Taking into consideration the relations that we have uncovered in the first section of the paper, these external interventions should focus not only on encouraging entrepreneurship through various individual or company level measure, but on a larger scale, for instance through construction cost related inflation control, and by encouraging construction works, for instance through infrastructure projects.*

Keywords: *entrepreneurship, construction, forecast*

JEL classification: *L26; L74;*

1. Introduction

Innovation and entrepreneurship play an important role in the economic growth, as well as in countering unemployment and increasing living standards. While in the past the sources of innovation were often thought to be large companies, in the recent period small and medium enterprises (SMEs) are now considered to be the sources of innovation and growth (Faria et al., 2010). With SMEs accounting for 99% of the total number of companies in the European Union, and providing employment for 2/3 of the total working population (Badulescu D., 2014, Dodescu and Badulescu A., 2009), understanding their evolution and genesis has become an important endeavor. Current theories and research seem to indicate that entrepreneurship is a critical factor in the economic growth (Glaeser et al., 2010), however the connection between entrepreneurial

activity and growth in the developing countries seems to be qualitatively different than in the case of the developed countries, as it involves different determinants, government policies and even entrepreneurial profiles (Keilbach et al., 2009). In line with this hypothesis, we decided to investigate the economical factors connected to entrepreneurial activity in Romania, and more specifically in the construction sector, since it has been relatively overlooked by current research.

1.1. Entrepreneurship

What is entrepreneurship and how wide it's field of study should be is still an open question, as researchers in the field use different criteria for distinguishing entrepreneurial activity from other economic activities.

One of the first definitions of entrepreneurship comes from Schumpeter, and it focuses on innovation: "the doing of new things or the doing of things that are already being done in a new way" (Schumpeter, 1947: p. 151). However this definition has the drawback of restricting the field of study to a relatively small number of enterprises. Current research into entrepreneurship is focused on a wider field, that of all new enterprises. In line with this point of view, the entrepreneur is seen as either self-employed or the individual that starts a new company (Rocha, Sternberg, 2005; Van Der Sluis et al., 2008).

In our paper we choose to use the latter definition, as it is easily measured and comparable between countries and in time. We will include in our entrepreneurship measure all new companies and newly registered self-employed persons in a certain time frame. While this runs the risk of not being complete, as some persons might not be registered, we prefer to use the official reported figures, rather than estimates of total activity, as we believe that in the case of Romania the two are highly correlated, and that the vast majority of enterprises are included in the official statistics.

1.2. Constructions and the economy

The constructions sector is both an important contributor to economic growth and recovery and an important focus of government policy (Myers, 2008). The European (EU27) construction sector comprises of 3.1 million enterprises, 95% of which are small and medium enterprises (SME) with less than 20 employees. Its importance to economic development stems from its direct contribution to the domestic product, the construction sector accounted for 9.1% of the EU27 GPD in 2013 and 49.9% of the EU27 Gross Fixed Capital Formation, from its absorption of labour force, in 2013 it accounted for 6.8% of EU27 total employment, and it was the biggest industrial employer, with 30.2% of all industrial employment and also from its multiplier effect, as 1 person working in the construction industry provides work for 2 persons working in other sectors (all statistics taken from the European Construction Industry Federation, FIEC, annual report 2013).

The literature suggests that a relationship exists between construction output and the growth of the economy as a whole (Zhang, Yao, 2013), however there are some divergent opinions regarding the direction of the causal relationship: from construction to the economy (Lopes et al., 2002), bidirectional (Chan, 2001; Zheng, Liu, 2004), from economy to construction (Tse, Ganesan, 1997), or complex and non-linear – during economic growth the economy seems to lead construction, while during economic downturns, the construction sector seems to lead the economy (Kargı, 2013; Lewis, 2009). While the relationship has been extensively investigated and a consensus on the direction of the relation has not yet been achieved, all researchers emphasize the importance of the construction sector and the need for research in the field.

In general, the construction sector seems to grow faster than the national economy in developing countries, as many investments are needed in infrastructure and new buildings, while in developed countries most of the construction output is focused more on maintenance and repair and the construction sector contributes less significantly to

the economic growth (Giang, Sui Pheng, 2011; Lewis, 2009; Myers, 2008). A more recent view on the fields is that the nature of the construction sectors is changing in the last few years, and as such other variables may have entered the equation, such as market size and population density, alongside economic growth (Gregori, Pietroforte, 2011).

1.3. Entrepreneurship and the construction industry

Entrepreneurial activity and innovation requires a certain level of infrastructure, both in regard to the scientific development of the region, leading to spill-over effects from the academic field, but also, and more importantly, from the physical infrastructure, such as transportation, access to power, water and raw materials, real estate costs and local construction costs. In areas where the physical infrastructure is lacking, even if rich in innovation, entrepreneurial activity will be low, due to increased risks and costs. Entrepreneurs will prefer to implement their innovative ideas in other areas and this will lead regional stagnation and even local depression. The construction and especially housing sectors vitality is seen even as a barometer of the regions private sector, with low property values and new construction rates signalling regional decline (Bates, 2008). The current tendencies in the field of construction favor entrepreneurial activity. The focus on small companies and networks of self-employed persons cooperating on specific projects, in order to lower costs and share risk, has lead to more and more specialized workers being pushed into entrepreneurial activity (Rath, 2002). The subcontracting tendencies, combined with low entry barriers, low level of qualification required for workers (at least at the bottom level), the need for flexibility and project-based work create an optimum environment for the potential entrepreneur to develop and start his business (Walton-Roberts, Hiebert, 1997).

Current research in the field of entrepreneurship in construction seems to be focused on the social aspects and determinants, such as immigration and communities (Feagin, Imani, 1994; Rath, 2002; Walton-Roberts, Hiebert, 1997) or on sustainability (Klein Woolthuis, 2010), however little research is available into the influence of other factors, such as unemployment, inflation, demand and offer on the construction market.

As noted previously, especially in developing countries, the construction sector could be an important factor of growth, especially during economic downturns (Kargı, 2013; Lewis, 2009; Lopes et al., 2002). Based on this theory, we believe that stimulating the construction sector, especially through a focus on innovation and entrepreneurship, could lead to sustainable economic growth in the case of Romania. Therefore we try to investigate the economic factors involved in entrepreneurial activity in the construction sector, as well as try to forecast the future evolution of this activity.

2. Research methodology

Based on our review of the literature, we expect that entrepreneurial activity in the field of construction will be at least partly influenced by the changes in demand and supply in this sector. As such we take into account several economic indicators related to this dynamics, such as unemployment and employed workforce, building permits issued and completed projects, inflation and the costs of construction, the number of new enterprises as well as the number of closed companies in the field.

2.1. Indicators

When measuring construction output a major issue is the availability of data. Since many construction projects are small scale and provided by SMEs or even individuals (such as do-it-yourself DIY projects), the sector is predisposed to miss-reporting. For instance in many countries as much as 20-28% of total construction output is estimated to be missed by the official reports (Myers, 2008). Taking into consideration these limits, we have

regardless decided on using the official records, as they provide a consistent view of the field and are precisely calculated.

All indicators cover the May 2009 – February 2014 period and have monthly availability. Since in 2008 there was a change in the classification of companies based on activity type, most of the time series were not backwards compatible.

In order to measure the volume of entrepreneurial activity we choose as an indicator the number of new companies being registered into The National Trade Register Office (ONRC) each month. The data was collected from the online platform of the Office (ONRC, 2014). We used two time series, one for Total entrepreneurial activity and one for the Construction entrepreneurial activity. As evidenced from Figure 1, the entrepreneurial activity in construction has a seasonal aspect, following a 12 month period. Also, since 2011, it is on a descending trend.

The indicator chosen for unemployment were the monthly national unemployment rate. The data was collected from the online platform of the National Employment Agency. We also used the number of individuals employed in the field of construction, as provided by the National Statistics Institute.

For the construction output we used the Indices of Construction Works – base year 2010 time series (CNS105F) and the Building permits – square meters useful area time series (LOC108B) as provided by the National Statistics Institute (INS, 2014). In both cases we used the total values, for the sake of simplicity.

As a measure of inflation, we used the Consumer Price Index (CPI) and the Construction Cost Index (CNS107B) as provided by the National Statistics Institute.
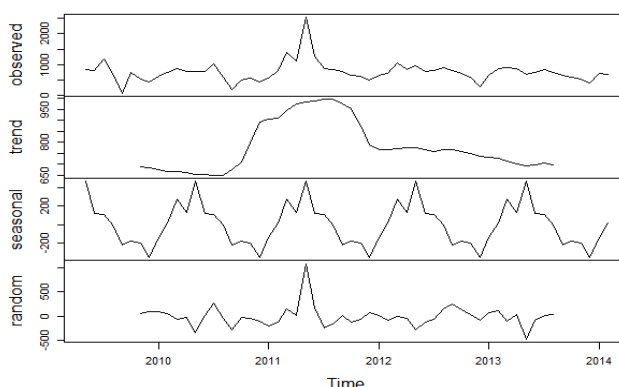
Figure 1: Decomposition of Entrepreneurship in construction based on seasonal and trend components
Source: Author's calculation based on data from The National Trade Register Office

We have also included a subjective indicator, the Trend of activity compared to the previous months as reported by the construction business. This indicator used in conjuncture analysis was collected from the time series "ei_bsbu_m_r2", available from Eurostat (Eurostat, 2014).

2.2. Testing the factors

The relationship between Construction Entrepreneurship and the economic factors of interest was investigated using the Cross-Correlation Function (CCF) method as implemented in the stats R package (Venables, Ripley, 2002). We used this method to investigate the optimum time lag between two time series, and to provide us with the significance and size of the relation between pairs of variables.

The results of the CCF analysis for all pairs of variables are presented in Table 1. In the interest of simplicity we only indicate the correlations at the chosen lag values, which are the local minimum or maximum points.

Table 1: Results of the CCF analysis - optimum lags and correlation values

Predictor	Lag (k)	Correlation at lag k (significant at p = 0.05)
Unemployment	-15	0.39
Closure	-9	-0.35
Construction works	-8	0.29
	-1	-0.42
General Entrepreneurship	0	0.38
Construction workers	-22	0.41
	-3	-0.53
Building permits	-11	0.36
	-3	-0.39
CPI	-21	-0.32
CCI	-22	-0.28
Conjuncture index	-8	0.35
	-2	-0.34

Source: Authors' calculation based on data available from Eurostat, the National Trade Register Office and the National Statistics Institute

From Table 1 one can notice several interesting facts:
- Unemployment (-15) has a positive relation with construction entrepreneurship
- CPI (-21), CCI (-22) and Closure of construction companies (-9) have a negative relation with construction entrepreneurship
- Construction works, Number of construction workers, Building permits, Conjuncture have a non-linear effect: on the long term they relate positively and on the short term negatively with construction entrepreneurship

As previous research indicated (Șipoș-Gug, Bădulescu, 2013; Sipos-Gug, 2012) there is a direct link between unemployment and entrepreneurship. The link is bidirectional, as the CCF also indicated a positive k value of 2 (correlation -0.35), suggesting that both the push and pull effects reported by previous research can also be found in the construction sector in Romania (see Figure 2). The positive correlation at the -15 lag suggests that when unemployment is high, entrepreneurship in construction will also increase 15 months later. The relatively long time lag can be explained by several factors. Firstly in Romania one can benefit from financial support for the first 12 months of unemployment, and starting an enterprise can also be a lengthy process.

The Consumer Price Index (CPI) is negatively related to entrepreneurship in construction, 21 months later. The long time lag can be explained by the fact that price changes can take a while to propagate through the economy and ultimately affect demand for construction. Since construction project are long term projects, taking several months or years to complete, inflation can lead to losses and as such increase in inflation can discourage potential entrepreneurs. Infrastructure projects funded by the Government or the European Union are especially vulnerable to CPI changes, as the payments are usually delayed several months after completion. We believe that a similar phenomenon explains the long time lag (-22) in the case of the Construction Costs Index (CCI) as the two are expected to behave in a similar fashion.

Closure of construction companies is also negatively related to entrepreneurship in construction 9 months later. This is to be expected, as an increase in the closure rates of

the sector can discourage potential entrepreneurs, while a high success rate, signaled by a low closure rate, can encourage more individuals to open enterprises.

The 8 months lagged positive relation between Construction works with entrepreneurship in the field of construction is to be expected. Assuming the increased construction output is a result of higher demand, this would naturally attract more entrepreneurs to the field, and as such within 8 months they would become active. However the 1 month lagged negative relation is more difficult to explain. One possible interpretation is that there might be an interference from the seasonal nature of construction work. As the season progresses, there is more and more construction output, however less chance that a company will be opened, especially passed the middle of the season. So on the very short term, an increase in output can be inversely related to entrepreneurship.
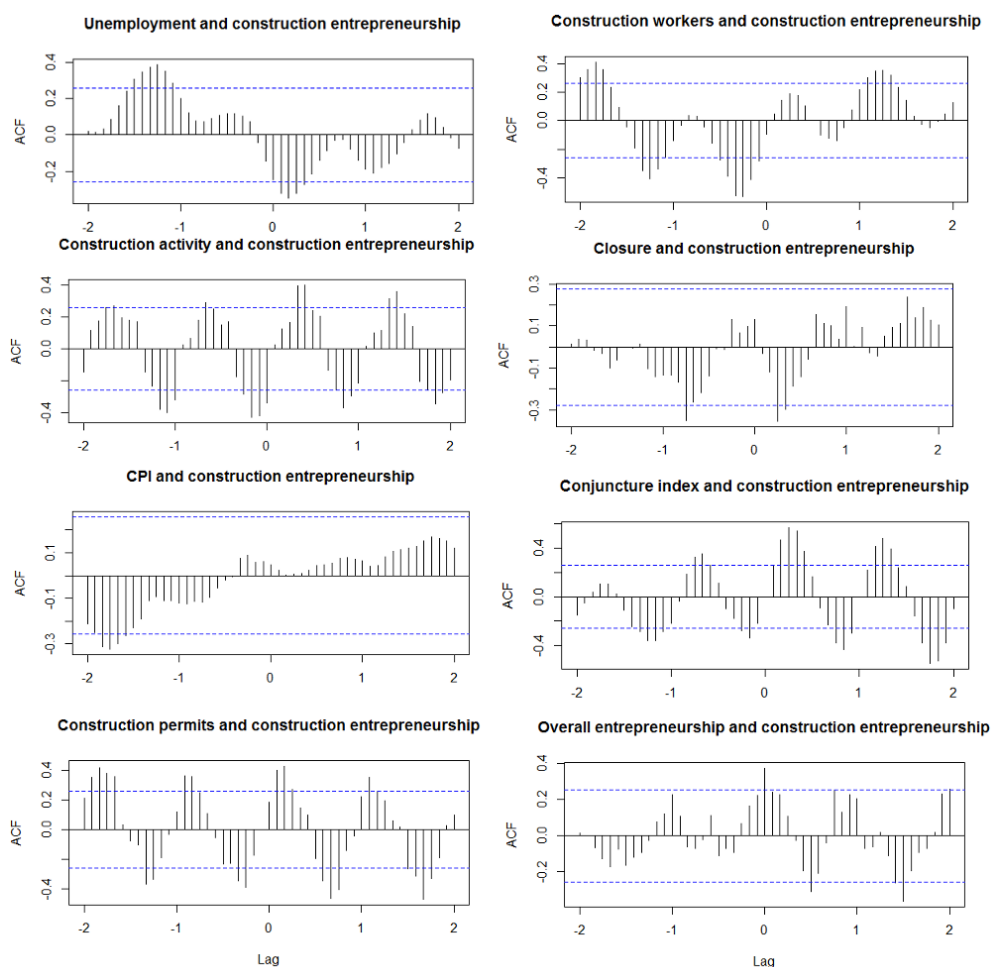
Figure 2: CCF between construction entrepreneurship and the factors investigated. Blue lines are the limits of the 95% confidence interval. Lags are expressed in years.
Source: Authors' calculation using R, based on data available from Eurostat, the National Trade Register Office and the National Statistics Institute

The 22 months lagged positive relation between the number of construction workers in Romania and entrepreneurial activity in the field of construction can be explained by the fact that a large specialized workforce will be more likely to produce a larger number of

potential entrepreneurs, while at the same time being a signal that there is high demand in the field. We explain the negative correlation on the short term (3 months) by the fact that prior to starting a company the entrepreneur is very likely assessing the labor market for potential employees. If there is an increase in the number of workers in the field, he might have difficulties in recruiting valuable candidates, and delay the start up of the firm. While if there is a decrease in employment, he will have little difficulty in finding qualified and low cost labor.

The 11 months lagged positive relation between construction permits and entrepreneurial activity in construction can be explained by the fact that when considering a start-up in the field, the potential entrepreneur is influenced by the previous years demand level, as evidenced by the number of building permits. The 3 months negative relation could be explained by the fact that entrepreneurs will start companies in the field at the beginning of the construction season, anticipating an increase in activity, and not during periods of high activity, such as in the middle of the season.

The 8 months lagged positive relation with the Conjuncture index can be explained by the fact that the index reflects a subjective confidence of the companies in the field, and as such this subjective confidence could be transmitted to potential entrepreneurs outside the field, either attracting them or discouraging their initiatives. On the short term however the effect might be reversed. A high level of confidence of growth from existing companies will likely encourage them to invest and expand, and recruit potential entrepreneurs, thus removing them from the entrepreneurial market. Indeed this is noticeable if one investigates the CCF between the conjuncture index and employment in the field of construction, we see a positive relation with k values of 1 and 2 (correlations of 0.3 and 0.2, respectively).

2.3. Forecast of construction entrepreneurship

In order to forecast entrepreneurial activity we used several alternative methods. The first method we employed was using an Exponential smoothing state space model (ETS). Since the ETS model family has a number of 30 proposed models, we used the function "ets" in r to select the optimal model type based on Akaike's Information Criterion (AIC) values of each of the 30 potential models, as it is recommended in the research literature(Hyndman et al., 2008, 2002). The resulted model was of the type ETS(M,N,M) and has the Smoothing parameters alpha = 0.3157 and gamma = 0.0001 and a sigma of 0.2697. The AIC for the model was 874.

According to standard notation, this refers to a model with multiplicative error type, no trend and multiplicative seasonal type. Based on this model, the forecast entrepreneurial activity in construction is available in Figure 3.

The forecasted values, save for seasonal variation, suggest that the entrepreneurial activity in the field of construction will remain relatively stable.
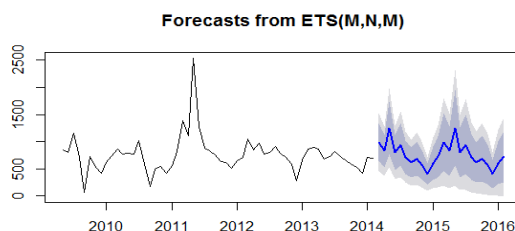
Figure 3: Forecast of construction entrepreneurship from ETS model
Source: Authors's calculation using R, based on data available from the National Trade Register Office

The second method we used was Autoregressive integrated moving average (ARIMA) forecasting. The general form of the model is ARIMA (p,d,q)(P,D,Q)m, where p= order of the autoregressive part; d= degree of first differencing involved and q= order of the moving average part, with P, D and Q being the seasonal degrees and m is the number of periods per season (Hyndman, Athanasopoulos, 2012).

Based on the Augmented Dickey-Fuller Test (ADF = -3.5565, p = 0.04) and the auto-correlation (ACF) and partial auto-correlation (PACF) plots in figure 4, we concluded that our model is of the ARIMA (1,0,0)(1,0,0)12 type, since the ACF is sinusoidal and there are no significant lags in PACF beyond lag 1.
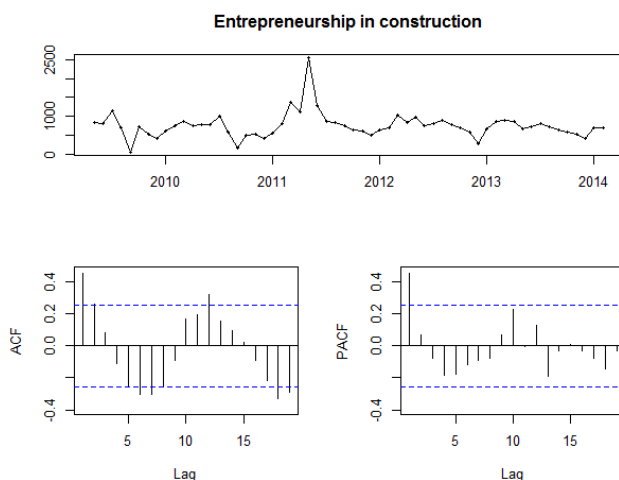
Figure 4: ACF and PACF plots for entrepreneurship in construction
Source: Authors' calculation based on data available from the National Trade Register Office

Using these parameters the forecast is available in figure 5. The forecasted values, similarly to the ETS ones, suggest that the entrepreneurial activity in the field of construction will remain relatively stable.
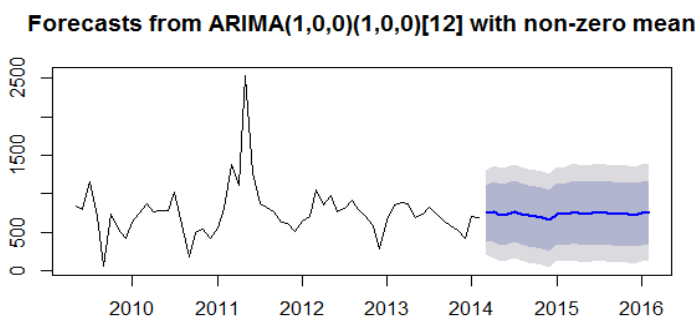
Figure 5: Forecast of construction entrepreneurship from ETS model
Source: Authors' calculation using R, based on data available from the National Trade Register Office

Since there are no efficient ways of choosing between the two models based on the sample they were created on, we will have to rely on future data, as it becomes available, to support one model over the other.

3. Conclusion

Both of our forecasts indicate that on the long term entrepreneurship in construction will very likely remain around the current values. This might have negative long term consequences not only for the construction industry, but the entire national economy.

All of our proposed factors are significantly connected to entrepreneurship in construction, with unemployment, construction works, number of construction workers, building permits and conjecture index having a long and medium term positive relation with it, and CPI, CCI and Closure of construction companies having a negative relation with entrepreneurship. While no causal relations were demonstrated in our study, due to the strong relations and precedence of the factors, they are likely to exist, and changes in these factors might reflect in changes into entrepreneurship.

Taking into consideration the factors related to entrepreneurship in construction that we have identified, there might be several paths of action available in order to stimulate entrepreneurial activity. The main issue would be that of controlling inflation and stabilizing the costs implied by the construction sector. Also providing training and specialization for workers and supplying construction works for local enterprises, perhaps through investments into infrastructure, would also encourage entrepreneurship in this field.

The multiplier effect on the economy of the construction sector and the current struggles for economic recovery are reasons for which the government support for entrepreneurs in this field would be needed and would lead to long term economic growth.

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MARKET, CULTURAL HERITAGE AND THE SOLUTION TO THE CORPORATE GOVERNANCE PROBLEMS

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Abstract: *The current economic scenario and the cultural heritage are two very important factors that heavily affect the companies and the way in which they can resolve the corporate governance problems.*
According to this principle, we intend making an analysis on the endogenous and the exogenous factors affecting the company and its structure.
For example, in Italy the difficult situation on the market - straightly connected with the international financial and economic crisis - involved relevant changes concerning the number of firms, their structure and their own management.
But it is not the single reason causing the companies metamorphosis. The cultural heritage played - and still today it plays - an important role for the company growth and dimension.
The analysis is divided in two parts:
First part: comprehension of the exogenous factors indirectly affecting the company and their structure.
As we will see, the corporate governance is connected with different factors and it straightly depends from them. In this part we will analyze Market, Technology and Tax burden. Above all, the cultural heritage is one of the most important factors, then it will be analyzed in depth.
Second part: analysis on the endogenous factors that directly affect the corporate governance.
Stakeholders' importance for the company development and performance will be deeply considered.
More in particular, in this part we propose to analyze the way in which Stakeholders affect the company management – then consequently its performance - and above all the relationship between small company-Stakeholders and large company-Stakeholders.
Conclusions: This study, therefore, proposes to make an analysis of the reality which today characterizes the companies, the factors that are affecting it and the new challenges for the Corporate Governance in Italy.

Key words: Corporate Governance, Entrepreneurship, SMEs, Management, Stakeholder

JEL classification: M20, F00

1. Analysis on company development in Italy
1.1 The exogenous factors affecting the corporate governance
Generally, every analysis and study focused on the corporate governance has a direct approach to the relations and the systems by which a company is directed and controlled. That's possible when the analysis considers only the internal situation and the different parts that have a precise role in the company management.
Instead, in this case our purpose is creating a sort of link about the company and two different typologies of factors that have a great importance for its development. We are talking about the endogenous and the exogenous factors.

It's hard to think that a company and its governance are only affected by the relation among the managers and the shareholders.

Making a precise and depth analysis about the company metamorphosis during the years, we can see how much do the external conditions (exogenous factors) are important for the managers' businesslike choices and the shareholders' choices when they adopted a particular managerial structure.

Undoubtedly, these factors indirectly affect the corporate governance but directly the company strategy.

Taking into consideration the current global economic situation, we can clearly understand that the market has affected the number of the born companies and the death companies. (Istat, Noi Italia, 2014: 63)

Indeed, the corporate strategies and the managerial arrangement widely depends from the market request and by the consumption.

Let's make an example.

TAB. 1 - FAMILY PROPENSITY TO SAVE IN THE MAIN EUROPEAN ECONOMIES - 2000/2012
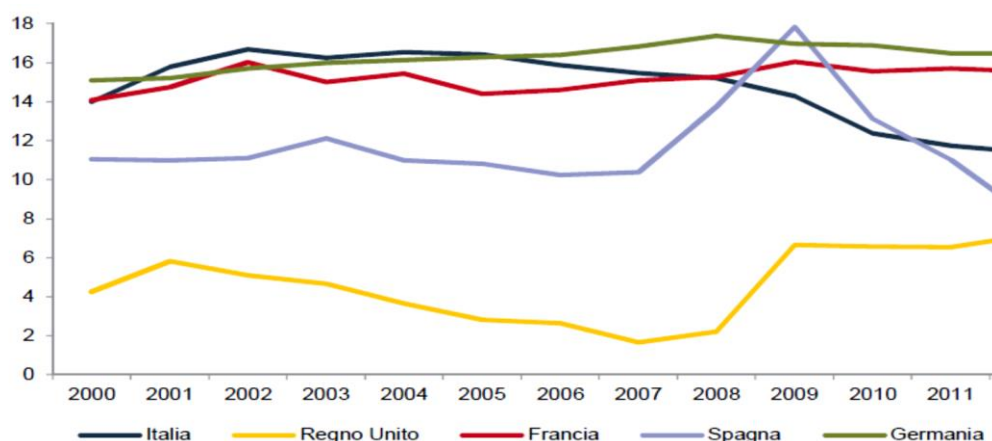
Source: Eurostat data in "Istat, Annual report 2013", p.9

As revealed by the Eurostat data, in the last two years the families savings are increased. In this sense the French families and the German families have the most high level of propensity to save.

The values of the Italian families propensity have decreased in comparison with the others but always remaining upper than the Spain families level.

More in particular the crisis strongly beat the Italian family consumption with enormous consequences on the companies production and structure.

TAB. 2 - ITALIAN FAMILY PROPENSITY TO SAVE - 2008/2012

——— Spesa per consumi finali ——— Reddito disponibile ——— Propensione al risparmio (scala destra)
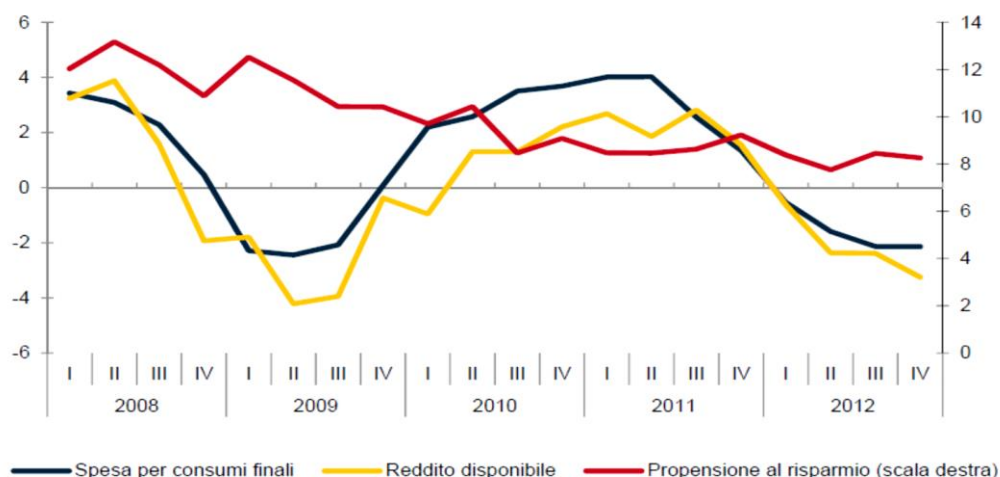
Source: Istat, "Annual report 2013", p.8

From the 2008, the immediate reactions to the crisis and the family savings were:

1) defending own placement on the market (medium and small enterprises, 64 % / large enterprises, 69 %)

2) entering new markets (small and medium enterprises)

3) product diversification (large enterprises)

4) increase of agreements between companies

In the case mentioned at the point n. 4) the large corporations generally choose particular form of agreements as the Joint Ventures or the Consortium, while the small and medium enterprises adopt informal agreements. (Istat, "Annual report 2013": 68)
This is just an example - widely known by the economists - showing how does a exogenous factor affect the company.
The market variability pushes company to make different production or service strategies and as direct consequence company will adopt a different organizational strategy.

1.2 Know-how and less tax burden as essential conditions for company development.
Usually, when we talk about the start-up phase of a business or about an underway business in Italy we are considering different situations for entrepreneurship.
In the case of a family businesses, we must consider how does the family tradition is important for the entrepreneur; generally, this principle is valid if the firm is already started and the sphere of people revolving around consists in family members.
In the case of a sole traders, we have to consider how do the aspiration and the prospect of earnings such as the possibility to be not a dependent worker are important for him.
The interest in realizing an innovative idea has not to be overlooked. This motivation, which in Italy is very little considered by banks rather than in America, it is an attitude widely considered by sole traders, by family firms but also by large enterprises.

If the original motivations underpinning entrepreneurial choices are generally related to the individual sphere or to economic and social reality in which the individual or the group of individuals are living, the difficulties suffered by companies are shared at a general level. Let's make some examples:

1) amongst the major problems that start-up or underway companies meet, there is the difficulty of doing organizational-administrative choices. Bank indebtedness is today a practice widely observed by businesses and entrepreneurs. In fact, today, they cannot work easily without it.

As argued previously, the possibility for a start-up to get a help through seed capital or venture capital is very difficult. However, it is strictly necessary in order to emerge on the market. Also the difficulty to find banking funds has become one of the main challenges for Italian companies. The entrepreneur has never been so close to the primordial figure of entrepreneur described by Cantillon.

The risk has never touched so high levels; in absence of external aid, whether public or private, companies and entrepreneurs have primarily to face the investment with their own funds.

The crisis has prompted a new rule: the credit is awarded, but only if the enterprise holds a satisfactory guarantee fund for what has been lent by banks.

In short, money is granted only to those who have already it and not to those who need it most.

2) together with these daily difficulties, it's also detected the burden of taxes that lie on the corporate governance, such as: IRES ("Corporate income tax" amounting to 27.50% in 2012), IRAP ("Local tax on productive activities" amounting to 3.90% - this is a perverse tax also applied to companies at a loss), IRPEF ("Personal income tax", progressive from 23% to 43%) which added to other local taxes reach a taxation higher than 44% on the income produced by companies.

3) labor costs in Italy - it means not only the remuneration of employees but also the burden of contribution connected to it. This cost is amongst the highest in Europe and in the world.

4) another difficulty heavily encountered by companies is the ability to find and to employ qualified personnel, because most often young people look for and find a job abroad.

The economic growth accomplished in recent years has prompted more companies to use specialized technical skills and advanced technology.

In recent years Knowledge Capitalism seems to have become one of the frontiers of companies operating in a globalized system.

5) another considerable difficulty is the relationship between company and its customers. In this sense the crisis weighted very much on this delicate relationship. The customer loyalty regarding firms is less than before due to higher level of competition on the market. Furthermore, the destitute customers increasingly push the company into insolvency in relation to suppliers and creditors.

This vicious circle has enormously contributed to break the relationship between Bank and enterprise. However, it cannot be regarded as pure architect of the changed financial policy of banks (increasingly inclined to make financial investments rather than to invest on business and in favor of the same).

1.3 The importance of cultural heritage

When we approach the corporate world, we must always take in consideration that the firms are the result and the direct expression of endless changes that have characterized the State in which they work. The historical context, legal provisions but also and above all the cultural settings are important factors which have influenced - and still today they widely influence - the firm development and the management by which the governance is composed.

It is enough thinking to A. D. Chandler's studies, who succeeded, with admirable skill, to prove that starting from the early 1900 Nations such as the United States, Britain and Germany were promoters of a very diversified firm development to study its causes. (Chandler A.D., 1994)

In the United States the powerful organizational development process within companies made increasingly the need for a strong managerial structure that would have pushed the birth of Competitive Managerial Capitalism. Obviously, we should not forget the exogenous conditions such as rich and growing domestic market, the wide availability of new technologies and a legal framework that limited contractual agreements on prices and on the market. The direct result was the large corporations in the field of energy, chemistry and transport, marked by a complex internal organization and a widely diversified corporate structure.

This setting would forever dictated the structural rules and the governance of the large transnational corporations.

Germany was perhaps the nation which has more features in common with the managerial U.S. corporations. The explosion of a massive managerial setting characterized by the interplay between *first movers* and *senior managers* gave the opportunity to leverage the entrepreneurial skills in the various sectors of production, management and marketing. However, we must take in consideration how German corporations have always kept alive and strong the family sense and the degree of interaction between *management* and *first movers*.

We have not to forget the fact that the degree of diversification and collaboration between the German companies has always been significantly higher than the footprint of the competitive USA corporations, so much to be defined Managerial Cooperative Capitalism. One reason for this may be found in the fact that in Germany there were no specific antitrust laws such as in U.S. (*Sherman Antitrust Act*, 1890).

In Great Britain, on the contrary, companies were marked by a completely different evolutionary process. Although the fields of activity were the same in which large enterprises USA developed, UK companies were *personally managed* (Chandler, 1994: 387) or the management remained within the personal or family context.

Chandler, in fact, stresses that internal corporate organizations were generally characterized as follows:

-*Personal Enterprise*
-*Entrepreneurial or Family Enterprise*: holding of shares by the heirs of the enterprise founders
-*Managerial Enterprise*: where there is actually a managerial governance which, however, remains structurally limited and always under the influence of the founders or the heirs.

Although with notable differences and peculiarities that distinguish companies in each State, we can, however, support the theory that there is a common denominator amongst the family structure of Italian companies and British *personally managed* companies analyzed by Chandler.

Even in Italy, as well as in the United States or in other Western countries, corporate governance has been heavily influenced in many ways by historical circumstances, regulations and market conditions.

For instance, we can consider the importance of the access to resources and to technologies had as well as the ability to have large capital to start up (today called *seed capital*) for the large American firms.

In Italy, proved by war and financially collapsed, there was no viable alternative to the development of simple family industry.

Doing just a premise of historical-economic character, we see the way in which the major manifestations of the large corporate groups in Italy were the State-owned enterprises. In this sense, the IRI (Istituto per la Ricostruzione Industriale) was primarily established for

the purpose of acquiring the shares that the banking system held in important private companies (as well as afterwards prescribed an act of 1936) and with the intent to rehabilitate distressed corporations.

Amongst the best expressions we also emphasize ENI (Ente Nazionale Idrocarburi 1953), EGAM (Ente Gestione Attività Minerarie 1971) and EFIM (Ente per il Finanziamento Industria Meccanica 1962) that in the period from 1950 to 1980 were the highest expressions of State intervention on the market in order to create infrastructure and basic industries. (Amatori F., 1996)

The setting of large State-owned Holding Company, however, did not withstand to changing times increasingly directed to a fluid market, competitive and especially international, particularly in the economic crisis that swept Italy in the various productive sectors such as steel and that one of the facilities.

In the early 1990's the large State-owned corporate groups reached a degree of diversification that it was unable to withstand the market challenges. The result was a gigantic process of privatization.

With the law of the 8th August 1992, No. 359 IRI, ENI, INA and ENEL were forced to put their shares into the hands of the Treasury Ministry transforming themselves in Joint Stock companies.

Therefore, the various industrial branches in which the presence of the Public Institution was massive (food industry, infrastructure, telecommunications and steel) were converted to private enterprise.

From this historical-economic premise, it isn't so difficult to understand because it was impossible for a country such as Italy to develop a process of competitive or cooperative management comparable to that one arose in the USA or in Germany.

If on the one side the public mark was able to resettle a stagnant economy by implementing a plan for building a new industrial base, on the other side it failed to form and to establish gradually a class of officials/manager - separated from the political leadership - which could find valid and ready managerial solutions for the holding companies.

2. The endogenous factors directly affecting the Corporate Governance
2.1 Introduction to the endogenous factors through the Berle and Means' though

If factors such as the market situation, the national legislation or the historical heritage indirectly affect corporate governance, other factors definable "endogenous" massively characterize it from the inside.

As A.Berle and G.Means showed in the book "The modern corporation and private property" [1932], the company has undergone far-reaching changes in the management structure due to disproportionate growth of the shareholder's number. (semi-public companies)

The decision to adopt a managerial system that could handle an equally complex organization was the result of a massive fractional property.

The innumerable amount of shareholders pushed the corporations to delegate managers the effective administration. However, this process has prompted administrators to take over more and more power, sometimes without getting effective results to the shareholders.

Adolf Berle and Gardiner Means studied in depth the question concerning the separation between control and ownership.

The interest to find a solution that could justify the managers decisions pushed Berle and Means to analyze thoroughly modern companies and everything is straightly related.

First and foremost, we believe that we should take into account the first and fundamental clue thanks to which the two authors were able to carry out the subsequent

considerations; we are referring to the transformation of large company into the so called "semi-public company". (A.A. Berle and Means G.C., 1966: 6)

The last two decades of the 1900 were in fact deeply marked by a dynamic and continuous process of mergers and incorporations that would have so greatly influenced the organizational style within the enterprise.

New organizational structures had a large number of workers employed under a single management as well as enormous riches coming from different individuals were placed under a single control.

The immediate consequence was the formation of corporations - made and supported by a plethora of shareholders - submitted to the control of few managers.

This decisive process - begun due to the semi-public company born - according to Berle and Means pushed towards a split of the corporate control.

The proof of this theory lies in the fact that the new Corporation allowed several possible combinations of shareholders.

Always according to Berle and Means, this possible scenario would have been induced following two distinct processes occurred in the last century: the massive ownership diversification, leading to a disproportionate number enlargement compared with the detention and the real control management; and finally an enterprise enlargement that have increasingly felt the need of a strong and steady managerial control.

The enlargement of the so called "semi-public companies" composed of a vast number of shareholders, created in fact countless methods and solutions for the corporate control and changed the classical setting that for centuries had marked the relationship between ownership and corporate governance.

TAB. 3 - SHAREHOLDERS TYPOLOGY AND GOVERNANCE

Control Typology	Shareholders	GOVERNANCE
Majority	Limited Shareholders and small company	Company leading is hold by a single or a small group with shares controlling more than 50% in a holding that has the majority
Pyramidal	Wide Shareholders Group, typical in wide public companies	Controlling
Legal	Wide Shareholders Group with large company with a wide and fractioned	By controlling half of remainig shares with vote right or through a Shareholders voting
Minority		Control by a minority interest through a proxy voting
Administration	Extremely fractioned Shareholders	Administrative criterion by receiving a proxy

Source: author's elaboration on the basis of Berle and Means' studies.

Thanks to the Berle and Means' studies it has been possible understanding how does few fractioned shareholders group is important for the corporate governance. Consequently, their theory highlighted why a wide and fractioned shareholders group started to delegate the managers.

2.2 The relation "Company-Stakeholders": one of the most important endogenous factors

As we have considered before, the size of the Italian company has specific parameters that for some reasons mark it from those of other European countries.

The cultural and historical heritage has highlighted a significant singularity about entrepreneurship and the structure which has set, with everything that goes with it.

We're not talking just about managerial techniques but also about the typology of Stakeholders who gravitate around the company and who influence it significantly.

This category of entities - sort with R.E. Freeman (1984) and implemented with new figures like partners, the media, the debt holders and creditors, policymakers and even competitors by Friedman (2006) - plays an important role in the corporate governance, in the case of a collective enterprise or in the familiar one.

Therefore, also the typology of Stakeholders will vary in base of composition and size of the enterprise.

It can be easily understandable just thinking to the relationship between a large enterprise to its business partners or shareholders compared with a family company with medium size.

The relationship between enterprise and suppliers, in the specific case, is the best example that can express how the category of stakeholders is important in the life of an enterprise.

Coase's theory (1937) can reinforce what we said before; in fact, through the Transaction costs theory, he was able to express the capacity of the firm to avoid additional costs in the production processes. This theory can be applied to the large companies but not certainly to the SMEs which can hardly surpass or "internalize" the production steps, avoiding to sign contracts with any suppliers.

It will be also understandably different the degree of interaction that occurs between a large company and financiers-creditors (such as banks) and that one created in the case of SMEs.

In the specific case of the relationship between Banking system and enterprise, there are a few considerations to make.

The intervention of bank credit for the family business performance (or in the case of SMEs) will play a really different role in comparison with the specific case of a wide company structure.

The access to finance for SMEs is now considered as a component *sine qua non* the company can adapt itself to the market changes.

Indeed, Italian companies have enormously suffered from the financial system crisis started in 2007 and persisting until today.

TAB. 4 - BANK LOAN TO ITALIAN RESIDENTS

- —— Settore privato: non corretto per le cartolarizzazioni
- – – – Famiglie: corretto per le cartolarizzazioni
- –·–·– Società non finanziarie: corretto per le cartolarizzazioni
- —— Settore privato: corretto per le cartolarizzazioni ed escluse le controparti centrali
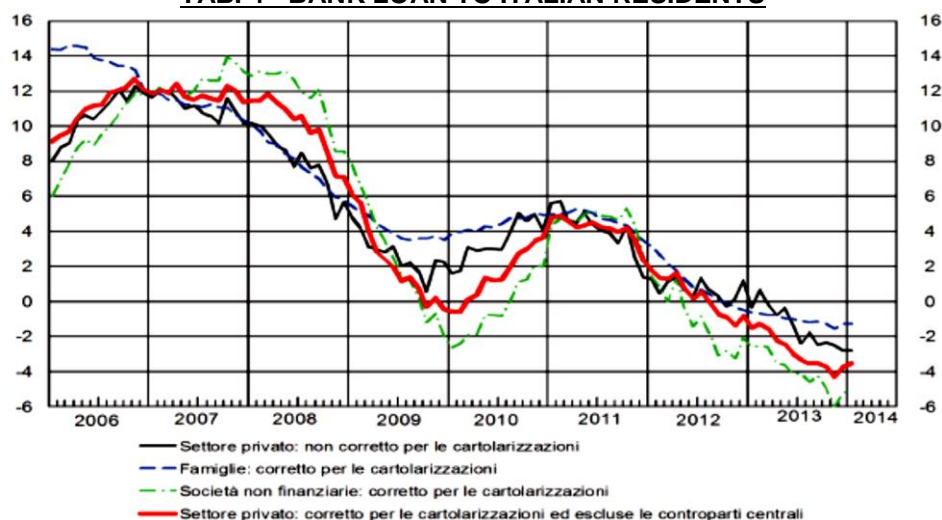
Source: Banca di Italia, "Supplementi al Bollettino Statistico, Indicatori Monetari e Finanziari" 2014

The banking support to enterprises has fell and enterprises insolvency on the previously bestowed credits has widely increased.

Tab. 5 - Bank Credit to Italian residents by economic activity - in millions euro

Periodo	IFM		Amministrazioni pubbliche		Altri residenti					Famiglie		
					Altre istituzioni finanziarie		Assicurazioni e fondi pensione	Società non finanziarie				
		di cui: banche	Amministrazione centrale	Enti locali ed enti di previdenza		di cui: pct con controparti centrali			Famiglie consumatrici	Famiglie produttrici	Istituzioni senza fini di lucro
	S628348M	S541849M	S554530M	S223255M	S579814M	S798896M	S591009M	S640592M	S515363M	S530259M	S675057M
2010	372.549	348.976	178.265	80.602	214.984	38.239	7.481	867.122	483.717	99.410	9.440
2011	402.276	368.358	175.150	82.322	194.492	21.199	6.071	893.577	507.197	101.176	10.126
2012 - dic.	361.012	333.211	186.327	81.448	243.211	62.542	4.712	864.656	502.053	97.852	10.143
2013 - gen.	370.400	333.444	184.323	82.131	225.991	55.210	4.676	865.699	500.660	97.593	10.236
feb.	383.225	350.602	182.365	82.524	234.976	64.836	4.760	865.144	499.536	97.182	10.222
mar.	377.661	347.277	184.846	82.833	237.366	60.766	4.819	855.275	499.635	96.667	10.220
apr.	389.213	354.513	182.218	82.874	229.579	61.346	4.756	852.449	498.986	96.511	10.119
mag.	369.674	346.052	183.099	82.937	241.027	73.959	4.845	848.352	500.020	97.012	9.769
giu.	369.049	345.300	181.101	81.790	235.073	65.019	4.735	840.141	499.861	96.360	10.003
lug.	364.377	342.594	180.104	80.148	224.301	60.374	4.585	842.543	499.733	96.211	9.956
ago.	363.155	342.302	179.634	80.181	238.200	76.137	4.799	830.075	498.047	95.659	9.949
set.	372.671	347.347	179.549	80.492	236.124	72.009	4.630	828.972	497.765	96.020	10.041
ott.	376.580	351.705	178.709	79.165	234.790	73.044	4.713	822.925	497.635	95.651	9.930
nov.	367.436	350.722	179.284	78.829	245.210	84.076	4.715	817.003	496.974	95.071	9.988
dic.	357.978	337.116	184.993	77.427	246.957	77.096	4.661	814.129	497.013	95.352	9.864
2014 - gen.	(390.311)	(363.487)	(184.914)	(79.773)	(209.530)	(65.809)	(4.939)	(837.879)	(495.899)	(95.974)	(9.961)

To overcome situations of collapse and suffering, many enterprises have significantly diversified their corporate choices, sometimes recommended by their "Financial Partners".

This is the case of *Risk Managment* and business investments in derivatives products.

The mirage of risk management that was sponsored by banking system through the techniques of risk identification, measurement, and control correlated to the corporate performance have led many companies to diversify their investments in derivatives products. All this, even and especially for diverting from a unfavorable economic situation. It is undeniable the fact that the growth in the use of derivatives is constant even in the case of SMEs (general or limited partnerships) and sole traders.

For many years corporate organization has shaped and based on leverage programs.

Perhaps, given to the disastrous effects that the unsuspecting massive use of these instruments has meant in recent years, not only in the business world but also in the same banking system, it seems advisable to re-dimension the relationship persisting between enterprises and banks finding an optimal solution. Here, we're talking about a solution that allows companies to transform their stakeholders in collaborative and non-invasive entities. In brief, a bold plan to deleverage. However, we note that if it is desirable to reduce the enterprises dependency from the banking world, in a period like the current an exasperated deleveraging action in the "PIGS" countries can result in deleterious effects sometimes leading to a debt deflation (generalized price drop) (Bortolotti B.,2013: 169)

In short, following a Latin maxim ever fallen into disuse: "*in medio stat virtus*" (Horace).

With the introduction of new production systems on the market, it was big - and still today it is - the need to invest in research and development. But, how it can be carried out, if the banking system in Italy is unwilling to finance projects of technological innovation and these latter are primarily accomplished through the use of set aside profits reserves.

Only financial indebtedness seemed to be the escape for the enterprises survival.

Banks and financing companies have become absolute and irreplaceable partners of the Italian firms.

In order to overcome the need for a financial support in times of crisis such as today - in which banks are disinclined to lavish credit – then, the insertion of the venture capital practice could be one of the many great ideas.

The possibility to use venture capital funds combined with a public participation in risk might be in the future one of the solutions against general insolvency status of small and medium enterprises.

Conclusions

Through an examination of the main characteristics held by Italian SMEs, it has been possible to bring out the countless differences that distinguish them from others European companies and USA ones.

As it has been shown in the previous paragraphs, the historic and economic roots played a decisive role in the entrepreneurship development in Italy. The particular economic, historical, sociological but also legal and financial aspects have marked the enterprise development in Italy until the current days. However, the current managerial arrangements, in Italy such as in each other Country, cannot be closed off from different factors existing inside and outside the company.

The governance structure will be the result of the interaction between the endogenous factors with the exogenous factors.

Moreover, it is clear how much do the managers have to analyze both the category of factors in order to make the best possible choice.

On the basis of what we have upper mentioned, we would like to highlight that the analysis on the corporate governance should take in consideration even more the interdisciplinary research.

Indeed, it's not possible studying the corporate governance theme without an accessory historical, legal, political and sociological research that inevitably affects the environment in which the company works.

Acknowledgment

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SUB-SECTION: ECONOMICS

BAROMETER OF EFFICIENCY UNDER THE ACTION OF RISK FACTORS

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Abstract

The stated purpose of this research theme is to test the capacity to measure and analyze the degree of security and financial health of the company, starting with the economic content of efficiency. In this work, the efficiency will be addressed in compliance and in relation with the risks affecting the performance of economic activities. The main subject of this topic will be especially the enterprise system exogenous risks, for those risks are taken measures to achieve the desired correction effects and involve some specific decisions focused on trend evolution.

Market adds to its natural fluctuations - caused by variations in aggregated supply and demand and the equilibrium price – also other disturbing factors of economic activities such as those related to movement and imbalances in the financial markets, policy factors, demographic factors, globalization intensity, vertical integration, etc.

In this paper we try to find, motivate and apply a working mechanism in the diagnostic procedures that we dare to define as a "barometer of efficiency" and, to prove its applicability, we will test it at company level, respectively a practical situation.

The subject took for testing the efficiency diagnostic procedure depending on the magnitude and intensity of the action of risk factors is represented by an industrial company in the field of mechanical industry, with a high level from the point of view of quality and economic efficiency. This company, like any other economic entity is anchored to specific market mechanisms and those belonging to the general market for goods, with all the advantages and disadvantages of integrating on the market. Fluctuations in the market are disruptive factors that reverberate on business activity, absorbing its effects sometimes in an amplified manner.

The proposed indicators for the diagnosis of efficiency fluctuation depending on the risk factors are, in our opinion, the "barometer" sizes that management should consider and therefore should intervene through appropriate corrective decisions.

In this context, the "barometer" of efficiency is the tool for measuring the risks effects fluctuations to which the company is connected through market mechanisms.

Keywords: efficiency; risks; instruments; indicators; effects.

Introduction in the topic

Efficiency is a relative term, but it accurate estimation, assessment and perception are extremely important for economic activity generally, but especially for management of companies under the action of exogenous risk factors.

When we say that an economy or company is more effective than another it is considered the result, seen as an effect, of a comparison of criteria or indicators, as: turnover, overall productivity, profitability, return or output per employee, return for facilities, production for facilities etc.

Beyond approaching the efficiency as perspective and analysis support for the achievement of comparisons, there is the question of usefulness of this concept in relation with different action of risk factors, both temporal and spatial. The association of efficiency concept with business risks is granted, as state of interdependence and causality;

measuring the effectiveness in compliance with the force of action of entrepreneurial system external factors may acquire other meanings than classical ones.

Individual actions or in conjunction with risk factors propagate on the whole activity, the final retrieval on the level efficiency of recorded. Action force acquires different intensities, with multiple effects, all of which require management decisions consistent with the directions of correction of generated effects. To measure the effects of exogenous factors action is not a problem in itself; identify and measure the nature and intensity of risk, on a trend likely to follow the generated effects becomes an issue at least interesting and a challenging for economists.

One of the ways of action to use and exploit is the operative detection of risk factors. Once identified through diagnostic analysis type, working adequate mechanisms can be applied, namely, that of measuring the impact and action force exerted on economic activity, so that the right decisions will put the company's trend on the desired path.

One of the ways for foundation of managerial decisions, as those corrective of risk factors influence on company's efficiency, proposed in this paper, is the application of the barometer working principle, an instrument mainly used in weather forecasts.

In the field of economic activities, similar instruments to the barometer are some specific indicators, with a particular sensitivity to the influence of risk factors, especially of those exogenous to company's system.

Considering the operating principle of the barometer - purely technical instrument - in terms of economic activities can be considered as haphazard at times, but the results shown become significant in the decision making process, as we argue below.

1. Efficiency and the barometer for measuring it within the economic activity

Terms of efficiency and effectiveness come from Latin, so the notion of *efficiency* comes from *efficere* = to perform, and effectiveness of *efficas-efficacis* = capacity to produce a desired effect.

The concept of efficiency has seen widespread over time, especially with the increase of limited and restricted resources. Currently, efficiency is generally applied in the decision making process in any country and at all levels. Typically, a higher efficiency means a favourable development of economic phenomena and processes based on the use of labour, but also a process for improving social and human phenomena and processes.

In the general context of efficiency, *i.e.* economic nature, it should be seen as a complex category, within economics sciences, which requires systematic approach related to the consumption of production factors and the results obtained following this consumption. The content of this kind of approach does not reveal anything other than production cost elements or charges for services provided, in connection with the allocation of resources, regardless of their nature.

Starting from the idea according to which the cost is the basic component of the value, the passage from cost to value is at the expense of a relatively simple calculation: the fine production cost and profit margin, and reporting sales price thus obtained to the equilibrium price on the specific market.

Without pretending to make new assumptions, we say that the expression of efficiency in the economy, as a rule, is made by using the concept of *value*. A subjective representation of value might be that the concept reveals the desire to have, to get, to be the holder of a particular good, thing or service. In such case, appreciation of value is not only difficult to be achieved, but especially without a comparative basis, starting right from the subjectivity of the analyzed phenomenon.

Contextualizing by summing the concepts of value with those of efficiency, in the open market mechanisms, and adding the wishes for valorisation of shares with those of profit

maximization, profit realized through the utility of goods and services, we can get a certain generalization of meaning and content of efficiency.

In economics sciences, efficiency is a field of theoretical and applicative approach of prime importance in the study of economic phenomena and processes; this object of study should be viewed as the net result of the report, correlation or comparison, between *cost* (effort, resource consumption of any kind) and *outcomes* (effects of economic actions, resulting in the amount of turnover, production achieved, outlet level, etc. .) expressed either in physical or quantified value.

Therefore, economic efficiency is and should be regarded as a structural and qualitative concept, that establishes a connection between advanced efforts in economic processes and final effects, regarding proper grounding of decision directed towards the: use of resources, increasing competitiveness, providing capacity for compensation of production factors, lagging of development resources and self-financing, etc.. From this perspective, the concept of efficiency is a central one within theoretical and methodological concerns especially in the sphere of economic pragmatism in a functional economy.

Economic efficiency means getting the economic and social effects useful, in terms of a rational consumption of resources, materials, labour and financial resources, using for this purpose, scientific methods of management and organization of productive activities (Florea Staicu, and others, *Economic efficiency of investments,* Editura Didactică şi pedagogică, Bucharest, 1995).

Economic efficiency can be both a quantitative and a qualitative measure of economic activities, therefore, at least in terms of quantitative properties behaves as any phenomenon and can be measured using specific tools.

The notion of *instrument* refers to *"tool, device by means of which is performed a specific operation." The Barometer* is an *"instrument used to measure atmospheric pressure"* (DEX- *The Explanatory Dictionary of the Romanian Language*, Romanian Academy, "*Iorgu Iordan* - Al. Rosetti" **Institute** of Linguistics, 1996).

Atmospheric pressure causes a certain state of *natural phenomena*: a high pressure generates precipitation and vice versa. Any change in atmospheric pressure directly affects, in a period of time that can be anticipated, the phenomena of nature, influencing them in a consistent deviation (fluctuation) that has atmospheric pressure.

The instrument for measuring atmospheric pressure of oscillations is called barometer and it is used by professionals in developing forecasts of natural phenomena, their evolutionary expectations, for short or medium term. According to compiled forecasts, those interested can take appropriate measures to mitigate the effects that can be caused by natural phenomena.

In economic activities, tools for anticipating *economic phenomenon* are designed to alert management of possible and future fluctuations and put it in a position to make decisions of consistent correction.

Depending on the direction to approach the efficiency of the company (management vision) shall be used appropriate tools; should be used those indicators that reflect eloquently also efficiency itself but especially changes recorded under the action of economic phenomenon oscillations produced by exogenous factors of entrepreneurial system.

A certain *indicator*, targeting a specific goal, purpose, desideratum, is nothing but a working tool, a *barometer* used in relation to the phenomenon to be studied, either post or ante factum.

2. Efficiency - principle of organizing of company's activity

Seen as a consistency principle governing the organization and conduct of business activities with a high degree of connectivity to mechanisms of market economy, efficiency gains a rich content, and also more resumptive for favourable results as desired (by management) to be obtained.

Theories of economic thought, especially the modern era define the efficiency as a defining object of economic science. Ability to effectively choose how consumer needs are met (unlimited) with resources available (scarce and expensive) under constraints caused by the action of a variety of factors, exogenous and endogenous to reference system, are nothing but expressions by which efficiency is located in the centre of economic theory and practice.

The diversity of definitions of the concept of efficiency demonstrate interest shown in this direction, both by ideologist and by contractors or their agents (managers) on the imperative need to maximize the effects that are generated by resource consumption.

The way of conceptualizing the essence of the concept of efficiency results from different ways of approach of:

- *managers* - are focused on the overall efficiency of the company;
- *investors* - current and potential investors perceive efficiency by profitability and time of repayment of invested capital;
- *employees* - show interest in the sustainability and profitability of the company,
- *creditors* - are interested in the efficiency of the company in terms of its liquidity and solvency;
- *clients* - are concerned by partner company in terms of stability, technology and quality of goods and services produced;
- *government* - is interested in the ability to pay taxes that are often progressive in relation to the degree of efficiency, without excluding the general level of developed activity.

In practical terms, comparing the value level of the above indicators is usually made in:

- *time* - compared to the level recorded in prior or future periods when used for grounding systems planning;
- *space* - compared to the level registered by other companies with the same activity or industry / sectors activity average level indicators;
- *structure* - representing the composition analysis of indicators of efficiency, i.e. analyzing the evolution of the elements that define each of these indicators.

An effective entrepreneurial management with a bigger decision-making efficiency in providing the state of economic and financial equilibrium of the company, fighting what is "governed" by a variety of risks, dangers threaten the very fundamental principle of companies: *efficiency through performance*. In the same level of pragmatism in the battle to achieve equilibrium state, are operating a number of risk factors that can be controlled, more or less in the decision- making process, acting as *constraints.*

Constraints under which the company meets the requirements of efficiency are generically called *risks.*

3. Risks of inefficiency in the company

Specialty literature (Petrescu, Silvia, *Economic and financial diagnosis. Methodology. Case Studies.* Editura Sedcom Libris, Iaşi, 2004) assigns a lot of pages for the ample concept of company risks.

Within the debate about business as existence, modality of organization as well as operational and functional perspective of companies sometimes the risk is associated with the notion of bankruptcy (Maria Bătrâncea, *Risk and Bankruptcy*, Dacia Publishing house, Cluj-Napoca, 2003), defined in many forms and meanings, most times the risk of being connected with the words: *uncertainty (*Ion Staicu, *Finances*, Editura economică,

Bucharest, 2002) and *future* (Florea Radu, *Methods and techniques of financial and economic analysis, Editura Scrisul Românesc, Craiova, 1999)*.

Both uncertainty and the future are usually referring to the same thing:

- *uncertainty* - the fact of not knowing what will happen if ...
- *future* - the multitude of facts, actions or operations that will be consumed in the following periods, with a certain degree of ... uncertainty.

The concept of risk is not significant only when the future is foreshadowed and there is the try to estimate the possible fluctuations of different rates, of which the return is the central one (S. Petrescu, M. Mironiuc, *Economic and financial analysis. Theory and Applications*, Editura Tiparul, Iaşi, 2002).

French literature (Nathalie Mourques, *Les chois des investissements dans l`entreprise,* Editura economică, Paris, 1994) approaches the risk as a elusive and vague concept, difficult to define by economists, this task is even more difficult for investtors and entrepreneurs.

In economic activities environment, risk, either economical or financial, accumulates a number of features that can define it in a certain way, depending on the direction from which it is approached: theoretical or pragmatic:

- is a *sum of uncertainties* of the economic phenomenon evolution generally, and production activities particularly;
- expresses the *ability to adapt to new conditions*, namely, the entrepreneur's ability to react appropriately to factors of future action, based on current expectations;
- shows the *degree of modification of predefined objectives*, under the action of exogenous or endogenous factors in the future;

Corroborating the assertions above, we can conclude that:

Company's risk is the uncertainty that the entrepreneur expresses under the action or disruptive factors in the economic processes as well as optimal responsiveness, according to predefined objectives.

Speciality literature divides and separates the concept of risk, according to the method of approach of various authors, in interesting categories, as: *way of anticipation* (potential and actual risk), *research field* (political, social and economic risk), *research level* (mondo - country risk, macro or micro economic risk), *nature of microeconomic activities* (investment, economic and financial activities), etc.

Depending on the interest expressed for the risk, its classification and the manner in which it is approached, represents a certain degree of interest from: *economists, managers, investors, staff,* etc.

External risks, particularly those related to specific market buoyancy act directly on the economic activity of companies, with minimal counter-balances from management.

Action force exerted from outside the company on demand or supply aggregate by factors of production or goods resulting from the activity of the company, is difficult to predict although it can be quantified, it is true, in the post factum phase.

One of the frequent questions is to identify the main categories of risks of the company that produce commeasurable effects on efficiency. Since fluctuations experienced by the financial side are most easily identifiable, is understood that financial indicators clearly show the risk categories.

Another answer to this question can be obtained by contextualizing the actual conditions under which the productive companies or service providers develop their activity, and we refer to the company's activities funding insurance.

Therefore, the financing costs of the activities are borne from several sources, among which: *own assets, bank loans, loans from specific financial markets, allowances and subventions of the state, non-refundable sources etc.* The access to external financing sources shall be done within competition conditions and under the action of exogenous risk factors of the company.

The categories of risk to which the company is exposed to within the call to external finances can be related to: volatility of financial markets, incertitude of rhythmicity, fluctuating costs, dependence upon restrictive clauses, etc.

On the other hand, risks, this time endogenous risk for the company, such as:

- *liquidity* - modification of assets' capacity, transformed in liquidities, of covering the current debts;
- *solvency* - oscillation of company's capacity to handle the assumes obligations.

As regarding *liquidity*, this presents at least two defining characteristics: 1) <u>transformation</u> of assets into liquidities and 2) <u>covering</u> of current debts, based on liquidities obtained through the transformation of specific assets.

3.1. Liquidity - Risk factor of the company

The company works with assets, meaning, with those values of any kind belonging to it and are worthy (fixed assets, current assets and financial assets), from which, the financial assets have the highest degree of liquidity, more precisely the cash from the office or from the current accounts.

We know the fact that the company has a complex activity, organisational and functional on specific stages of activity. Therefore, the production and services are simultaneously found in different forms of presentation, with different degrees of financing requested by the specific of the economical phenomenon. Consequently, it is unthinkable that providing the financing of the economic cycle can be exclusively realised based on own assets (it can be understood also the available cash), this premise being utopic on the market economy.

With the purpose of analyse and considering the liquidity as risk factors, usually, this is determined by the comparison of current assets with the current debts, in absolute values, but also within relative measures.

According to the interest of the analysis, this risk factor can be expressed in monetary units or in percent, resulting the following relations:

Absolute liquidity – calculated as difference between the current assets and current debts:

Lg = Acrt – Dcrt	≥ 0, represents the liquidity excess
	= 0, shows a general balance condition
	≤ 0, shows the lack of liquidity, condition of incapacity to cover the current debts

In which:
Lg – general liquidity,
Acrt – current assets
Dcrt – current debts

Relative liquidity – determined as a degree of the general liquidity (Lg), based on the following formula:

$$Lg = \frac{Acrt}{Dcrt} * 100$$	≥ 100, un exceeding degree for covering debts
	= 100, full covering of debts
	≤ 100, partial covering of current debts

In the analysis aiming to obtain a diagnostic for the company's activity, the optimum values of the "liquidity" barometer are comprised between 50 and 100%, with the following interpretations:

- if liquidity is *in excess*, meaning, higher than 100%, it shows: an excess of caution of the management, the fact that it does not assume risks, it limits the capacity of action for the development of the company's activity;
- if liquidity is *adverse*, less than „0", it shows a degree of dangerous debt for the continuation of the activity, with extreme risks, meaning, it presents those signal criteria that the company is about to go bankrupt;
- the gap of liquidity comprised between 50-100% is also known as „safety interval".

The management, when it founds out that there are oscillations of the *liquidity barometer* beyond the limits that assure the sustainability of the activity, shall have to decide corrective measures, with immediate applicability and possible fast effects. The possible decisional measures are the most diverse and, are first of all related to the management's ability and their contextualization to the level of the economical phenomenon.

One of the possible action directions, very general, is represented by the *operative control,* exercised over the entire activity of the company, demanding a certain positioning of the current liquidity barometer on the optimum gap, action that may be successfully realized through:

- the planning and pursue of the framing of financial resources flows (cash-flow in all its variants) within the optimality parameters;
- the planning of the production costs, pursue and operative correction of deviations acting over the effective cost;
- the correlation of the assets' market value with the level and due date for the payment of debts;
- the planning and pursue of the degree of indebtedness in report to the degree of utilisation of the production capacity.

The management's action directions do not limit to the measures mentioned above, these being only an example.

3.2. Solvency - financial risk factor

Solvency expresses the company's incapacity to reimburse upon due date the debts he acquired. This indicator – barometer is calculated as a report between the total assets (At) and the long-term debts (Dtl) and it expresses the way in which the company finances its activity based on own assets (share capital, reserves, accumulated benefits).

Apparently, there is no direct and proportional liaison between the level of the solvency indicator and the company's efficiency because, most of the times the company's development depends more on the borrowed capital than on own capital. But, the company's degree of exposal to indebtedness determines the efficiency, either positively or negatively, according to the optimality of that exposal.

Like the liquidity degree, solvency can be calculated a) in absolute values or b) in relative sizes.

Absolute solvency – it is determined as difference between:

Sg = At – Dtl	≥ 0, represents the situation of solvency excess
	= 0, it shows a general balance through solvency
	≤ 0, it shows the lack of solvency or general insolvency

In a more simple presentation, the degree of general solvency shows the following fact: *if the company had some money, after the capitalization of its assets at the market price and the payment of debts it means that it is solvable.*

Relative solvency – the result is either a coefficient or a percent, so that:

$Sg = \dfrac{At}{Dtl}*100$	≥ 100, exceeding degree of covering the liabilities
	= 100, full solvency
	≤ 100, partial solvency

The interpretation of solvency considers the positioning of the result in one of the following situations:

- solvency *in excess* (higher than 100%) is rare within the practice of production companies, because only these units register the situation of not having obligations;
- solvency over 50% is appreciated as positive;
- a degree of solvency between 30 and 50% shows a satisfactory situation;
- solvency below 30% is considered risky, at least by the possible financers.

The barometric system from above (the liquidity and solvency indicators) indicate the relevant capacity of the company's health condition, both in report to itself, but especially towards its competitive environment.

Within the above paragraphs, two of the barometer-indicators, belonging to the endogenous risks of the company, have been given as example. But, according to the approach of the indebtedness risk, this can gain endogenous or exogenous valences.

I consider the fact that indebtedness itself is an internal risk factor, but also exogenous to the company's system, being more a condition of competition within the acceleration of the evolutional rhythm of markets. As an argument to the affirmation above it can be mentioned the need of financing the technological infusion within the context of markets' globalization.

We are not mistaking by saying that any action of the risk factors to which the company is exposed, reflects upon the quantity and quality of the efficiency of the developed activities.

4. Implementation of the barometer's functioning principle on the measuring of risk factors' action

Generally, the measurement of the impact of exogenous factors' action over the activity of the company shall be done through specific economic-financial *indicators*. The level of those indicators must be optimum in report to: its content, the evolution registered in dynamics and, especially, to the perspective of the activity, reported to the foreknowledge system.

In order to bring an argument to the dependence of the company for the exogenous and endogenous risks, I consider explanatory the example below.

Data, regarded as support of economic- financial analysis, belongs to a company within the mechanical sector of the automotive industry.

Analysis support. Work situation 1

Crt. no.	Economical-financial information	VALUES (lei)		
		2011	2012	2013
1.	Turnover	8.102.301	8.618.212	8.058.949
2.	Total assets	10.736.821	15.501.958	18.413.148
3.	Ownership equity	9.527.049	14.163.524	17.651.646
4.	Total debts	1.209.772	1.338.434	761.502

Crt. no.	Economical-financial information	VALUES (lei)		
		2011	2012	2013
5.	Clients	5.723.656	8.789.932	11.746.984
6.	Stocks	31.314	94.919	107.085
7.	Gross profit	5.393.665	5.529.859	4.194.663
8.	Net profit	4.517.271	4.636.475	3.502.850
9.	Operating profit	5.483.065	5.412.493	4.567.850
10.	Wages fund	485.437	592.865	657.080
11.	Average number of personnel	14	17	19

According to data above, the company can be appreciated as performant, during a period of 3 years of study, irrespective to the dynamic evolution of specific indicators.

Nevertheless, from the observations resulting from the Work situation 1, several conclusions can be drawn out from the trend evolution of the 11 studied indicators, in absolute values, as it follows:

▪ *the movement registered by the Turnover (CA) in report to the evolution of total assets (At) shows an important impact of the trend registered on the specific market;*

The argumentation of this statement refers to the fluctuating evolution of the CA index from the level of technical equipment, which might be translated by a mitigation of the capacity of assets' utilization. The financial effort made in the direction of the technological infusion, concretized in technical and technological equipment meant to increase the production and physical productivity of assets, was not appropriately received by the market, through an appropriate increase of turnover, because the evolution of the specific market (The company produces spare parts and pieces for the energetic industry (hydroelectric power plants) that it exports to different countries of the world). left its mark upon the company's activity in a negative manner. The market contraction wave initiated beginning with 2009, reached the company at the end of 2010 and it continues to mark a descendent rhythm of the orders volume, implicitly a decrease of turnover.

▪ *The result level of the report between the turnover and the value of outstanding receipts (CI) suggests as clearly as possible the fact that the financial issues of the company are far to be solved;*

The cash-flow deficiency shows the financial dead end in which the general activity of the company is situated, from this perspective, even though the absolute level of debts tends to continuously decrease. Only apparently, the diminution of total debts can be appreciated as a positive factor, in fact, this shows difficulties in maintaining the rhythm of technological infusion as shown above. In such a field of activity, providing the production capacity with state-of-the-art technologies is decisive. Not cashing from clients (also blocked by the generalized financial recession), the difficulties in accessing credits, the reduction of work orders, all these are the results of the actions of the exogenous factors of the company: the market in general and the external financing system.

▪ *The report between Stocks (S) and the Number of employees (N) shows the preoccupation of the management for launching again the activity;*

Training for a new stage of the company's activity, positive – evolutionary, may have several components within the managerial strategy, among which:

▪ Professional training of the hired personnel, but also recruiting, on the same basis, of new members of the team, may be one of the action directions;

▪ Providing the stocks of specific raw materials, within the conditions in which the demand agreed in this field is decreasing, fact that grants two perspectives in the management's advantage: costs economy and time economy, both for the future re-launching of the activity;

- Identification of some new market niche once with the diversification of production, within the conditions in which the premises of the appropriate technological equipment and also the assurance of qualified personnel can handle this challenge;
- Realization of a market study can be another direction and in the same time an option of the management, study confirming or not the existence of a real and solvable demand for the realized products or for those that can be put into production on the specific market segment.

The analysis of absolute values has the capacity to highlight certain features and aspects of the economic activity of the company, but, it does not show the efficiency of the activity in its essence, but only a general part.

Starting from the data above, it imposes the determination of the main relative indicators, characteristics of this kind of productive activities, indicators meant to extend the analysis area over the efficiency level, and not only, starting from the following *working mechanisms*:

Work situation 2

Indicator	Calculation method
Financial security	$Sf = \dfrac{\text{Ownership equity}}{\text{Medium-long term debts}}$
Economic profitability	$Re = \dfrac{\text{Operating gross profit}}{\text{Total assets}}$
Financial profitability	$Rf = \dfrac{\text{Net profit}}{\text{Ownership equity}}$
Financial autonomy	$Af = \dfrac{\text{Attracted capital}}{\text{Ownership equity}}$
Degree of indebtedness	$Gi = \dfrac{\text{Exigible payments}}{\text{Total assets}} \cdot 100$
Rate of profit	$p = \dfrac{\text{Gross profit}}{\text{Turnover}} \cdot 100$
Debt's recovery	(Debtors + not cashed invoices)
Debt's recovery period	$Pcr = \dfrac{\text{(Debtors + not cashed invoices)}}{\text{Turnover}} \cdot 365$
Debt's reimbursement period	$Prd = \dfrac{\text{Certain liabilities}}{\text{Turnover}} \cdot 365$
Labour productivity	$W = \dfrac{\text{Turnover}}{\text{Average number of personnel}}$

The utilization of one or other indicators from above shall be chose by the entrepreneurial management.

As for us, we consider them both important and also appropriate to the purpose we have proposed, that of reflecting over the risks to which the company's activity is related to.

This way, the approach of the analysis considers the results of the relative indices that reflect the general situation of the company, on the one hand and, the contextualization of indices to the market environment where the company is active.

Work situation 3

Crt. no.	Indicator	Values		
		2011	2012	2013
1	Financial security	>>> 100%	>>> 100%	>>> 100%
2	Economic profitability	51,07	34,91	24,81
3	Financial profitability	47,42	32,74	19,84
4	Financial autonomy	12,70	9,45	4,31
5	Degree of indebtedness	11,27	8,63	4,14
6	Rate of profit	66,57	64,16	52,05
7	Debts' recovery period	257,84	372,27	532,04
8	Debts' reimbursement period	54,50	56,69	34,49
9	Labour productivity	578.735	506.953	424.155

Interpretations of data presented in the Working situation:

- *Profitability.* Both economic profitability (Re) and the financial one (Rf) argument the statements made above, those referring to the descendent evolution of the trend of general activity of the company. The decrease with almost 27 points registered by Re in 2013 from 2011 and of over 27 points of Rf is conclusive about the impact that the market has generated (external factor) over the economic activity of the company.
- *Financial autonomy.* If in 2011 the degree of autonomy was high (12,70 %), in 2012 this decreases to 9,45 % and collapses to 4,31 in 2013. The financial dependency of the company towards the non-cashed clients becomes alarming in 2013, corroborated with the rigidity of the financial market. From this perspective, the management can appreciate that, during this period, the maintenance on the market becomes a high priority.
- *Work productivity.* This indicator, that clearly reflects the efficiency of using production factors, especially of the human resources, decreases significantly, every year during the analysis period, on the one hand because of the decrease of turnover CA and on the other hand because of the increase of N. apparently, the decision to hire personnel during the periods of economic recession could have been appreciated as insufficiently substantiated. According to this detail and also from future perspectives, this decision supports itself. The training of personnel on appropriate levels of qualification supposes time and important financial efforts. It should be mentioned that in 2013 it was succeeded the opening of new markets on the Asian area, fact that give a plus of optimism for future periods.
- *Rate of profit.* Even if the level of this indicator can be appreciated as favourable during the study period, its trend evolution reveals at least one major problem, if analysed related to W, indicator registering an important decrease every year. The fall of the rate of profit with over 14 percent in 2013 from 2011 and a decrease of W with over 26 percent afferent to the same reference period, shows one of the causes which generated the fall of the general efficiency, respectively, the intensive utilisation of the work factor, degree of utilisation that reflects the level of productivity.

For relevance, Figure 1 below presents the evolution of 3 of the indicators showing the degree of efficiency of the economic-financial activity of the company, respectively, the economic profitability, the financial profitability and the degree of indebtedness:
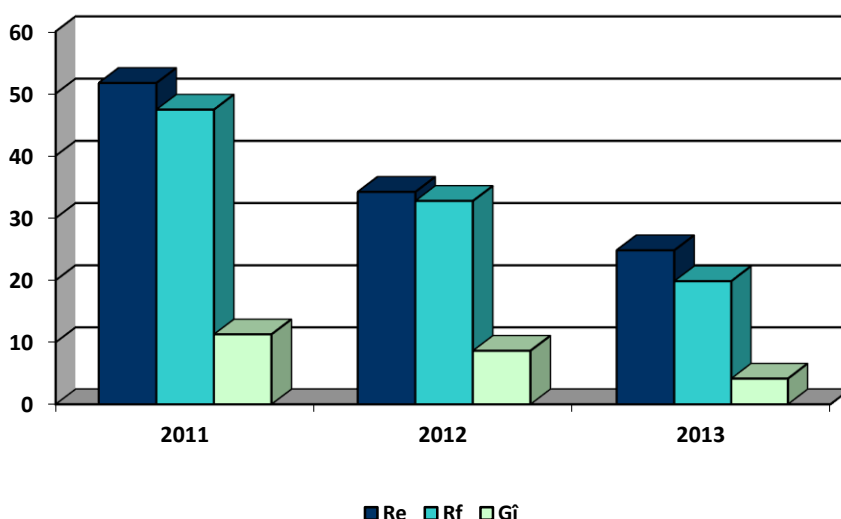
Figure 1

The place on a decreasing line of the 3 indicators presented in Figure 1 eloquently shows, without being necessary their quantification, that the company heads in a critical direction from the perspective of its activity. If the taken decisions or those to be taken shall not produce their effects within a bearable time gap, the future of this producing unit shall not be a happy one.

General cause: the fall of the specific market due to the global financial recession, with direct impact overt the investments within the energetic field, and implicitly over the producers of spare parts for this industry.
The conclusions over this subject show that:
   ▪ Exogenous risks of the company action obviously action on the activity of the company and are hard to controlled;
   ▪ The effects of the action of risk factors reflect through the efficiency indices, and then redounded upon the sustainability and traceability of the economic activity;
   ▪ The risks, both internal and external, affect the entire package of indicators supporting the degree of efficiency, mostly: the profitability, autonomy and productivity of the production factors;
   ▪ The obtain of information on the fluctuation of efficiency indicators by the call to the efficiency "barometer", at reasonable moments, grants the possibility to the management of acting operatively, with positive effects, through the system of corrective decisions.
The measurement of the action of risk factors over the general efficiency of an economic activity does not represent an issue itself. But, the correct choice of the appropriate working instruments that allow obtaining conclusive results with the evolution of the studied phenomenon becomes an art for the managers of the modern companies.
This paper was aimed to be a guide for the selection of the measuring instruments of the modification of the efficiency report related to the action of the risk factors. We can add

also other instruments to those presented above (efficiency indicators), but these would make the object of another thesis.

Without the assertion of absolute novelty brought to the functioning of the mentioned instruments (the indicators are almost known and applied practically), we believe that the novelty is represented by their way of selection and grouping, the order and approach according to the risk factors of the company.

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GLOBALIZATION AND THE EVOLUTION OF THE GLOBAL FINANCIAL SYSTEM IN THE CURRENT FINANCIAL CRISIS

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Abstract. *Globalisation is best exemplified nowadays by the stage of integration of the capital markets. The free movement of capital engages the countries in a global competition, makes them vulnerable in front of the multitude of speculative transactions. The globalisation comprises change processes of a spatial and temporal nature, which support a transformation of the organisation of the inter-human relationships, by connecting and extending the human activity across regions and continents. As a result, first of all, the concept of globalisation implies an extension of the social, political, economic and financial activities across frontiers, so that the events, the decisions and the activities in a particular region of the world may influence the people and communities from other regions of the world. We are all accomplices in causing these financial crises. The financial crises made their presence felt all throughout the modern economy history, they all represented major challenges at an international political level, although many of these crises did not have a large scope and did not develop into large crisis that would have encompassed the sector of the real economy. In the developed countries, the financial instability takes the shape of the banking and monetary crises, while in the underdeveloped countries, it is a mix of the two, accompanied by the increase in the difficulties linked to the service of the external debt. Both the financial crises in the middle of the `90s and the current crisis we are experiencing nowadays have had a great impact on the economic security of people in different parts of the world. This engendered a sudden change in the volume of the foreign investments flows, leading also to the reconsideration of the financial system, overall, by the great players in the international arena.*
The tendency of the financial crises towards instability caused numerous efforts to be oriented towards generating a general pattern of the financial crises.

Keywords*:* financial crises, real economy, financial markets

JEL classifications: F65, G01

1. Introduction

The last century witnessed a series of financial "obsessions, panics and crashes" which were felt more or less all over the world. The period we are passing through now is no exception to the shocks experienced by the financial markets.

As the connections between the worlds economies have tightened, the effects of the crises spread at a higher and higher speed, causing the governments and the citizens to become more and more worried about the frequency and the volume of the devastating impact of the movements on the financial markets. By way of consequence, we may speak about a crisis globalisation in the context in which no nation remains out of the reach of the gloomy effects of the crises faced by the world.

The financial crises are characterised by large-scale failures, both of the financial and non-financial enterprises, usually accompanied by a decrease in the incomes and prices all through the economy. In principle, the implications of such crisis can be limited to a

single country, but actually, both the financial interdependence and other forms of economic interdependence mean that these ones are transmitted at an international level, as a result of an all influencing phenomenon.

2. Premises and causes a new financial crisis

We are now at the core of the most serious financial crisis since 1930. In several respects, it resembles other crises appeared in the last twenty-five years, but it also differs clearly from the latter: the current crisis marks the end of a period of credit expansion, using the dollar as the international reference currency. The previous periodical crises were part of a wider advance-decline process; the current crisis represents the climax of a huge impetus that lasted for more than twenty-five years. (Soros, 2008, p.68)

In order to understand what is going on, we need a new paradigm. The paradigm at work nowadays, according to which the financial markets tend to reach a balance, is both false and deceiving. The new paradigm we are talking about does not concern only the financial markets, being based on the rapport between thinking and reality and supporting the idea according to which the misinterpretations and the misconceptions play an important part in shaping out history.

At present, the world is confronted with a situation similar to the one created after the start of the crisis that lasted between 1929 and 1933. The majority of the states are preoccupied with establishing and applying solutions which may alleviate the effects of the crisis that started in 2007 and has continued to increase; solutions that must concentrate first of all on the causes that have generated the current crisis, so that, in the future, a new crisis of this kind might be avoided.

The current crisis came slowly but surely. It could have been anticipated seven years before.

Since the '90s, the financial engineering started restructuring everything it laid hands on, and first of all, the mortgage credit. The principle is relatively simple: the bank forms a special vehicle in which it collects the credit contracts and then issues *via* this vehicle a series of obligations to whose tranches each one is attached, at a certain credit file; this enabled to obtain the borrowed sums and generated a credit explosion. (Mâşu et al, 2009)

Numerous investment funds came in the situation to borrow in order to buy these attached obligations. But as these had a higher interest than that of the loan, the investment generated substantial profits. The banks participated in this by creating investment vehicles as their own investment channels. In order to protect themselves from any loss of control, they covered their assets by means of derived financial products that covered against any loss or disruption caused by a certain instrument. As a result of this financial engineering, the risk fell under the zero level, at least theoretically.

By using all these products, the banking system created a balloon of speculative operations, operations that took place without encountering any problem as long as the ones who borrowed initially paid their debts. But since 2005, the credit holders no longer succeeded in reimbursing their debts because the interests practiced by FED increased very slowly, and also because the value of the assets put as pledge crashed, so the creditors no longer succeeded in recovering the volume of the granted credit.

At the beginning of 2007, both the actors of the real estate market and the credit institutions realised that the number of their clients who could not pay their debts was increasing. What is paradoxical in this crisis is the fact that, since the beginning, the American bankers knew that this could end in a bad way and hired these subprime credits that is they called them this way because they knew that there was the possibility of the impossibility of their reimbursement.

In spite of the recent failure of the risk management professionals, the markets will start to amend themselves. The financial institutions are reducing their indebtedness degree, and the necessary capital reserve for banks or investment societies is on an upward slope.

This change is not taking place due to the regulations, but, to a large extent, due to the fact that the financial partners impose on themselves and mutually the respect of the conditions.

The current crisis extended, through the network of banking channels, from the USA to Europe and afterwards, all over the world. Since the latter half of 2008, the crisis has been global, encompassing all the economic sectors, but also international, affecting the great majority of the national economies.

In just a few years, it is almost certain that we will be in an economic world much different from the one we are accustomed to. The severe credit crises have led throughout history to deflation: a period in which the economic activity takes place passively, in the best of cases; it is the reign of cash, and the goods and the means of production sell cheap. But this is not the landscape we will emerge in from the current crisis. (Greenspan, 2008)

Even if credit creation is the foundation of the wealth-generation process; it is also the cause of financial instability. We should not allow the merits of the former to blind us to the risk of the latter. We are lucky enough to have inherited the best monetary and financial architecture in history. The system comes complete with a central banking system, which, if used properly, should be able to contain the inherent instability of our credit system, and thereby enhance our long-term wealth-generating capacity. (Cooper, 2008)

The global financial stability map (Figure no. 1) presents an overall assessment of how changes in underlying conditions and risk factors bear on global financial stability in the period ahead.
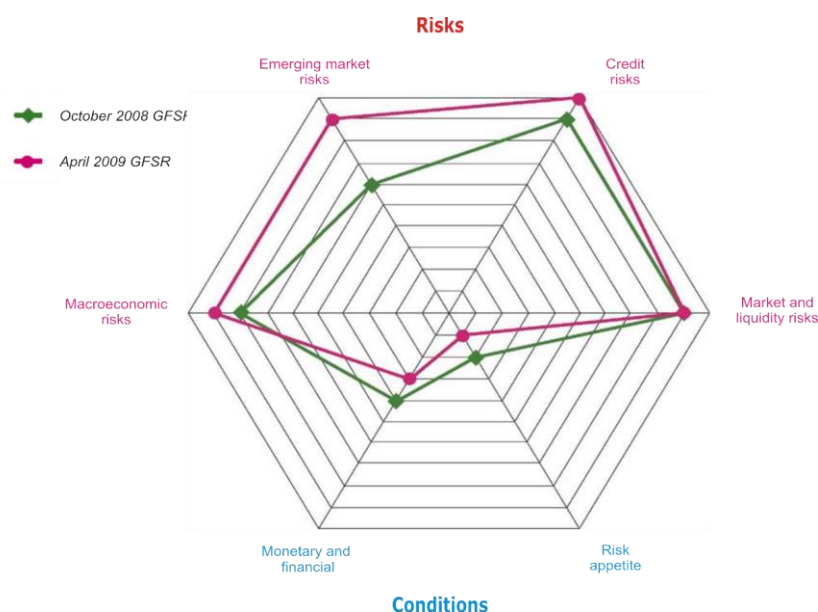
Figure 1 Global Financial Stability Map
Source: IMF, Global Financial Stability Report, 2009, p.16

As we can see, nearly all the elements of the map point to a degradation of financial stability, with emerging market risks having deteriorated the most since the crisis beginning in 2007. The economic downturn has gathered momentum, resulting in deterioration in macroeconomic risks. The IMF's baseline forecast for global economic growth for 2009 has been adjusted sharply downward to the slowest pace in at least four

decades. Global financial stability has deteriorated further, with emerging market risks having risen the most since the 2008. (IMF, 2009)

Thus, in July 2007, the crisis started on the mortgage credit market in the USA, which was then felt in other countries, as well. A year later, what was initially defined as mere ephemeral financial turbulences became an economic world crisis in full swing, being the biggest economic crisis after the one recorded in history eight decades ago. (Adumitrăcesei, 2009)

The mortgage credit crisis fully struck both the Western and the European banking sectors, causing the collapse of big financial colossi and of what once used to be the powerful economies of many developed countries. No sooner had those who had taken credits from the banks not been able to give back the loans, on the construction market, than those banks announced imminent crash. Consequently, the construction industry was the place the current crisis started on, but which spread rapidly afterwards.

In the last years, to many people's satisfaction, the banks invited their clients fervently to contract loans, in most of the cases operating on a simply mathematical level. The real economy had added a virtual component, which it turned out to be dependent on; when this one no longer functioned, the real economy started to tremble. The financial crisis is no longer (as it is believed to be) the crisis of the virtuality based on mathematics and informatics; the current crisis already is a credit crisis, a liquidity crisis etc. The restrictions in granting credits and the hesitation to invest have spread almost everywhere.

Nowadays, it is not only the construction market that has already reduced its size, but other markets as well: the product distribution has become difficult, the credits are granted very strictly, the shares of the companies on the market decline, even the economic initiative is at a standstill. Although there are opinions according to which the current crisis is drawing towards its end, nobody can foresee neither its end nor the safe way towards the exit from this situation. (Marga, 2009)

Besides the thirst for credits, or, better said, the thirst for great profits "overnight", the current crisis had other causes, as well.

First of all, the tendency of maximisation of the profits obtained by a small majority (represented by the shareholders and the directors of the great multinational companies) caused the unprecedented amplification of the speculative operations. Within these operations, an increasingly high weight was gained in the last years by the derived contracts, these being in fact bets on possible fluctuations of the price of the shares, the bonds, the currencies or even the stock index. This tendency of profit maximisation, especially through the amplification of the speculative operations to the detriment of the real economy, inflated more and more the sphere of the nominal economy, like a soap bubble, bubble that exploded with the outbreak of the current crisis.

A second cause of the current crisis lies in the heightening of the discrepancy between the real economy and the nominal economy, due to the spectacular increase in the volume of the speculative operations. In recent years, the speculative operations have become prevalent in the sphere of the nominal economy, which created a real disruption between the two spheres of the economic life, generating the current economic crisis. In the context of the crisis, the markets reacted suddenly: the demand for "exotic" securities sustained with assets crashed rapidly. The incapacity to establish a fair price for this kind of instruments convinced many people to stop investing in them. In the absence of the interest on the part of the investors, a significant number of these products that remained incomprehensible to the initiated ones will disappear from the market. The innovation in finance, as in any other sector, had its winners and its losers. The latter leave the field of financial speculation, sometimes crashing noisily and disrupting the others' activity.

The eruption of the financial crisis and the uncertainty provoked a crisis in the real economy. Individuals, suddenly uncertain about their job prospects and facing more expensive and difficult to-obtain financing, delayed purchases that could be put off,

typically consumer durables such as automobiles, refrigerators, and televisions. Similarly, firms delayed the implementation of investment projects, preferring to wait and see if such projects would remain profitable under future demand and financing conditions. This increase in precautionary saving (and the associated reduction in investment and consumer demand), together with increased borrowing costs and tighter lending standards, explains the unprecedentedly rapid fall in global demand for manufactured goods during the fourth quarter of 2008 and the first quarter of 2009. Moreover, while consumer demand has and will recover, saving rates are unlikely to return to earlier low levels, because households will continue to save to restore a proportion of the financial wealth destroyed during the crisis. (World Bank, 2010)

In the third place, the current crisis was generated by the promotion of policies that were based on the exacerbation of the role of the markets and on the limitation of the states' role, both within each national economy, and at the level of the world economy. The policies adopted by the international financial institutions concerned mainly the profit maximization and the growth of the big multinational companies. The application of these policies has led to the malfunctioning of the majority of national economies and of the international economic relationships, which has definitely contributed to the start of the current crisis. Of course, the determining role in engendering chaos on the financial markets was held by the tendency of maximization of the profits obtained by the globalisation promoters – the multinational companies. This tendency brought about the adoption, by the great actors on the international scene, of several policies based on the free functioning of the markets and on the reduction of the economic role of the states in the functioning of these markets – the deregulation.

Some people think that the intensification of the regulation could improve the performance of the financial markets – the idea that a single institution should become the regulating factor of the market stability, with the authority of highlighting the potential imbalances. Indeed, the international financial community made many efforts in recent years to institute such a kind of supervision, but none of them has succeeded in preventing or amending the crisis humankind is facing nowadays. Those who make the economic policies cannot anticipate with sufficient certitude the financial and economic shocks and the consequences of the economic discrepancies. This will never take place as predicted. This is why the financial institutions must have important capital and liquidity reserves, due to which they may cope with extreme situations, like the one we are being confronted with nowadays.

The financial and economic crisis that started in 2008 left people perplexed. In the age of the greatest scientifical and technical revolution and of the most constant economic growth in modern history there appeared, relatively suddenly, the signs of the inability to pay and of the insufficiency of the financial liquidity. These were followed by the credit reduction, then by the decrease in the economic activity and by the unemployment, with the subsequent social and political concerns.

Although the current crisis is in full swing, we can underline a few resemblances with and differences from the crisis in 1929-1933.

In the first place, just like the previous crisis, the current one started in the USA once more and, once again, developed as a lack of stability of the financial market, at first. In the second place, the current crisis has an international nature, affecting, to a greater or a less extent, the majority of the countries. In the third place, just like the previous crisis, the current one tends to include all the sectors of the economic life. In the fourth place, just like the previous crisis, the current one is supposed to be a long-term one, with profound effects both at the economic and financial level.

What differentiates the current crisis from the previous in the first place, is the encompassing sphere of the capitalist system in the world. This crisis encompasses a greater manifestation space because the majority of the countries are governed by this

capitalist system embraced once the socialist system collapsed. In the second place, another difference consists in the growth degree of the international labour division. Based on the scientific and technical progress, the international economic relations diversified and amplified more and more. As a result, the interdependences between the international economies became stronger and in this way was achieved the market globalisation, which favoured in particular the multinational companies and the developed countries. Finally, another difference consists in the current stage of the relationship between economy and nature, a quite concerning situation if we come to think that the industrialisation of the majority of the countries affected this relationship seriously. The differences between the current crisis and the previous one can be expected to concern both the encompassing sphere, and its intensity, and, by way of consequence, the scope of the generated economical and social effects.

Responsible for the increasing frequency of the financial crises is the financial globalisation, although the financial liberalisation and the innovation, combined with the free capital movements, are fundamental factors for the economic growth, together with high rates of savings, budgetary discipline, weak inflation, quality institutions and high human capital levels and technological development. (De la Desha, 2007)

The global financial markets expose and sanction, by highlighting the economic difficulties; at the same time, they facilitate the transmission of the financial distortions, at the highest speed and more efficiently than ever. This means that the shocks affect other countries and crises spread much more easily.

The facts have proven that the market liberalisation, the free flows of capital and the financial innovation have their own problems – there where these conditions prevail, the financial crises tend to happen more frequently.

The globalization of the financial markets was a successful project of the market fundamentalism. If the financial capital is free to circulate, it becomes difficult for any state to tax it or to regulate it, since it can move elsewhere. This fact places the capital in a privileged position. The governments must often take into account rather the requirements of the international capital than the desires of its own population. This is the reason why the globalisation of the financial markets served the objectives of the market fundamentalists so well.

The potential benefit of financial globalisation for the emerging economies, results from the same unique factor which differentiates the emerging economies from the developed ones. We count weaker productivity and level of income and, as a result, the policies which try to transmit information and to solve the imperfections of the credit market and to improve the institutions by increasing transparency, ampler information and better banking regulations, which can be insufficient for the prevention of the crises in these emerging economies. (Martine et al, 2002)

The growth at an international level of the financial crisis started in our country in 2008 by the deregulations and the errors of the banking financial system and the desire of the shareholders and of the leaders of this system to maximise their profit have affected almost all the countries developed from an economic viewpoint.

3. Romania in the current crisis - facts and solutions

Although it is far away from the epicentre of the financial crisis, Romania's economy is not sheltered from the effects of the decline that has brought the big international markets to their knees. And the most affected economic sectors are the ones which, not long ago, multiplied the investors' money overnight. The Bucharest Stock Exchange occupies a top position in the range of sectors seriously affected by the financial crisis. The limitation of the exposure in the area of the foreign investment funds basically made the quotations of the most liquid actions collapse.

The current financial crisis affected the banking system in several ways; first of all, the decrease in liquidity. Secondly, the increased strictness of the crediting conditions of the population reduces the access to credits in currency. The external context also left its mark on the exchange rate, which has recorded a high volatility lately. This crisis was generalised to the whole banking network of the planet, in the entire world economy, particularly due to its globalisation, invalidating the hopes that the effects of the financial crisis will be limited to the USA and Europe, through the decoupling of the emerging economies.

At an international level, we can talk about four big orientations regarding the recovery and the reform of the markets stifled by the crisis:

- the integrity of the financial markets, the big world banks must meet annually and create supervision bodies for all the big financial transnational companies;

- the reform of the financial institutions, IMF and the World Bank in the sense of strengthening the financial stability and of re-establishing credit flows towards the emerging countries;

- exactness and rigour in the operators' functioning;

- support for the world economy, by way of recovery policies, which confirms the fact that the way out from the crisis and recession depends to the largest extent on the content and the strictness of the ensemble of measures applicable to both of the components of the problem: recovery and reform, reform and recovery.

Starting from the main causes that generated the current crisis, we can suggest a few anti-crisis solutions, possible to be applicable.

The first solution would be avoiding the absolutisation of the profit maximisation all throughout the economic life. This solution would eliminate the objective basis for the amplification of the speculative operations and would ensure the appropriate correlation of the nominal economy to the demands of the real economy. In this context, the evolution of each national economy, and also the evolution of the international economic relationships are based on the passing from the profit maximisation tendency towards the achievement of a triple efficiency (economic, social and ecological).

The second solution would be that of coming back to the natural relationship between the real economy and the nominal economy. This would suppose that, in the ensemble of the economic life, the real economy might have the determining role, while the nominal economy could always adjust to the demands of a healthy development of the real economy.

The third solution consists in the appropriate combination of the role of the markets and of the state's role in the functioning of the economic life in every country, as well as in the international economic relationships. This way, all the three solutions aim not only at the attenuation of the effects of the current economic crisis, but also at the prevention of the initiation of a similar crisis in the future.

4. Conclusions

The current crisis extended, through the network of banking channels, from the USA to Europe and afterwards, all over the world. Since the latter half of 2008, the crisis has been global, encompassing all the economic sectors, but also international, affecting the great majority of the national economies.

Emerging from the crisis started in 2008 will imply the adoption of several measures of financial, economic and social nature. The current crisis was caused by the way in which globalisation has been practised until today and, in this way, by the type of development adopted in recent decades. This development type is already being questioned and will be changed in one way or another, in accordance with the resources of each country, and with the role that will be assumed by the great actors on the international scene.

Undoubtedly, not all the crises are the same. We could consider the current crisis as the first global crisis, which marks the passing to a new stage, both for the majority of the world countries, and for the overall development of the economy. It remains true that this statement will be fully understood only when the current crisis has ended.

In spite of this, the current crisis will not put an end to globalisation; on the contrary, the globalisation will take place in a different way, there will be mutations, a shifting of the gravitation centres and perhaps a different interaction system of the national and international actors.

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CREATIVE ECONOMY: A NEW CADRE FOR MEDIA INDUSTRY

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Abstract: We wonder why the creative economy concept causes so much passion, excitement and so high expectations. Because imagination, creativity, competence, fantasy, individual talent, ingenuity were and still are today catalysts that led to society development. How does creative economy, that seems to promise so much, distinguish from other economic stamps which imprinted the human community in the course of history? These are some of the questions we will try to answer in this paper work, having in mind as objective the study of communication processes and mass-media. Generally, the research over mass-media system considered that the content analysis may provide the means to understand the society we live in. In terms of methodology, starting from the observation of mass-media industry and economy actuality, we propose to make an analysis of content. We will raise issues regarding concept definition and delimitation, historical development and media industry analysis from an economical perspective, analyzing the opinions of some other researchers about these subjects. We will try to present the concepts we support having in light some reference paper works and to illustrate with realities from Romanian and international mass-media economy. We will go through literature and we will try to support with empirical data the subjects discussed in theory. To achieve these things, we will use relevant statistical and official data of other researchers. In the examination of mass-media economy we will study economical models, comparative analysis and analysis of international organizations positions. In the current situation, mass-media is part of a technological and economic transformation, like the whole society is. An economical approach of media industry is important today both from the scientific and practical point of view. Most of the decisions taken by the factors that lead the businesses in media sector are largely influenced by financial resources. In this aspect, the economic approach of media sector is extremely relevant to understand the way firms act in the media sector and what are the perspectives of this industry.

Keywords: communication; mass communication; mass media.

JEL classification: L82; D83.

1. Introduction

In the current situation, mass-media, as well as the whole society, is in a process of technological and economic transformation. An economic approach of media industry is important today both from scientific and practical aspects. Most of the decisions taken by the leading factors of the businesses in media sector are greatly influenced by financial resources. In this issue, the economic approach of media sector is highly relevant to understand the functioning of companies from mass-media sector and what are the perspectives of this industry.

We wonder why the creative economy concept causes so much passion, excitement and so high expectations. Because imagination, creativity, competence, fantasy, individual talent, ingenuity were and still are today catalyst that led to the development of society. How does creative economy, that seems to promise so much, distinguish to other economic stamps which imprinted the human community in the course of history? These are some of the questions we will try to answer in this paper work, having in mind as

objective the study of communication processes and mass-media. Generally, the research over mass-media system considered that the content analysis may provide the means to understand the society we live in.

In terms of methodology, starting from the observation of mass-media industry and economy actuality, we propose to make an analysis of content. We will raise issues regarding concept definition and delimitation, historical development and media industry analysis from an economical perspective, analyzing the opinions of some other researchers about these subjects. We will try to present the concepts we support having in light some reference paper works and to illustrate with realities from Romanian and international mass-media economy.

In the first part we will try to show that media industry is a vector of cultural communication but in the same time is a creative and productive economic sector. In the second part, we will start from the steps of economic development: agrarian economy, industrial economy, knowledge economy, and then stop to the current topic which is creative economy. We will define the concept of creative economy and we will position mass-media in this economical frame. In the last two parts we will highlight some classical and contemporary approaches of creative economies and industries.

The conclusion we are trying to achieve is that cultural and economic development are two interdependent parts of the sustainable growth process. In this process, in both the European and Romanian society level and the worldwide level, mass-media is one of the main actors.

2. Mass-media industry: culture, creativity and creative industry

Mass-media industry is by excellence a vector of cultural communication and a creativity catalyst. But how can culture and creativity be understood and approached from the economic point of view?

In December 2012, based on the 305 article of the treaty regarding the functioning of the European Union, European Commission decided to consult the European Economic and Social Committee regarding the promotion of cultural and creative sectors to stimulate the economic growth and jobs creating in UE. The document resulted after this consultation stipulate the vision, the role and the special importance accorded at the top of European Union to creative industries and economies.

We have in the box below the opinion of European Economic and Social Committee over the creativity and culture as fundamental values of the European Union:

The Committee believes that for Europe culture and creativity are:

- the cornerstone of the values underpinning EU identity and its social market economy model;

- a winning combination in terms of high-quality local, regional, national and EU economic, social and production-related development;

- key elements of comparative advantage in terms of European added value in the design, development, production and consumption of tangible and intangible assets;

- a key contributor to competitiveness across all economic and social sectors;

- a source of rich potential in terms of more, better jobs;

- an international calling card advertising the EU's prestige and originality throughout the world.

**Figure no.1 Creativity and culture – fundamental values of the European Union
Source: European Economic and Social Committee EESC COM(2012)537**

It is notable the substantiation of belief and lending attributed today to the idea that art and culture may be, in fact are „productive", and development exists in close dependence to creative ideas and creativity. In 1947, Theodor Adorno and Max Horkheimer, key members of the Frankfurt School, introduced the expression „Culture Industry" that marks the concept of mass-produced products, an educational and manipulation system, and without doubt, profit pursuing. We notice so the development of a massive cultural industry, a system managed by an industrial logic, but also by a market for cultural goods. Culture industry is fascinating through the dynamic and the utility we see, serving day by day to billions of people, consumers who crave for beauty, good taste and most important, information. But these cultural industries are parts of creative industries and economies. The term „creative economy" appeared in 2001 in John Howkin's book, „How People Make Money from Ideas", a book about the relationship between creativity and economics. For Howkins, creativity it is not new and neither is economics but what is new is the nature and the extend of the relationship between them and how they combine to create an extraordinary value and wealth." (UNCTAD *Creative Economy Report 2010*) The creative economy concept is based on the idea that cultural and economic developments are phenomena's which are intertwined and are an intrinsic part of the process of sustainable growth. If just a few years ago there were talking's about the contribution of the services to economic and social development of a nation, after the accelerated development of the immaterial economics, the concept is brought forward by a new one, the creative industry. According to John Howkins estimations, in the year 2000, the creative economy was worth $ 2.2 trillion and it was growing at 5 per cent annually. The situation in the European Union confirms the analysis made by Howkins, who predicted the potential and the ascending trend of creative economies. „The creative industries represent in European Union level a significant number of working places as we can notice in the next chart. The employment situation in the main core of creative industries, out of the 27 member states in UE, in the year 2008 was about 8,5 million or 3,8% of the total European workforce. The situation of the employment in the total of creative industries was about 14 million or 6,5% out of the total workforce in European Union" (Tera Consultants analysis, 2010) as we can notice in the chart below.

Table no.1 Economical weight of creative industry in EU 27 (2008)

Creative Industries	VALUE ADDED		EMPLOYMENT	
	VA 2008 (billion €)	% of EU VA	Jobs (million)	% of EU employment
Core	558	4.5%	8.5	3.8%
Interdependent	213	1.7%	4.2	1.9%
Non dedicated support	90	0.7%	1.7	0.8%
TOTAL creative industries	862	6.9%	14.4	6.5%

Source: Processed by the author based on the Tera Consultants analysis data

In European Union, culture and creativity gain an increased attention not only for the social and cultural matter but more for the economical one. Europe is the place where the idea and the project „European Capital of Culture" were born, a program in which are involved numerous and skill labor as well as significant financial resources. The „European Capitals of Culture that received an European title and financing from this program (1,5

million per capital), in some cases had about eight times bigger stimulation effect over the generated incomes, gathering investments with values between 15 and 100 million euros in their operational programs and served as catalyst for additional investment capital. These were usually addressed to a public of millions people, involved hundreds of volunteers and left a long term impact for the involved cities, regarding the improvement of skills, capacities, affinity, infrastructure and cultural image." (European Commission „Creative Europe" 2011)

Maybe it is not so easy to accept that two concepts that are specific for the cultural-artistic phenomena are in the same time vectors of economic growth, sources that generate many work places, which diminish the markets and that, add to individual, national and regional incomes. On this framework, mass-media industry and economy in contemporaneity reseats its anchors and contribute to the formation of a global economic puzzle based on creativity and innovation. This way, mass-media economy answers the interfusion challenges of the theoretical frame with reality and the dynamic of the society.

3. Definition of creative economy concept

The evolution of global economy is surprising in the matter of forms taken by the course of centuries. In history, the human society accentuated the development as the agrarian economy grew, and the next stadium was marked by industrial economy. A plus of wellbeing in the people's lives was brought by the economy based on services, and the culmination of promises of even better is reached with the step to economy based on knowledge. But it seems that this is not the end: the new decade is predicted to be based on creative economy.

Creative economy is encountered in many sectors, starting from agriculture to the space crafts, because „creative economy uses people that are paid to think. They are constantly analyzing and exploring in their day by day work multiple possibilities to reach to viable solutions." (FINAL REPORT – Eastern Ontario, 2010) The national and multinational societies, the cities and the regions, the states or the continents need weapons for their creative economies to grow. This is why three distinctive but interconnected elements are needed as we can see in the study made by Toronto University. These three elements are: cultural creative industries, creative industry and creative economy.
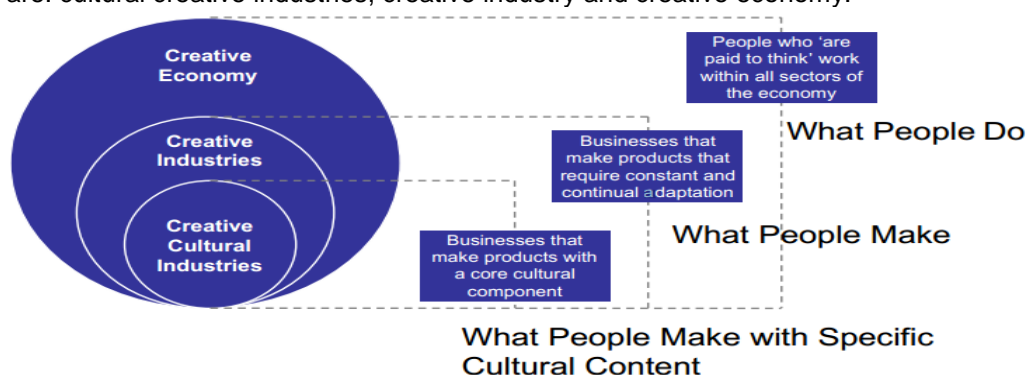
Figure no.2 Elements of creative economy
Source: Processed by the author based on The final report – Eastern Ontario: Canada's Creative Corridor

In the biggest circle we have creative economy. The main objective is to encourage people to do all possible things to find functional solutions that reply with success when they have a problem to solve. In the second circle, creative industry, we have the people that create, think and act to adapt constantly and continuously, so that all their creations to be exactly what is needed. The smallest circle regards the thinking and the creation activity focused

on a cultural base component. Together, these three elements, different but interconnected, reflect in words and in images what creative economy means in reality.

United Nations Conference on Trade and Development (UNCTAD) defines creative economy like this:

The creative industries:

- *are the cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs;*

- *constitute a set of knowledge–based activities, focused on but not limited to arts, potentially generating revenues from trade and intellectual property rights;*

- *comprise tangible products and intangible intellectual or artistic services with creative content, economic value and market objectives;*

- *stand at the crossroads of the artisan, services and industrial sectors; and*

- *constitute a new dynamic sector in world trade.*

Figure no.3 Definition of creative economy
Source: Processed by the author based on United Nations Conference in Trade and Development (UNCTAD).

According to the vision transmitted by the UNCTAD, creative economy is based on creative acts that may generate the economical grow and development. Creative economy aspects include culture (cultural creations) and intellectual property, which interacts with society through technology. In other words, we are talking about mass-media as a promoter and diffusor of cultural values that are transmitted to society through modern technologies, obtaining in return, beside the satisfaction of accomplishing a public mission, consistent economic rewards. Media industry and economy are based entirely on economic activities that need knowledge, with an economic development at a micro-, macro- and mondo- level. Creative industry represents the heart of creative economy, one of them being media industry.

When John Howkins was asked how he would define creative economy, he said: – „It's an economy where the major inputs and outputs are ideas. I would also say it's an economy where most people spend most of their time in having ideas. It's an economy or society where people worry, think about their capacity to have an idea; where they don't do just a 9 to 5 job something routine and repetitive, which is what most people did for many years whether it was in the field or in the factory. The 'creative economy' consists of the transactions in (the resulting) creative products. Each transaction may have two complementary values: the value of the intangible, intellectual property and the value of the physical carrier or platform (if any). In some industries, such as digital software, the intellectual property value is higher. In others, such as art, the unit cost of the physical object is higher." (An Interview with John Howkins
http://www.wipo.int/export/sites/www/sme/en/documents/pdf/cr_interview_howkins.pdf)

Mass-media activity is by its nature dynamic and creative. The people involved in mass-media don't have a fixed schedule like does who work in a factory. Here everything moves around ideas. Most of the work time is consumed to generate, to process, to pack and to transmit the ideas to the receiving mass through modern technologies, and all these expand with a social and cultural note, specific for the context made by the symbiosis between the broadcaster and the receiver. The added value component is the infusion of

intellectual creation. The more this value is bigger, the more the economic social and cultural impact of mass-media industry grows.

4. Classical approaches on the creative industries and economies

For a better understanding of the new economical paradigm, which is „creative economy", it may be a good idea to return hundreds of years ago (1744) in the time when Adam Smith lived and wrote, the father of political economy, the one who expressed with so much determination over the unequivocal delimitations between the productive work (which adds value) and unproductive work (which doesn't add value).

The well-known economist demonstrates that „the work of a workman from a manufacturer is usually added to the value of the materials he works on, his own sustenance and the profit of his patron." (Adam, 2011:183) In Smith's concept, the productive work is the work that has a material result, palpable…a good, says Smith, that can be sold, that is not consumed in the time of execution, of the professional exercise and that lasts even after the work made on it will be done. While the unproductive work may belong to some of the most respectable blankets of the society, it doesn't produce any value because it is not a material product, palpable, a marketable good, a permanent product that exist even after the work is done. „So, the most serious and the most important professions will be included in the same class with the most frivolous: the clergy, the lawyers, the physicians, any kind of literates, actors, buffoons, musicians, opera singers and dancers. The work of some of the bottom professions has a certain value regulated by the same principles that regulate this kind of work – and the most noble and useful ones do not produce anything that may be afterward bought or procured with an equal work quantity. This is the case of the actor declamation, the lawyers pleading, the sing of the musician – the work of all these is lost right in the moment of its production." (Adam, 2011:184)

In the context of the time he lived, when the annual product of the earth was the main source of income, Adam Smith was a fine observer of the economic reality. Then, the industry was showing the first signs of development: „A wagon pulled by horses needed six weeks to make a course between London and Edinburgh and back."

The initiator and the promoter of the work division principle paint the picture of the „workman in a manufactory" and had no way to glimpse the industrial revolution, the wellbeing generated by the large industries, obsoleted in less than a century by the technological revolution, the higher technology, that had the biggest role in the knowledge economy that is important today, at the beginning of the 21th century and in the last decade on the creative economy. Surprisingly for the new paradigm of creative economy, the immaterial services depend on the incomes obtained from the material economy, and they also have a great potential to generate significant incomes and profits.

Adam Smith affirms: „Not only the agrarian or the rich businessman, but also the most usual man among people, if his salary is slightly considerable, may sustain a servant; or could go to the theatre or to the market, contributing this way with his part to sustain a group of unproductive workers." (Adam, 2011:186) The reality Smith captures has today different nuances. It is true that even today, the population wellbeing depend on the consumption of cultural products. Even today a person with a decent salary can secure for himself the necessary things to live, but he can also afford small and eccentric pleasures: to watch a movie at Multiplex Cinema, to go to a concert, to arrange an apartment based on the design made by a professional designer, to use the internet for economic, political, social, cultural, local, national and worldwide information and news.

5. Contemporary approaches on the creative industries and economies

As Elena Botezat says: „For new times, new ideas! We need a new type of entrepreneurs who live and promote a new way of thinking and acting based on the approach of economic problems with imagination and creativity." (Botezat 2012) Nowadays, cultural goods are marketable and income bringing, so they managed to have a significant part in the national and worldwide income. For example, The UK creative sector – one of the biggest in the world – is worth £36bn. The 1.5 million people who work in this sector generate £70,000 every minute to the UK economy, making a greater contribution than the financial services sector. Furthermore, they help create our cultural identity and the social environment that we want to live in. Governments and people around the world are increasingly recognizing the importance of this dynamic and innovative sector." *(Creative Economy Programme 2013*, available on site: http://creativeconomy.britishcouncil.org/about/our-work/)

We find another example in the evaluation made by United Nations Organization, who makes a special analysis of the creative economy. So the „Creative Economy report 2008", elaborated by shows that „over the period 2000-2005, international trade in creative goods and services experienced an unprecedented average annual growth rate of 8.7 per cent. The value of world exports of creative goods and services reached $424.4 billion in 2005, comparing to $227.5 billion in 1996. Regarding creative goods, we notice a spectacular growth of exports, 8.8% annually between 1996 and 2005. This positive trend took place in all regions and it is expected to continue in the next decade, assuming that the global demand for creative goods and services will continue to grow." (UNO, 2008 available on site: http://unctad.org/en/docs/ditc20082cer_en.pdf)

The above examples show us that creative economies are more and more in the attention of worldwide Governments and economic organizations. Just as the internet produced a real transformation in global economy, the creative economy paradigm seems that will bring the resource the world need in the current context. Dr. Richard Florida, Director of Martin Prosperity Institute within Rotman School of Management, Toronto University, sustains that „human creativity is the most important economic resource." (Florida, 2002: XIII) So, creativity is the most important economic resource. Actually, our world is a world in which creative economy shows its benefits more and more. People, in their quality of entrepreneurs, managers in the quality of leaders, professor in their quality of educators, engineers, artists and workmen, or each person in the household activity must respond to the actual challenges through ideas, knowledge, diversity, creativity, collaboration and innovation. Looking towards the future, Alvin Toffler predicted that will appear „new and bewildering problems about the correct and incorrect usage of knowledge, to be able to confront the affairs and the society per ensemble. We will not only reflect on the Baconian truth of knowledge which is represented by power but also on the truth at a higher level, in symbolic economy. The knowledge about knowledge is the one that will matter the most." (Toffler, 1995:132)

If „the industries from the 19th and 20th centuries depended on material resources, on industry, on science and technology, the 21th Century industries will depend more and more on knowledge generated through creativity and innovation." (Landry and Bianchini, 1995: 12) This way, cultural and economic development is an interdependent phenomena, and part of the sustainable growth process. The famous American sociologist, Daniel Bell, was talking about three types of poverty: the poverty of goods and money, the moral poverty and the knowledge poverty. Inspired by this model, we suggest that for a sustainable welfare we must go the other way around: accumulate knowledge by rebuilding and restoring moral and social values in order to obtain in the end goods and money that we can enjoy. For this, at the Romanian society level as well as the European and the global level, mass-media is one of the main actors.

6. Conclusions

Mass-media suffered in the last years major transformations, being a dynamic and important sector. The technological innovations and the economic dynamic determined the relocation of media businesses. Between the most visible commercial societies, in Romania or in any other country, we find the firms that activate in mass-media and communication sector because regular people use daily the services provided by this industry. The demand and the offer on this sector have a sustained dynamic, especially in the context of diversification of communication channels through what we would call today, *new media,* conjuncture that causes the increase of economic interest for this industry. Creative economy seems to be the new frame in which the media industry finds its place in the new cultural, social and economic terms.

Methodologically, starting with the observation of actuality in industry and in mass-media economy, we proposed a content analysis. We brought in discussion aspects that regard definition and delimitation of concepts, the historical development and the analysis of media industry from the economical point of view, analyzing the opinions of other researchers about the subjects. We tried to present the concepts that we sustain in the light of some reference works and to exemplify with realities from international and Romanian mass-media economy.

In the first part we tried to show that media industry is a vector of cultural communication but in the same time is an economical sector, creative and productive. In the second part, starting from the steps of economic development: agrarian economy, industrial economy, knowledge economy, we stopped in actuality to creative economy. We defined the concept of creative economy showing the place of mass-media in this economical frame. In the last two parts we tried to underline some classical and contemporary approaches of creative industries and economies.

According to the research we managed to accomplish, it seems that the cultural and economic development is an interdependent phenomenon as part of the sustainable growth. In this process at the level of Romanian society as well as the European and global society level, mass-media is one of the main actors.

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MEDIA INDUSTRY IN THE DIGITAL WORLD

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Abstract:
The development of the internet and the expansion of digitalization changed the way society works, especially mass-media. The question is if the internet was an advantage or a disadvantage for mass-media? Apparently, on one hand digitalization determined the reduction of production and distribution costs but also content diversification. At the same time, social media and rapid documentation brought an accession in the quality of journalistic product as well as the entering on the market of multiple actors, in consequence, more ideas more carefully selected. On the other hand, it is possible that the internet may have increased the volume of information, detrimental to its credibility. In other words, the quality of the journalistic act and its results have been altered or at least crippled. Methodologically, starting from the observation of the actual situation in mass-media industry and economy, we propose to make a content analysis. We will talk about aspects concerning the challenges and the opportunities from media industry in the digital context, analyzing the opinions of other researchers about the topic. We are trying to present the concepts that we sustain in the light of some reference works and to give examples from the reality of Romanian and international mass-media economy. The mass-media sector in the digital world is confronting with opportunities and challenges. The change isn't simple and without risks but is expensive and may be the only way of survival for each of the societies in this sector. In order to build successful businesses in media industry just like in any other sectors, sustainable growth has to be the main characteristic. Sustainable development, predictability and upward economic growth are possible only taking into account the context in which the organization operates. Adapting press organization to the external environment, a creative response to market challenges and optimal management of the financial capital but mostly of the immaterial one are some of the challenges for the involved societies in the mass-media digital era.

1. Introduction

The mass-media sector in the digital world is confronting with opportunities and challenges. The change isn't simple and without risks but is expensive and may be the only way of survival for each of the societies in this sector. In order to build successful businesses in media industry just like in any other sectors, sustainable growth has to be the main characteristic. Sustainable development, predictability and upward economic growth are possible only taking into account the context in which the organization operates. Media industry, at the beginning of the XXI century is in a context marked by digitalization. Convergence, divergence, market or digital economies are words that characterize our world. The European Commission in the 18 December 2012 communication regarding the content of the single market digital frame, shows that „ *digital economy* was an important engine of the economic growth in the past decades, and in the coming years it is expected to grow seven times faster than the global GDP of EU."

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(COM (2012) 789 FINAL) This forecast provided by the European Commission must be taken into account by the active economic agents in mass-media. Such an important growth in the economic situation marked by the crisis brings new perspectives for the mass-media sector operators.

The same document of the European Commission supports that the online environment it is expected in the future to offer new ways of creating and distributing valuable content. „The emergences of new affairs models that are able to take advantage of the internet potential of offering content represent at the same time a challenge and an opportunity for creative industries as well as for authors, artists and other actors of the digital economy. In this context, one of Commission's objectives is to guarantee that copyright and related practices such as licensing, continues to meet the requirements of this new digital context." (COM (2012) 789 final) Challenge and opportunity are key words for the creative frame of media industry development in the digital world.

Methodologically, starting from the observation of the actual situation in mass-media industry and economy, we propose to make a content analysis. We will talk about aspects concerning the challenges and the opportunities from media industry in the digital context, analyzing the opinions of other researchers about the topic. We are trying to present the concepts that we sustain in the light of some reference works and to give examples from the reality of Romanian and international mass-media economy.

In the first part we will try to analyze the main characteristics and trends of mass-media production in the digital context. We will make reference to aspects regarding speed, quality, and costs in media production in the digital world. In the second part, starting from the new economic realities we will make a short analysis of mass-media market insisting on the aspects regarding the competition, the diversification of offers, and market division in digital economy.

The development of the internet and the expansion of digitization changed the way society works, especially mass-media. The question is if the internet was an advantage or a disadvantage for mass-media? Apparently, on one hand digitalization determined the reduction of production and distribution costs but also content diversification. At the same time, social media and rapid documentation brought an accession in the quality of journalistic product as well as the entering on the market of multiple actors, in consequence, more ideas more carefully selected. On the other hand, it is possible that the internet may have increased the volume of information, detrimental to its credibility. In other words, the quality of the journalistic act and its results have been altered or at least crippled.

2. Mass-media production in digital context

Last century was called *the century of speed.* In the attempt of conquering space and time, man accelerated as fast as possible in all areas to gain the biggest speed. The records have always been broken: from the jet engine discovered in 1910 by Henri Coandă to nowadays supersonic airplanes, from the animal-drawn carts to cars that reach over 100km / h in less than five seconds, from the newspaper that could only be read after a few days or even weeks after they appeared to information transmitted instantly using digital technologies. A famous journalist pleased by the speed of communication said: „Among the remarkable achievements of human genius nothing can exceed in importance the triumph over space and time, materialized in the human's ability to communicate even if they are far away from each other." (Bryant, J., Thompson. S. 2002:68) Reading this affirmation we may believe he is talking about the internet, but the words have been written in 1872 by the journalist Horace Greely who was excited by the possibilities and the transformation brought by the telegraph in those days mass-media.

Speed and precision are mass-media characteristics in the digital context. Even though the first step in the speed of collecting and communicating information was made through the apparition of telegraph, the internet and the digital world accelerated this way of communication. The possibility of redactions to collect fast and precise information brings freshness, clarity and attractiveness for the program content in audiovisual or the articles in newspaper. Often, before having these modern ways of communication, uncertainty flew over some information gathered and transmitted through media means either we are talking about the written press or audiovisual. The world of internet developed even more the possibility of checking the information.

The speed that helps today to obtain and to transfer the information generated important changes in the growth of journalistic product quality.

The quality is another consequence of digitalization. A quality business in mass-media implies that the operator move fast an all fronts. To be the first that has the last hour technology in order to accomplish the most professional audiovisual program or the best publication. Quality and trust are the two hands that build together the relationship between the transmitter and the receiver, more precisely, the press institution and the beneficiary client. The media product or service that helps the consumer live the experience he desires and that brings him into a new reality is the product or the service that has quality. We all desire quality in mass-media and digitalization is a way of achieving this objective.

Digitalization brought the reduction of production costs. Modern technologies have taken an important part of the work undertaken by people before. Let's remember the classic photographs that needed a complicated process: developing, processing and printing the image on the "revealing" paper. The newspaper's text had to be written by hand, that it had to be typed on the printing machine, corrected, typographic take over, formatting the molds and the hole typing industry, than the transportation of newspapers to distribution points, kiosks sellers, ambulatory sellers or the postman that completed the chain until the product arrived to the final consumer.

Digitalization changed everything. It is no more needed the movement of all correspondents because a part of the documentation and verification is made through the internet. The work of an entire "army" has been taken by just a few. Analyzing this phenomenon, Robert Picard says that "production and distribution economy after digitalization are huge and bring a cost reduction of 80-90%." (Picard R. 2011:12) The rationality of passing to digital technologies is obviously an economical one. Fewer employees, less expenditures, but higher quality seem to be the ingredients for the best businesses. In terms of production, digitalization definitely brought major benefits for media industry. There are some justified criticisms regarding the risks brought by internet documentation or regarding the subjectivity of the journalist that writes about an event without actually be on the sight. There are vulnerabilities also regarding the imaged that can easily be edited. Even having these disadvantages, digitalization changed forever the product and the way of production in media industry.

3. Media products and services distribution in the digital world

The way media products and services are produced, distributed, commercialized and conserved changed a lot in the past years. Active societies in media market have the natural tendency to practice the same commercial behavior as in the XIX-th century or the XX-th. The market reality is different today, fact that requires a different behavior on a marked transformed by the new communication technologies. In the new frame there is a bigger competition, diversified offers and a divided market.

Digitalization raised competition. By reducing the production costs as a result of digitalization, more societies considered opportune to enter the mass-media market.

Alongside the cost reduction another factor that determined competition to grow where the political changes in the East European countries. After these changes was created a favorable legislative frame for new actors to enter the media market. After 1990 in Romania and in all the other communist countries, media industry had known a strong development motivated by the lack of diverse offers in the communist period. If the first independent newspapers in Romania appeared in the revolution days, audiovisual sector was regulated by the Audiovisual Law no, 48/1992 which entered into force on 25 May 1992.

The first Audiovisual Board was constituted on 15 July 1992 when took place the first meeting of the 11 members. In the 30 July 1992 meeting, C.N.A adopted the decision no.2/04.08.1992 regarding the available frequencies for radio and TV transmissions that were to be given for the competition of obtaining a license in the 1992 session. Until the year 1992 ended, CNA accorded 31 radio licenses in 9 localities, 20 licenses for television in 10 localities and 51 licenses for television through cable in 35 localities; In the next 22 years that passed audiovisual sector in Romania had known an important quantity raise. In 2014 we have 750 societies that have audiovisual licenses having a total of 2569 audiovisual licenses in 8114 localities. (CNA http://www.cna.ro/IMG/pdf/Statistica_SITE-3.pdf)

This big number of 750 societies present on the audiovisual market in Romania is due to the possibilities offered by the digital technology. Performance equipment, the possibility of collecting, processing and transferring fast information, as well as the favorable legislation made competition to grow on Romanian mass-media market. The situation is similar to other countries where legislation allows the operators to participate actively on mass-media market.

Offer diversification is the creative response of the media sector due to digitalization. Once the number of active societies in media industry grew, these created a diverse offer of media products and services. Creativity is a main characteristic of mass-media workers. Actually, at the European level as well as in United Nation perspective, mass-media is part of the creative industries sector. The passion, the talent and the creativity of mass-media workers have been capitalized through the usage of digital technologies. The text and the images in digital format are transferred on the fiber with the speed of light to the consumer that opens the newspaper on the cellphone, on the tablet, on the smart TV or on the computer. Just as Ahlers says: "in the news press, a lot of newspapers and televisions have extremely cheap online versions. These appear as substitutes of traditional press and similar to the baking phenomena of ATM (bank machines)." (Ahlers, D. 2006:32) Ahlers's message is true. Not just the written press passed to digital format but also the audiovisual. "Television is not just a simple images receiver, but a multifunctional machine that through the videotext connected to data banks and services, it becomes a receiver of programs transmitted through satellites." (Drăgan I.1996:74). Probably the biggest discovery and transformation of the communication ways through the internet was determined by the apparition of chat. This changed the world, the way of communication, mass-media and determined the apparition of *social media* system or the *new media.* At the end of year 1996, Aril Vardi, having the support of his father Yossi that gave him 10.000 USD opened the firm Mirabilis. Erik and his three friends from high school created a system that helped them to talk on the internet. More precisely, they were able to transmit data and messages. They named it ICQ which is in fact an abbreviation for the game of words "I Seek You". "For the beginning only the four were communicating this way, but only after two months 65.000 persons had downloaded the program. Two years later Mirabilis was bought by the AOL for 287 million dollars. At the end of 1998, the service was called AOL Instant Messenger and had twenty five million downloads, after less than twenty six months from the program debut." (Scolbe R., Israel S. 2008:47) What came after is history. The message communication systems developed

more and more. From SMS to Facebook, all communication offers worked on this principle of instant and free message transfer for a modest price. Communication broadening between people and institutions brought uncounted financial benefits because the trust was bigger and the communication-socialization nets grew exponential. As an example we present the evolution of Facebook users in Romania.
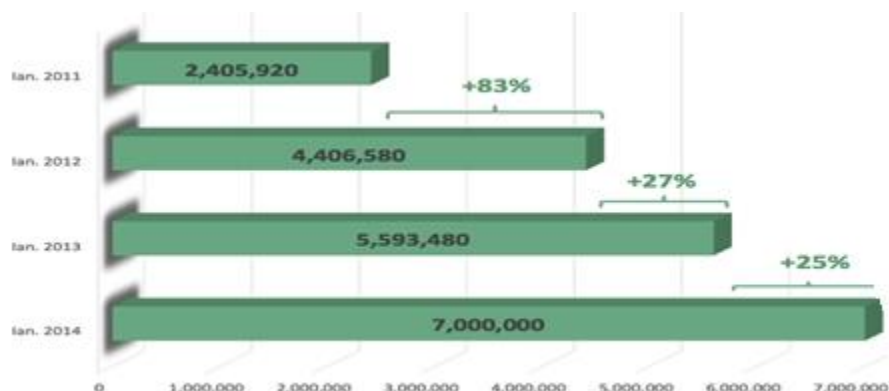
Figure no.1 Evolution of Facebook users in Romania
Source: Facebrands.ro

The possibility of keeping in touch with the whole world arouses passion, opening and development. This raise caused the insertion of cheap or free publicity and an important competition in contradiction to the traditional mass-media system. Thereby, at the beginning of April 2014 in Romania, according to the data offered by Facebook, there were 7.200.000 users of this socialization network. We have a spectacular growth in the number of those who use the Facebook services but at the same time we find that we are almost on the point of saturation whereas in Romania, according to the data offered by The National Authority for Communication Administration and Regulation we have 12 million internet connections. Among these, 3,8 million are fixed connections and 8,1 are mobile connections. (ANCOM 2014) This growth of the users of socialization networks and the participation of each one of them in the quality of producer and consumer of virtual information challenged the societies that traditionally produced media content for the written press and for the audiovisual.
Digitalization determined the extension and the division of mass-media market. Traditionally, the global economic system was organized around material, energy and work. The new digital technologies extended a lot the variety of applications and brought significant changes in the approach of economic chain. More and more we have today a system focused on information, communication, machines work and the participation of the robots. Mass-media makes no exception for this transformation. Moreover, the main raw material in media is information. Thereby, digitalization and internet caused the markets extension for this industry. The diversification of transmission and package of the information were a part of the strategic response of the media companies for the market demand. Communicational variance and offers of written press and audiovisual in the digital world brought the market fragmentation. "Audience was fragmented and differentiated as the number of available media was proliferated. Starting from an era with a limited number of TV networks, video machines or DVD's, a limited consumption of computer and other communication systems, the lack of mobile media, we find now a penetration like never before of all types of media in our daily lives". (Rotaru Ileana 2010:128) One hundred years ago, the newspaper was the most important channel for mass-media information to be transmitted. The market was afterward divided with the

radio than in three (print, radio and television) and in the last ten years, the last player on the market, the internet, conquered more and more of it. In the next figure we observe the evolution and the reposition in the market of the main actors of media industry in the last ten years.
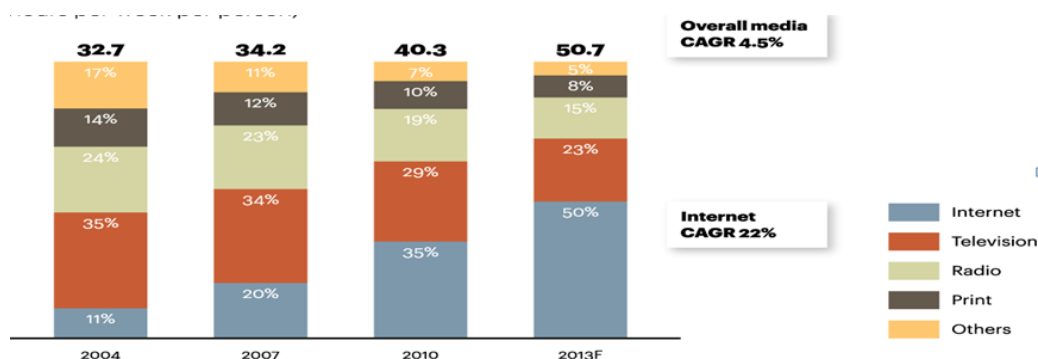
Figure no.2 The channels for mass-media access in the Vest of Europe
Source: PWC, Atkeamey

In 2004, the segment in mass-media market occupied by the internet represented 11%. In 2013, we had a share of 50%. We have a compound annual growth rate of 22%. We also remark a decrease of other mass-media segments: television drops from 35% in 2004 to 23% in 2013, radio drops from 24% in 2004 to 15% in 2013 and the written press drops from 14% in 2004 to 8% in 2013. If we analyze more carefully the trends in mass-media market we notice that the trend of relocation of the actors in this market will continue the same way. Young consumers use very little of the old communication means preferring the information in the digital format offered by the new on line channels. In the next figure we present a comparison on age groups of the consumer preferences for mass-media on line or TV.
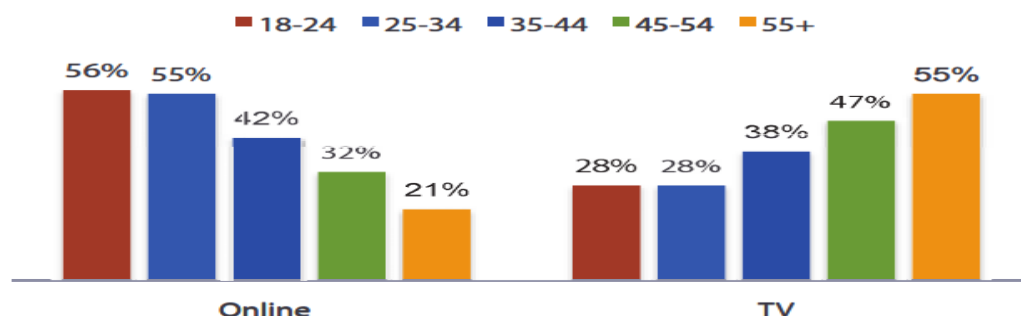
Figure no.3 Consumer preferences on age groups for on line or TV mass-media systems
Source: Reuters Institute, Digital News Report 2013

According to the report presented by the Reuters Institute, only 21% of the persons over 55 years old are consumers on the on line market while 55% prefer TV. On the other side we find the young people with ages between 18-24 years old that prefer in proportion of 56% on line mass-media services compared to 28% that use services offered by the television.
Mass-media market in the digital world in transforming. The tendency of passing by the printing forms, radio, and television to the digital forms is obvious and in seems the trend will continue in the future. Regarding the print, it seems that some publications will pass from the printed product to digital service offered on the internet. It is possible to have a

period in which the newspapers appear both on printing and on line form but is just a matter of time (not too long) until the newspapers will pass almost entirely on the digital form. We can draw the conclusion that digitalization brought a modification of the market, from a market of mass-media products to a market of preponderant mass-media services. On the other hand, the market is more and more divided and the number of those who create content on line is rising. Just as we have shown, only in Romania we have more than 7 million accounts that product daily digital audiovisual content through Facebook network.

4. The trading company having as activity object the mass-media in the digital era

The big changes that took place in the mass-media production which came along with the digital revolution determined inevitably the remodeling of the society that works in this sector. The internet and the digitalization determined a revolutionary raise of the communication systems and of the societies that operate in this sector. Revolution is a change that happens very fast and most of the times it produces turnarounds, imbalance, risks and many times mistakes. "The internet itself represents this kind of fundamental change, visible among other in the way we communicate to one another, in the affairs functioning, in the collapse of business model of mass-media." (Ulmanu A-B 2011:69) Just as Alexandru-Brăduţ Ulmanu shows, the traditional business model of media industry has been highly affected by the internet and digitalization.

Reorganization of operating societies in mass-media of the digital era is a necessary and a mandatory condition to continue to activity. The vision, the strategy, the objectives, the personal, the investments and the capital are areas that will not remain unchanged. The vision of the active societies in this sector must orientate according to the behavior of the consumer that choses daily between the versions and the variable offered by the mass-media market. Gary Vaynerchuk entrepreneur shows that the organizations must be aware of the habit and the expectations of the consumers. These habits don't last forever. "Go to a mall, a cinema, a stadium and look at what the masses do. Good, or wrong, half of the people, if not more, walk with their head down tasting the gadgets in their hands." (Vaynerchuk G.2011:37) Going deeper into this analysis, in the report presented in 2013 by the Reuter Institute from Oxford University we notice the time allocated daily by consumers on age groups in order to access different mass-media forms, analysis that is presented in the next figure.
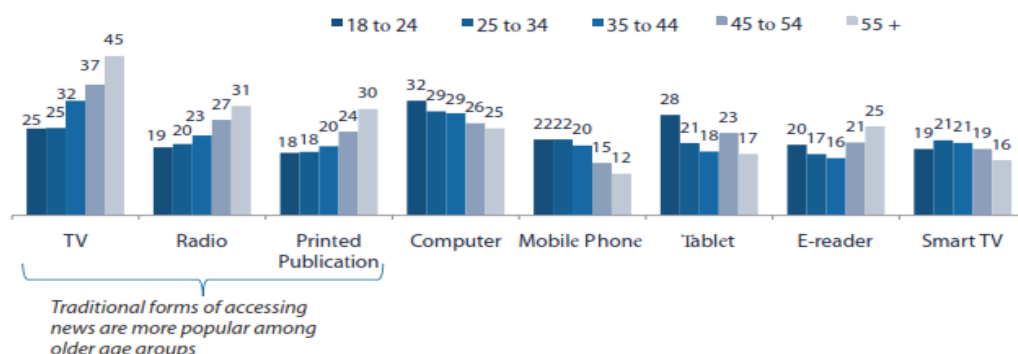
Figure no.4 The daily time allocated by consumers on age groups in order to access different mass-media forms
Source: Reuters Institute, Digital News Report 2013

We have different preference regarding the access of mass-media services and one of the consequences is the fact that today each one of us keep in our pockets much more performed gadgets that the computers we used to have on our desks ten years ago. According to Reuter Report, most consumers between 18-54 years old use digital instruments in order to access mass-media services. We don't have to neglect the fact that traditional mass-media forms are needed today. Even young people between 18-24 years old allocate more than one hour per day four these information means.

For affairs in media industries "the computer, a connection to the internet and a glimpse of initiative and creativity represent all that someone may need to enter in the economy game." (Tapscott D., Williams A. 2010:33)

Regardless that information is transmitted through old or new systems, the digital element becomes central. In Romania, the process of TV digitalization is ongoing and it's preconized to be over in the middle of year 2015. For radio there still isn't a work plan at the national level but each active society in the market must reorganize in this direction having in mind the consumer tendency on the digital market. Printing had an accelerated crossing in the last years to digital format mainly from economic reasons.

The capital of mass-media industry operates today in a world focused on globalization, technological development, internet, innovation, creativity, dynamism and uncertainty. In this context, "the complexity and the changes in the competitive environment impose the crossing from the principle *seeing and doing*, that works in a secure and predictable market, to a strategy based on the principle *anticipating and preventing,* manifested on a market where change an uncertainty represent the only constant." (Ursăceanu Minodora 2009:41) It seems that in information and knowledge economy the characteristic is rather instability, the unexpected and the uncertainty. "Digitalization is a costing process, especially when we take into account the fact that the actual technique of conversion to the digital format is just a part of the process". (Feijoo et all, 2012)

The capital the firms invest and capitalize in this imperfect market is not just of financial nature, although this cannot be neglected, but is also of immaterial capital nature. The report of the France government, *L'économie de l'immatériel, la croissance de demain* shows that "wealth of today's nations is no longer concrete and abstract. It is not material but immaterial. Immaterial is today the key factor to success in the developed economies. And the economy of immaterial will be the strongest source of society growth in the – XXI-th century". (Lévy, Jouyet, 2006) The material and immaterial capital invested in media industry in the digital context enlist to creative economy investments. There are costs and risks but mass-media will never manage without capital. Once the typography appeared based on Guemberg model, investors acted and the success was big. In the economy that puts accent on performance and competition, the ability of controlling, managing and harvesting economically the information constitute for the mass-media societies the investment way and capital development.

5. Conclusions

The postindustrial period, marked by the *economy of services* brought a plus of force in the expansion, the modernization and the perfection of media products and services. These have seen a spectacular growth through the financial fluxes and especially through political, social and cultural influence at global level. The volume of *mediatized information* to mankind had reached to impressive dimensions. In this situation is seems that we witness saturation and an apogee regarding the traditional forms of mass-media: *the written press and the audiovisual.* Both wings of this industry are today in a reinvention process. Politicians, economists, journalists, IT specialists, talk, plan and act in order to reestablish media industry in the new frame of *creative economy.* Actually, the transformation in media industry is determined by the global relocation marked by digitalization.

Methodologically, starting from the observation of the actual situation in mass-media industry and economy, we propose to make a content analysis. We talked about aspects concerning the challenges and the opportunities from media industry in the digital context, analyzing the opinions of other researchers about the topic as well as documents of the European Union. We tried to present the concepts that we sustain in the light of some reference works and to give examples from the reality of Romanian and international mass-media economy.

In the first part we tried to analyze the main characteristics and trends of mass-media production in digital context. We referred to aspect concerning the speed, the quality and the costs of media production in the digital world. In the second part, starting from the new economic realities we made a short analysis on the mass-media market insisting on some aspects regarding the competition, the diversification of offers and market division in the digital economy.

It seems that on one hand, digitalization determined the reduction of production and distribution costs but also the diversification of content. In the same time, social media and fast documentation brought a raise in the quality of the journalistic product as well as the entering on the market of numerous actors, in consequence of numerous ideas more carefully selected. On the other hand, it is possible that the internet may have increased the volume of information detrimental to its credibility. In other words, the quality of the journalistic act and its results may have been altered or at least crippled.

The mass-media sector in the digital world is confronting with opportunities and challenges. The change isn't simple and without risks but is expensive and may be the only way of survival for each of the societies in this sector. In order to build successful businesses in media industry just like in any other sectors, sustainable growth has to be the main characteristic.

Sustainable development, predictability and upward economic growth are possible only taking into account the context in which the organization operates. Adapting press organization to the external environment, a creative response to market challenges and optimal management of the financial capital but mostly of the immaterial one are some of the challenges for the involved societies in the mass-media digital era.

6. Acknowledgments

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DINAMICS OF THE ENTREPRENEURSHIP CONCEPT. LITERATURE REVIEW

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Abstract: *The purpose of this theoretical paper is to analyze the concept of entrepreneurship while following the approaches taken by scholars over time in this field of research. Four entrepreneurship theories which are relevant for the analysis and practice of entrepreneurship will be explained and compared. In a continuously and rapidly changing world, like the one today, information and knowledge seem to be of most interest for entrepreneurs. The current central element of entrepreneurship within the academic world is considered to be the notion of opportunity. Nonetheless, this has not always been the situation in entrepreneurship research and as a result, during this paper I will follow the evolution of entrepreneurship as a concept and I will point out a series of findings relevant for its analysis and practice. Consequently, I have considered choosing two theories focused on the notion of opportunity, namely Drucker's theory of entrepreneurship and Burt's theory of entrepreneurship. Additionally, I have used Schumpeter's theory of entrepreneurship because of its major influence over both the theoretical and practical aspects of entrepreneurship and von Hayek's theory of entrepreneurship because of its role in signalizing the significance of practical knowledge within the research of entrepreneurship. Each of these four theories is analyzed and strengths and drawbacks are pointed out. The comparison which resumes the paper takes into consideration the theories authors' profiles, their backgrounds and the moment in time when the theories have been stated. It will be possible for the reader to observe that the concept of entrepreneurship has changed in time and implicitly the trend in entrepreneurship research has altered from a theoretical approach to a much more practical one. The main driver for this change was the business environment, which was forced to continuously search for improvement measures in order to survive. These improvement measures relied always on discovering new opportunities and therefore, nowadays the scholars worldwide consider the notion of opportunity to be the paramount element of entrepreneurship.*

Keywords: entrepreneurship; innovation; practical knowledge; network theory.
JEL classification: O31.

1. Introduction : The Concept of Entrepreneurship

The concept of entrepreneurship has a very long history within the academic and business world. While the practice of entrepreneurship existed since the firsts trades between people occurred, the first attempt to define this concept was made during the 18th century by a French banker, namely Richard Cantillon. He argued that an entrepreneur is a person "willing to buy at a certain price and to sell at an uncertain price" (Cantillon, 1931). Another French author, that is Jean Baptiste Say, wrote around the beginning of the 19th century that an entrepreneur is the one to transfer economic resources from a sector with lower productivity into another one with higher productivity and better outcome (as cited in Dees et al., 1998). Since the 19th century, and once with the growing pace of world's economic development that took place after the Second World War, many different approaches

have been employed to analyze and describe the term of entrepreneurship. Because of its importance and implications over a large array of areas, like sociology, anthropology, psychology or economy the topic represented the subject of many studies and articles (Hebert and Link, 1989). The main findings upon entrepreneurship during the years can be ascribed to three important currents of research:

- The impacts and results of entrepreneurship, where the process of entrepreneurship has been analyzed as a motor of economic advancement
- The causes of entrepreneurship, where the entrepreneurs themselves have represented the subject of research, being observed moreover from a social and psychological point of view
- Entrepreneurship as a management process, where the main focus of research has been represented by organizations and how they are able to innovate and to continuously alter themselves in order to remain competitive on the market (Austin et al., 2006).

The hypothesis research of this paper builds on the idea that nowadays the main element of entrepreneurship is represented by the notion of opportunity. In what follows, we will present the historical evolution of the concept and the way it was approached by scholars over time.

2. Entrepreneurship Theories: Literature review.

2.1. Schumpeter's Theory of Entrepreneurship – Innovation and Entrepreneurship

In order to better understand the entrepreneurship's research evolution over time, a short description of relevant events during its history will be reminded. Therefore, after the early definition of the term by the 18th century's French authors, the research of entrepreneurship entered into a shadow period. This was due to the fact that a large number of economists, among which Walras, Ricardo or Marx, did not consider the entrepreneur as being relevant for their economic models and theories and therefore left it outside their findings (Swedberg, 2002). The situation was about to be entirely changed once with Joseph Schumpeter's studies upon the subject. The Austrian economist represents the main figure in the field of entrepreneurship research. By his studies, he demonstrated that the entrepreneur represents the agent of change inside an economy and that by its actions economic growth can be achieved (Swedberg, 2002). Moreover, Schumpeter presented the difference between innovation and invention (Schumpeter, 1934), argued that entrepreneurship consists of making innovations and that the status of entrepreneur is only acquired during the process of innovation. Notwithstanding its initial research directions, which can be considered to pertain to the first current of research stated earlier in the paper, in its last decade of entrepreneurship research, Schumpeter has underlined the fact that the theory of entrepreneurship ought to be build on "the actual activity of the entrepreneur", who could both be a single person or an organization (Schumpeter, 1934). Hence, the change of direction towards a more practical aspect in the research of the concept can be observed as far back as Schumpeter's period.

Overall, regarding the practicality of the entrepreneurship research, the most important feature of its studies was the very fact that they represented the cue toward a new way of analyzing the concept of entrepreneurship. As an example, Schumpeter continuously stressed the significance of bringing economic theory and economic history more close, in order to better understand entrepreneurship (Swedberg, 2002). Beside the suggestion mentioned earlier, there are also two typologies presented by Schumpeter, regarding the entrepreneurial behavior and the drivers of an entrepreneur which are considered to be of high relevance for the study of entrepreneurship practice. Hence, Schumpeter presented five types of entrepreneurial behavior:

- The introduction of a new good
- The introduction of a new method of production
- The opening of a new market
- The conquest of a new source of supply of raw material
- The creation of a new organization of an industry (Scherer, 1999)

And three main drivers for an entrepreneur:

- The will for power and independence
- The aim to triumph
- The happiness of creating (Swedberg, 2002)

He also clearly stated that money is not what decisively motivates an entrepreneur and that an entrepreneur is not an "economic man in the theoretical sense" (Swedberg, 2002). This point of view is in contrast with von Mises' insight about the same subject. Ludwig von Mises, another Austrian economist saw entrepreneurship as an anticipation of an uncertain event and believed that money represents the only driver for an entrepreneur's actions (von Mises, 1951). Von Mises is one of the few researchers of entrepreneurship who has underlined the role of entrepreneurial errors, about which he argues that represent also opportunities for the other entrepreneurs.

2.2. Friedriech von Hayek's Theory of Entrepreneurship – Knowledge and Entrepreneurship

Friedrich von Hayek, also a neo-Austrian economist, has made an important contribution to the research of entrepreneurship throughout its entrepreneurship theory based on the use of knowledge and more specifically of practical knowledge. According to von Hayek, the deficit of knowledge represents the fundamental premise for the existence of entrepreneurship. It is important to stress that by deficit of knowledge, the author does not refer to an existing knowledge which lacks from the initial conditions and is later added on throughout the entrepreneurial process, but rather to a new type of knowledge which is developed with the help of this process. As von Hayek states, to be an entrepreneur implies a "discovery process" (Swedberg, 2002).

In an article written in the 1945 and called "The Use of Knowledge in Society", Friedrich von Hayek brings an important and relevant critique of the trend in economic theory to minimize the importance of practical knowledge for economic actions (von Hayek, 1945). By practical knowledge in the sense presented by von Hayek, one can understand "the knowledge of practical circumstances of time and place" (Swedberg, 2002). Von Hayek's goal of signalizing the significance of practical knowledge represents an important step in the evolution of entrepreneurship's research towards more practical perspectives. A similar view over the concept of entrepreneurship is brought by Monica Lindh de Montoya throughout its anthropological approach in the case study of a strawberries' dealer. In its article, "Entrepreneurship and Anthropology: The Case Study of Freddy, the Strawberry Man", she argues that a series of an entrepreneur's actions are based on its capability to read cultural codes. By being aware of the practical information which defines a culture and its people and moreover by reading this information continuously during its actions, an entrepreneur can achieve success (Swedberg, 2002).

2.3. Peter Drucker's Theory of Entrepreneurship – Opportunity and Entrepreneurship

A more recent theory of entrepreneurship, presented by Peter Drucker, follows the definition given by Say in the 19th century and adds to it the idea of opportunity. Therefore, the practical aspect of entrepreneurship's research is embraced and a possibility of understanding the process of entrepreneurship is offered. Drucker argues that the entrepreneur is not necessarily the one to cause change, but is definitely the one to exploit the opportunities brought by change: "the entrepreneur always searches for change,

responds to it, and exploits it as an opportunity" (Dees et al., 1998). The concept of opportunity is encountered also in previous definitions of entrepreneurship, like in the one stated by Kirzner according to whom entrepreneurship means "alertness"(Kirzner, 1978) towards profit opportunities, but the major distinction which Drucker makes, is setting opportunity as a central element in defining entrepreneurship. For Drucker, the entrepreneur will always see the opportunities rather than the obstacles developed by change (Dees et al., 1998). In order to succeed, an entrepreneur has to be market oriented and moreover market driven (Drucker, 1985). Again this view is similar with von Hayek's and Montoya's point of view over the importance of practical knowledge in entrepreneurship. Drucker offers a definition for the systematic innovation which, according to him consists in "the purposeful and organized search for changes, and in the systematic analysis of the opportunities such changes might offer" (Drucker, 1985). Moreover, the same author also states a set of four fundamental areas where the process of entrepreneurship management requires clear policies and practices in order to become successful – these policies and practices are focused on the enterprise as an entrepreneur:

- The organization must be prepared to accept innovation and inclined to observe change as an opportunity rather than an obstacle
- A systematic appraisal of the company as entrepreneur and innovator is mandatory
- Practices pertaining to staff management, organizational structure management, rewards management are needed also for a successful entrepreneurial management
- There are specific actions that must not be taken under any circumstances (Drucker, 1985): managerial units and entrepreneurial units must not be mixed; by innovation one must not understand only diversification; it is recommended the avoidance of making a business entrepreneurial only by purchasing small entrepreneurial ventures (Drucker, 1985)

The theory of entrepreneurship centered on the concept of opportunity represents more or less the common point of view of current researchers within the field. Howard Stevenson, for example, is another theorist of entrepreneurship which adheres to this view. In its definition of entrepreneurship as "the pursuit of opportunity without regard to resources currently controlled" (Dees et al., 1998), he recognizes the idea of opportunity as being central for the process of entrepreneurship and moreover states that the current situation of a company, therefore including its current resources, does not represent an obstacle for the entrepreneur to pursuit a chance. This last argument helps to clearly differentiate between an entrepreneur and an administrative manager, the latter being tied up and focused on the firm's current resources (Drucker, 1998).

2.4. Ronald Burt's Theory of Entrepreneurship – Network and Entrepreneurship

Another approach towards the practice and analysis of entrepreneurship is offered by the sociologist Ronald Burt, throughout its network theory. According to him, entrepreneurial opportunities can be found in a person's network if this is structured in a certain way (Swedberg, 2002). A network represents all the relationships and connections that one has with the others, no matter of their nature and characteristics. The concept of network, in Burt's opinion is central to the term of social capital and suggests that there are two possible interpretations of it. On one hand a network can be considered important because it is the way which can lead to significant resources and opportunities and on the other hand a network can be considered important for the very fact that it in itself is a resource, able to offer better access, timing or chances. Considering the latter interpretation, the same author introduces a structural theory of entrepreneurship. Therefore, Burt argues that one can act as an entrepreneur only if it is in a position of

mediating between distinct members of its network. Moreover, the entrepreneurial opportunity, which is called by Burt "a structural hole" (Burt, 1995), will occur between two non-redundant contacts, meaning contacts between which no connection exists at the moment and as a result a third person from the network called "tertius gaudens" (Burt, 1995) will have the possibility to take chance of it (Burt, 1995).

In order to improve its network efficiency and implicitly its social capital, a person or enterprise should try to construct its network mainly with non-redundant contacts. In this way the costs of the network will be minimized, the structure will be optimal and the number of structural holes will increase. The fundamental benefit of a structural hole is the information and the access to a given situation which the tertius, namely the entrepreneur can obtain from its network. Hence, depending on the quality of its network structure, an entrepreneur can raise or diminish its rates of return (Burt, 1995).

Talking about entrepreneurial motivation and opportunity, within the same theory of entrepreneurship stated earlier, Burt argues that the type of network one constructs also represents an important driver for its behavior. Consequently, he concludes that "a network rich in entrepreneurial opportunity surrounds a player motivated to be entrepreneurial" (Swedberg, 2002) while "at the other extreme, a player innocent of entrepreneurial motive lives in a network devoid of entrepreneurial opportunity" (Swedberg, 2002).

3. Findings: A Comparison of the Four Theories

Although the four theories stated above focus on the same concept, namely entrepreneurship, there are a series of differences between them. First of all, their authors have distinct backgrounds. While Schumpeter and von Hayek were economists, Drucker was a writer and a consultant and Burt is a sociologist. The second major dissimilarity is represented by the time period when the theories have been elaborated. In the case of Schumpeter and von Hayek the theories were presented in the 1940s, while Drucker and Burt published their theories in the 1980s. As a result, the first two theories are more focused on the "why" and "who" of entrepreneurship, in contrast with the last two, which are focused on the "how" of entrepreneurship. Even though Schumpeter's and von Hayek's theories come from a period when the practical aspect of entrepreneurship was mainly disregarded, the two authors have succeeded to approach important aspects from the practice and analysis of entrepreneurship. Hence, Schumpeter noticed the significance of studying the actual activity of an entrepreneur for the future understanding of entrepreneurship, comprehended the difference between innovation and invention, stressed the fact that money is not the first driver for innovation and entrepreneurship or realized that not only private persons can act as entrepreneurs. Similarly, von Hayek apprehended the wrong treatment applied by entrepreneurship researchers to the practical knowledge and argued its fundamental contribution for the success of an entrepreneur or underlined the strong connection between new knowledge creation and entrepreneurship.

On the other hand, both Drucker and Burt presented their theories in a period when the shifts in entrepreneurship research toward the "how" question was already clear. Therefore, their findings within the field adhere to this trend. The two authors have centered their entrepreneurship theories on the concept of opportunity. Whilst Drucker offers a typology of opportunity sources, a guideline of practice for entrepreneurial management or states that an entrepreneur is not necessarily the change agent, Burt tries to explain with the help of its network theory how persons or enterprises can develop their social capital and how can discover opportunities and information and become successful entrepreneurs.

It is worth to underline that despite the fact that all the four authors recognize throughout their theories that entrepreneurship is of major importance for the overall economic health and point out some practical tools and aspects of entrepreneurship, Drucker and Burt, who are not economists, manage to get more close to the practice of entrepreneurship. Also, by taking into consideration the argument of Schumpeter that one has the status of entrepreneur only during the process of innovating, of bringing the new into life and therefore no one is entrepreneur forever, the shift in entrepreneurship research's focus from the qualities of the entrepreneur, which are permanent over one's life time, towards how entrepreneurship happens and how opportunities are spotted seems of more relevance for the future of this concept.

4. Conclusions

In order to conclude it must be stated that the trend in entrepreneurship research has changed over the years from a more theoretical focus toward a more practical one. This alteration was due to the new needs of the business world and throughout it scholars tried to keep up with the changes that took place in world's economies. Therefore, from the point of view of analysis and practice of entrepreneurship it can be observed that Schumpeter's theory and von Hayek's theory have a more limited insight, because for example they do not offer a clear guideline for the implementation of the entrepreneurship concept. This does not mean that both theories are not of fundamental importance for the following development of this concept. In fact, their main contribution to entrepreneurship research is the pioneering work within this field and the bases for the following findings. Regarding the Burt's and Drucker's theories, it can be seen that by explaining the concept of entrepreneurship with the help of the notion of opportunity, both of them offer a compelling understanding for the entrepreneurial process, while focusing more on its "how" side. Within a lately context of fast social networks and information technology development, the entrepreneur has access to a higher number of non-redundant contacts and thus to a greater range of opportunities (Scott, 2006). As a consequence, the initial hypothesis of this paper is sustained by the research trend in this area over the years and also by the way needs and liaisons have evolved in the business environment.

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ECONOMETRIC EVALUATION OF THE RELATIONSHIP ECONOMIC GROWTH AND UNEMPLOYMENT IN EU & TURKEY

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Abstract: *Unemployment, in Turkey as well as in the whole, world poses huge economic problems. When considering Turkey's economy with a continued growth but a sustainable growth trend that cannot be provided and cannot be avoided in unemployment. The concepts of unemployment and economic growth in the macro and micro level are the subject of many studies. Economists look for solutions to these problems that are faced by each country; unemployment, unemployment causes, economic growths are all concepts that are discussed. Turkey's population growth rate is high, investment and capital accumulation at the desired level cannot be performed, the quality of labor as a lack of economic and political instability, informal employment, the existence of inter-regional disparities, the lack of sufficient support in agriculture contribute to the many reasons such as unemployment, the foundation raised as an issue is caused to the end. One of the biggest problems faced by Turkey's economy has long been the problems of unemployment. Many policies have been identified and implemented to combat unemployment have been studied. High rates of growth to reduce unemployment are among the most important of these policies. The relationship between unemployment and growth for the first time was examined by Arthur M. Okun (1962). The main objective of this study with the participation of Croatia in 2013 with 28 member countries of the European Union and in Turkey for the period 2001-2011 is to examine and test the relationship between economic growth and unemployment is variable. Analysis Breitung (2000), ADF Fisher and Levin, Lin and Chu (2002) panel unit root tests, Westerlund (2007) panel cointegration tests are used. Breitung (2000), ADF Fisher and Levin, Lin and Chu (2002) tests taken by the series of first differences were stagnant. In addition, error correction model established between unemployment and economic growth Hausman tests were performed, and long-term parameters have been shown to be homogeneous, long-and short-term relationships Average Pooled Estimator Group (PMG) and have been estimated. Unemployment and economic growth variables among long-term relationships Westerlund (2007) panel co-integration test with the tested and analysis of our results of unemployment in the short and long-term parameters are significant and economic growth on the long term effects of positive and short-term effect was negative, was observed. In addition, a 1% increase in unemployment in the long-term economic growth, while an increase of 0.35%, a decrease of 0.26% in the short term cause has been determined.*
Keywords: Economic Growth, Unemployment, Panel Cointegration
JEL classification: O40, J60, C10

1. Introduction

Economic growth, the amount of goods and services produced in a country is increasing over time. The only way for a person living in the country to continuously raise the standard of living is to have economic growth. So all the basic macro-economic objectives

of the country one of the most important, is to realize a rapid economic growth (Ünsal, 2000). Reynolds (1974) according to unemployment; desire and ability to work in the wage level in the market for a job in the job search cannot be found even though it may be expressed. According to Bluestein et al. (2013) unemployment; many people who are caught in the vortex of the economic recession, inability to work caused by the deterioration of the physical and psychological states are expressed in this form. Substituting the use of capital rather than labor increases the unemployment rate is considered as the most important factor. In addition to these factors; informal employment, socio-demographic information on the labor market inefficiencies and lack of labor also increases unemployment are considered as other factors (Schimke, 2014). Belan and Cheron (2014)'s study shows that his; during his years of turbulent economic period, the U.S. and European unemployment rates remained at very high levels. Thus, the economic instability that affects unemployment must also be expressed.

Okun (1970) put forth by the law's impact on employment growth is explained. Changes in the rate of change in the unemployment rate and real growth are examined in the relationship between Okun Law. In other words, this law, potential and actual output to the change in the unemployment rate as the relationship between the growth rate is discussed (Güran, 1996). Between economic growth and a source of instability for the purpose of examining the relationship between unemployment in this paper, and for the relationship between economic growth and unemployment has been referred to the literature. Then, using a panel data analysis of short and long-term economic growth and the relationship between unemployment is tested.

2. Related Literature

The impact on employment growth in the economics literature is a controversial issue and validations of empirical research are often expectations. Describes the relationship between growth and unemployment rates, some of this work is presented below.

Moosa (1999), Okun coefficient was evaluated in terms of the U.S. economy. Studies have used quarterly data from 1947:1-1992:2. Okun coefficient, was found near -0.38. Read the estimated coefficient value close to the original value of Okun and also working with dynamic models, which give higher values than many recent studies have found to be reasonable.

Freeman (2000), Okun's law, has been sought at national level and in 8 regions in the United States. For the study, 1958-1998 quarterly and annual data for 1977-1997 were used. Okun coefficient is constant over time and across regions reached about "2" as a value of the findings.

Harris and Silverstone (2001), have examined the relationship between unemployment and real output. As a data source, the seven OECD countries (Australia, Canada, Germany, Japan, New Zealand, United Kingdom and the United States) has been addressed. As a result of this study, there wasn't a long-term relationship between unemployment and the product has been revealed.

According to Muscatell and Tirelli (2001), for OECD countries, the relationship between growth and unemployment in the years 1955-1990, were examined using structural VAR model. After all a negative relationship between unemployment and growth were found.

Gürsel et al. (2002), in Turkey from 1992 to 1997 covering the period of studies, it has concluded that, a 1% increase in growth rate has created a 0,425% increase statically and a 0.285% increase dynamically in employment in the non-agricultural sector. Employment growth will reduce unemployment, the results envisaged in the Okun Law though weak inverse relationship is seen to be confirmed. Yıldırım and Karaman (2003), with growth in order to explain the relationship between the unemployment rates in their study, they have used the period between 1975 to 1995 for Turkey. According to their results; period trend

growth rate which is 4.3% exceeding every 1% growth the unemployment rate 0.13% percent decrease and in some years a high growth rate despite the unemployment rate has increased in some years while the opposite is observed (Demir ve Bakırcı, 2005).

Brauninger and Pannenberg (2002), a country's level of unemployment that affects the rate of long-term growth to examine; Solow-type models have demonstrated improved. As a result, an increase in the scale of unemployment lowers the level of long-term growth as concluded.

Zagler (2003), examined Okun law by using vector error correction model for France, Germany, Italy and the United Kingdom. In conclusion it was determined that, long-term economic growth and unemployment is among the co-integration and direction of the relationship is positive.

Christopoulos (2004), has been wanted to test the validity of the Okun law for 13 regions of Greece by using panel data in the period 1971-1993. As a result of the study, 6 of the 13 regions showed that the unemployment and output move together.

Demir and Bakırcı (2005), With the growth of the relationship between the unemployment rate in Turkey 1988 - 2004 period under the Okun law to include the three different methods (mean, trend and internalization) were tested. The results obtained with these three methods; Okun equations, growth - the relationship between the explanatory power of unemployment at the same time very close together and showed to be very weak. On the other hand with the growth of unemployment relationship between the weak, the population growth, rural to urban migration and housewives in business increasingly more involved, such as employment and unemployment together in order to increase pressures there were connected.

Yılmaz (2005), in Turkey during the period from 1978-2004, with a growth direction while investigating the relationship between unemployment rates; Granger and Hsiao's causality tests were used. In the research; Turkey's economy with a growth rate of unemployment where there is a mutual causality, only unidirectional rate of unemployment growth rate was concluded that a causal relationship exists.

Villaverde and Maza (2009), in Spain, and for its seventeen regions using annual data from 1980 to 2004 Okun coefficient were examined. In this study, panel data analysis was used. Results in most of the regions throughout the country and is an inverse relationship between unemployment and output showed.

Ceyhan and Şahin (2010), investigated asymmetric relations in Okun Law by using analysis of Integrating Conversations involves TAR & M-TAR Models and annual data for the period 1950-2007. According to the results obtained, Okun coefficient was found asymmetric for the economy of Turkey and it has been demonstrated that the effect of reduction in unemployment (increase) during the period of real output expansion (contraction) is not the same.

Tunalı (2010), his work using quarterly data from 2000 to 2008, real GDP, unemployment level, the real effective exchange rate index and the consumer price index variables were used. After all, the real unemployment level of 1% increase in GDP 1.42% like it would create a reduction in economic growth creates jobs in Turkey, but it can't be said that it means reducing unemployment. During this situation arise, some reasons such as the demographic dynamics of the total workforce unpaid family workers and the agricultural sector disguised unemployment high share of the 2001 crisis, then the hours worked increased as a result of increased productivity and hence job creation by economic growth but being inadequate about reducing unemployment have been shown.

Boubtane et al. (2013), between the years 1987-2009 using VAR analysis, the studies conducted in 22 OECD countries, immigration, the relationship between growth and unemployment have been introduced. Immigration from countries GDP per capita rates of unemployment emerges in the positive results that have been affected negatively.

Mosikari (2013) in South Africa, unemployment on GDP investigate the effect aimed at in the study, from 1980 to 2011, covering the years of time series based on the analysis, the Augmented Dickey-Fuller (ADF) test, Johansen Cointegration Test and Granger Causality Test was applied. According to the results obtained, with unemployment rates of GDP growth a causal relationship has not been found.

Elshamy (2013), based on data from the year 1970 to 2010 for Egypt, Okun coefficient was tested. In this study, the long-term cointegration analysis in the short term when using the Error Correction Model was used. According to the obtained results, the long and short-term coefficients are statistically significant.

This study investigated the relations between growth and unemployment of Turkey and EU countries. This study similar to those encountered in the literature; is believed to be capable of further contributing to the literature.

3. Research Methodology

The merger consists of panel data, time series and cross sectional data. Panel data in time data samples are obtained from a horizontal section is repeated; but with the same economic unit is followed throughout the sample period. The general characteristic of these data is that the overall cross section of sample N is relatively large than time period T (Bayraktutan and Demirtaş, 2011). One of the major advantages of panel data analysis to researchers in the modeling of individual behavior change is that it allows much greater flexibility to offer. (Greene, 2003) Another advantage of panel data is adapted for controlling individual heterogeneity (Baltagi, 2011).

3.1. Panel Unit Root Test

Levin, Lin and Chu (1993) and Quah (1994) since the work performed by the unit empirical analysis of the data in the root operation panel play an important role. In fact, the panel integrated in the data (integrated) series is known a great development in the search for and the panel unit root tests have been applied to different areas of the economy (Hurl and Mignon, 2006).

Im, Pesaran and Shin (2003) panel unit root test, the Dickey-Fuller (ADF) test statistics using panel for each unit ADF, calculating the ADF average of the test statistic (Saracoglu and Dogan, 2005). Unit root test panel for the implementation of the horizontal section N and T to be the time series, first order autoregressive process,

$$\Delta y_{it} = \alpha_i + \beta_i y_{i,t-1} + e_{it}, \qquad\qquad i = 1,\ldots,N,\ t = 1,\ldots,T,$$

is defined (Im, Pesaran and Shin, 2003). In the test comes,

$$H_0 : \beta_i = 0,\ \text{for all "i"}$$
$$H_1 : \beta_i < 0, \qquad i = 1, 2,\ldots,N_1,\ \beta_i = 0, \qquad i = N_1 +1,\ N_1 +2,\ \ldots,N.$$

Acceptance of hypothesis H_0 implies the existence of panel unit root and the acceptance of the alternative hypothesis implies the adoption of panel unit root. Im, Pesaran and Shin (2003: 56), "There is no unit root" hypothesis is tested with the t-bar statistic.

In the form of first and second generation panel unit root tests are divided into two. First-generation unit cross-sectional correlations between tests assuming that the second generation unit root tests the correlation between the cross-sectional units are taken into consideration. The most widely used second-generation unit root tests of Moon, Perron and Philips (2007), Pesaran (2007), Phillips and Sul (2003) and Bai and Ng (2004) is located. Second-generation panel unit root test, primarily for the cross-sectional dependence in the data set are tested. In case if the cross-sectional correlation tests should be used in this case is the second generation.

3.2. Panel Cointegration Test

The concept of cointegration Granger (1980) has been provided in the literature for the first time. The concept of cointegration between economic variables implies the existence of a long-term relationship. Two or more variables to express whether or not integrated the principles of co-integration tests constitute (Dickey, Jansen and Thornton, 1991).

Co-integration test, under the assumption that there is cross-sectional dependence, with seven different tests to determine whether the panel data used in cointegrated. These 7 different tests; 3 of them inter-group (between-dimension) estimator, while 4 of them intra-group (within-dimension) include estimation was using the estimator (Pedroni, 1999).

Panel cointegration tests according to the practice of using time series cointegration advantage are to increase the power of the test. Panel Cointegration tests are Westerlund Panel Cointegration Test, Kao Panel Cointegration Test and Pedroni Panel Cointegration Test (Tatoglu, 2012). In this study, Westerlund (2006) cointegration test is the LM test statistic. This test is a test that takes into account structural breaks and cross sectional dependence. The model for applying Westerlund test will be estimated below:

$$y_{it} = z'_{it}\gamma_{ij} + x'_{it}\beta_i + e_{it},$$
$$e_{it} = r_{it} + u_{it},$$
$$r_{it} = r_{it-1} + \emptyset_i u_{it}$$

The above model is time-series variables (subduction). In the model, t=1,...,T time period, i=1, ..., N-panel shows a cross section..

P_a and P_t test statistics have been calculated by informations belongs to all panels. Hypothesis:

H_0: $\rho_i = 0$, for all "i"
H_a: $\rho_i < 0$, for all "i"
after establishing stats:

a. P_a-Statistics: $P_a = (\sum_{i=1}^{N} L_{i11})^{-1} \sum_{i=1}^{N} L_{i12}$

b. P_t-Statistics: $P_t = \hat{\sigma}^{-1}(\sum_{i=1}^{N} L_{i11})^{-1/2} \sum_{i=1}^{N} L_{i12}$
is calculated as such.

Average statistics groups D and Gt obtaining n, which is estimated for each unit ρi and ρi is started by calculating the weighted average of the ratio of t. Hypothesis:

H_0: $\gamma_i = 0$, for all "i"
H_a: $\gamma_i < 0$, for at least one "i"
after establishing stats:

c. G_a-Statistics: $G_a = \sum_{i=1}^{N} L_{i11}{}^2 L_{i12}$

d. G_t-Statistics: $G_t = \sum_{i=1}^{N} \hat{\sigma}^{-1} L_{i11}{}^{-1/2} L_{i12}$
is calculated as such.

In both test groups, rejecting of hypothesis H0 means the rejection of cointegration relations for all panels (Tatoglu, 2012).

4. Results

Data used in this study that were investigated the relationship between unemployment and economic growth in the short-run and long-run in Turkey and 28 EU members (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom) was obtained from the World Development Indicators published by World Bank for 2001-2011. Total unemployment (UNEMPLOYMENT in Table-1) data is

taken as a % share within the total workforce and the economic growth data type is taken as the total annual Gross Domestic Product (GDP in Table-1). Analysis of State-12 package and is collected using Eviews 7.0 Beta.

4.1. Panel Unit Root Analysis

Panel cointegration tests of the long-run relationship between unemployment and economic growth as a priority in order to examine the unit root properties of the series should be examined. First-generation panel unit root tests are used in situations. We also express our cross-sectional analysis because there is a relationship between the first-generation unit root tests have been utilized.

Table 1: Panel Unit Root Test Results

Variables	Breitung t Statistics (Trend&Constant)	ADF Fisher χ^2 Statistics (Trend&Constant)	Levin, Lin and Chu t Statistics (Trend&Constant)
LNGDP	1.74768	36.1706	-9.13908
LNUNEMPLOYMENT	-0.68082	64.7831	-7.76590
Δ LNGDP	-7.81703***	216.339***	-28.4935 ***
Δ LNUNEMPLOYMENT	-2.85221***	76.8272 **	-9.54836 ***
Note: Δ shows the difference for the first degree. ***p<.01, **p<.05, *p<.10			

In Table 1, Breitung (2000), the ADF Fisher and Levin, Lin and Chu (2002) panel unit root tests taken in first differences regarding the level and unit root results are given as a series. Breitung (2000), ADF Fisher and Levin, Lin and Chu (2002) tests taken by the series of first differences were stagnant. Thus, a prerequisite in series in that the same difference stationary Westerlund (2007) cointegration test condition is provided to apply.

4.2. Panel Cointegration Analysis

UNEMPLOYMENT and GDP variables belonging to the Westerlund (2007) panel cointegration test results are given in Table 2. "There is no cointegration". Our hypothesis is that we have established in the form of the hypothesis is defined as H_0. Gt, D, Pt and P values of the test statistic, z values and the probability values are given in Table 2. As seen from the table based on the results generated from the analysis of all statistics based on the hypothesis H_0 is rejected. In this case, long-term UNEMPLOYMENT and GDP is a correlation between the variables is concluded.

Table 2: Westerlund Panel Cointegration Test Results

Statistics	Value	Z Value	Probability
G_t	-8.534	-41.423	0.000***
G_a	-14.952	-2.473	0.007***
P_t	-23.924	-14.613	0.000***
P_a	-16.089	-6.433	0.000***

***p<.01, **p<.05, *p<.10

From the analysis we have achieved these results, Zagler (2003)'s, read law in France, Germany, Italy and the United Kingdom for the vector error correction model using the observations the work achieved in the long term economic growth and unemployment, among co-integration is and direction of the relationship positive is that is consistent with the results.

Accordingly, the Panel error correction model in Table 3, we see the results of the PMG. Long-term test of homogeneity Hausman test which is used to choose between forecasters and PMG has been seen that the model should be used. Long term homogeneous parameters were seen to be stable i.e. from unit to unit (see Table 3). According to the results obtained from the model, the error correction parameters were positive and significant. This parameter deviation of the series of short-term due to lack of stable equilibrium in the next period shows celerity. Accordingly, in a period of approximately 78% of the imbalance will be corrected in the next period will be provided closer to long-run equilibrium.

Table 3: Pooled Regression Results Per Group

Independent Variables	Coefficient	Std. Error	Z Value	Possibility
lnGDP	0.3496274	0.0567126	6.16	0.000
$lnGDP_{t-1}$	-0.260783	0.040849	-6.38	0.000
e_{t-1}	0.7766382	0.015277	50.84	0.000
Constant	6.43	4.44	14.48	0.000
Hausman Test (χ^2 test	0.000			

***p<.01, **p<.05, *p<.10

In addition, short-and long-term unemployment and economic growth parameters have significant impact on the long-term and short-term positive effects were found to be negative. A 1% increase in unemployment in the long-term economic growth, while an increase of 0.35% over the short-term will result in a decrease of 0.26%. When we look at studies on unemployment; GDP is usually calculated causality, and we can see that the correlation between them. Panel co-integration between our variable short-long-term relationships, there is much work trying to explain. Also the analysis obtained from our results Brauninger and Pannenberg (2002) in a country's level of unemployment long-term growth rate affect to examine whether the Solow-type models by putting their work obtained from the unemployment scale an increase in the long-term growth lowers the level to the conclusion that is in conflict.

5. Conclusion

In this study, using panel data analysis of short and long term economic growth and the relationship between unemployment and 28 EU member states in the 2001-2011 period and data to test for Turkey were used.

Whether long-term homogeneous parameters were examined by Hausman test. Breitung (2000), ADF Fisher and Levin, Lin and Chu (1993) panel unit root tests have been testing the stability of the series. Unemployment and economic growth as a result of the analysis variables in first difference stationary I (1) and in this case they are a long-term relationship between the two variables could be explored has emerged. For this purpose, Westerlund (2007) panel cointegration test with the long-term existence of a relationship between variables is proven. There is a long-term relationship between these two variables and it has been able to achieve a short and long term parameters. Unemployment in the short and long term economic growth in order to see how it affects the PMG forecasters using an error correction model was obtained. Error correction parameter is negative and statistically significant increased. Short and long term unemployment and economic growth parameters have significant impact on the long-term and short-term positive effects were found to be negative. A 1% increase in unemployment in the long-term economic growth, while an increase of 0.35%, a decrease of 0.26% in the short term cause has been determined.

Studies on the growth of European countries / continents at the level of the unemployment variables when examining the interaction of supply that have revealed several differences. For example, high unemployment in France, Italy and Germany are caused by the low level of growth similar situations override must in this case in the UK about the existence of the relations between variables cannot be fully rejected. Briefly, in Europe, unemployment in different countries affected by several variables, it is not explained only by a factor (Zagler, 2004). Our study short-and long-term unemployment and the relationship between economic growths have tried to be explained. In this sense, we believe that by using a different variable or adding new variables, we can provide new contributions to the literature for the future studies about unemployment.

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NEW TRENDS IN R&D DISPARITIES AMONG EU COUNTRIES. A SIGMA CONVERGENCE APPROACH

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Abstract: *The recent economic crisis brought about new challenges and disrupted the previous convergence process in R&D systems of EU member countries. The new developments in the configuration of the European Research Area require the use of adequate methods for measuring disparities between EU countries and monitoring of the convergence process. In this context, our paper aims to explore the new trends in R&D disparities among different groups of EU countries by means of a specific method for assessing the convergence/divergence process, namely the "sigma convergence" indicator introduced by Barro and Sala-i-Martin (1995). Considering the sizeable heterogeneity that exists within the EU-28 and candidate countries, we performed separate analyses on two groups of countries that are likely to be more homogenous: old and new EU member countries. Our main finding is a convergence trend for both EU-28 and candidate countries and old EU members over 2006-2013, while the new EU countries seem to diverge in terms of the research and development activity as captured by the Summary Innovation Index. The existence of a systematic trend of convergence / divergence was further tested based on both Augmented Dickey - Fuller (ADF) and DF-GLS stationarity tests.*

Keywords: R&D, disparities, sigma convergence, EU
JEL classification: O31, O32

Introduction

The monitoring of the convergence in R&D systems is being addressed for a long time within the framework of European Research Area. The new challenges induced by the current configuration of the European Research Area (ERA), by the Innovation Union commandments and by the new European research program Horizon 2000 - ERA, require the use of adequate methods for measuring disparities between EU countries. These can substantiate integrated strategies able to insert the objective of reducing disparities between R&D systems of EU member states.

As a result of the actions of building ERA, a certain degree of similarity and convergence appeared between the objectives and aspirations enshrined in national policies on R&D (Reding, 2005). It is due to better coordination and communication at EU level (Commission of European Communities, 2002, 2003, 2005), the implementation of the Open Method of Coordination and enlarged interactions between the old and new Member States, on the one hand and European institutions on the other, and by transferring best practices between countries or by imitating the priorities set out in the framework R&D Programmes.

The 2012 picture of the degree of convergence in the EU on innovation, considered the most important pillar of sustainable economic growth and competitiveness is however pessimistic. For the first time in 13 years, it was mentioned in a document prepared under

the aegis of the European Commission that there has started a divergence process in innovation, after more than 10 years of efforts to achieve convergence. Innovation Union Scoreboard 2013 states that "Less innovative countries as a group are no longer catching up with the most innovative countries. This means that difference in innovation performance in the European Union have started to increase signalling a possible start of a process divergence in Member State's innovation performance" (IUS 2013, p. 6). To the old factors involved in emergence of the European Research Area, such as economic globalization and communications, accelerating technological progress and its social implications (Council of the European Union, 2003; Sandu and Paun, 2009), new ones have been added in recent years, owing especially to the economic crisis which have disrupted the previous convergence process.

Nevertheless, new data in Innovation Union Scoreboard 2014 indicate that "there are again positive signs in Member States as the innovation performance improves and the catching up process of less innovative countries resumes" (IUS 2014, p.4). Despite overall improvements in R&D activity, proven by the annual average growth rate of 1.7% for the 2006-2013 interval (IUS 2014, p.6) significant differences in innovation performance persist among EU countries.

While acknowledging the weaknesses of R&D systems in the EU, compared to those of competitors in the U.S. or Asia, EU Horizon 2020 presents an optimistic view, tracing the lines of overcoming the current situation and facing current challenges such as slow economic growth, insufficient innovation, worsening environmental and social problems. The European R&D program is structured into a new vision, focusing on three key priorities (Excellent Science, Industrial Leadership and Societal Challenges) and the policies and strategies to support entrepreneurs and innovative companies to develop new technologies and to promote the kind of research that have marketable results. The six priorities established for the research aim to stimulate innovation, to offer solutions for solving problems of the today world, namely: health, population growth, food security and clean energy and also address climate change, the need to increase efficiency in using resources, to achieving an innovative, inclusive and safe society.

Monitoring the convergence is achieved, since 2000, through a system of indicators that develops and refines every year, in order to adapt to new trends and requirements, to express the most relevant and systemic progress in research, development and innovation, both in terms of inputs and outputs and the contribution of R&D, as a determining factor, in the growth of national and European competitiveness.

In this context, our paper aims to explore the trends in R&D disparities among EU countries by means of specific statistical methods used for assessing the convergence/divergence process.

The Method

Time trends in R&D inequalities among countries can be interpreted using the methods of convergence analysis. We will employ a standard indicator of convergence proposed by Barro and Sala-i-Martin (1995) – called "sigma convergence". Sigma convergence means the decrease in the dispersion of the variable of interest in cross-sectional data context. On the other hand, if less developed countries grow faster than the developed ones, it is considered that a β convergence process occurs.

In order to measure sigma convergence the common choice is the coefficient of territorial variation. The coefficient of variation for each year t is measured as the standard deviation of the variable y under consideration divided by its mean:

$$\sigma = \dfrac{\sqrt{\dfrac{\sum\limits_{i=1}^{n}(y_i - \bar{y})^2}{n}}}{\bar{y}} \tag{1}$$

The reduction of this coefficient of variation calculated for EU counties for a certain time interval T: $\sigma_{to+T} < \sigma_{to}$ would indicate the presence of a convergence trend. On the opposite, the increasing value of the sigma coefficient: $\sigma_{to+T} > \sigma_{to}$ is corresponding to a divergence process.

The existence of a systematic trend of convergence / divergence can be tested using the following regression equation:

$$\sigma_t = a + bt + \varepsilon_t \tag{2}$$

where the dependent variable σ_t represents annual values of the coefficient of variation and bt reflects the trend in sigma values. If the regression coefficient b is statistically significant and negative it indicates a convergence process. On the opposite, if positive it signals divergence among the group of countries in the sample.

In order to capture the persistence in the R&D dispersion among countries, an autoregressive process of first order is introduced in the model, resulting the following extended equation:

$$\sigma_t = a + bt + \rho\sigma_{t-1} + \varepsilon_t \tag{3}$$

The last regression equation is useful for testing the non-stationarity of the sigma time series based on Augmented Dickey - Fuller (ADF) test (Dickey and Fuller, 1981). ADF test estimates the equation that results by subtracting σ_{t-1} from both sides of relation (3):

$$\Delta\sigma_t = a + bt + c\sigma_{t-1} + \varepsilon_t \tag{4}$$

where $\Delta\sigma_t$ is the first-order difference in sigma values, bt captures the trend, and c = ρ -1. ADF tests the presence of unit root (H_0: ρ = 1). Failing to reject the null hypothesis confirms the existence of a convergence/divergence process, depending on the sign of the trend variable (Drennan, 2004). We are also going to use a second stationarity test, namely the DF- GLS test (Elliott et al., 1996) which is a stronger version of ADF and applies the method of generalized least squares (GLS).

Results and Discussion

According to Barro and Sala-i-Martin (1995) classical σ indicator, we consider that there is sigma convergence in the EU research and development system if the coefficient of variation for the relevant R&D variables analyzed in a territorial perspective decreases over time.
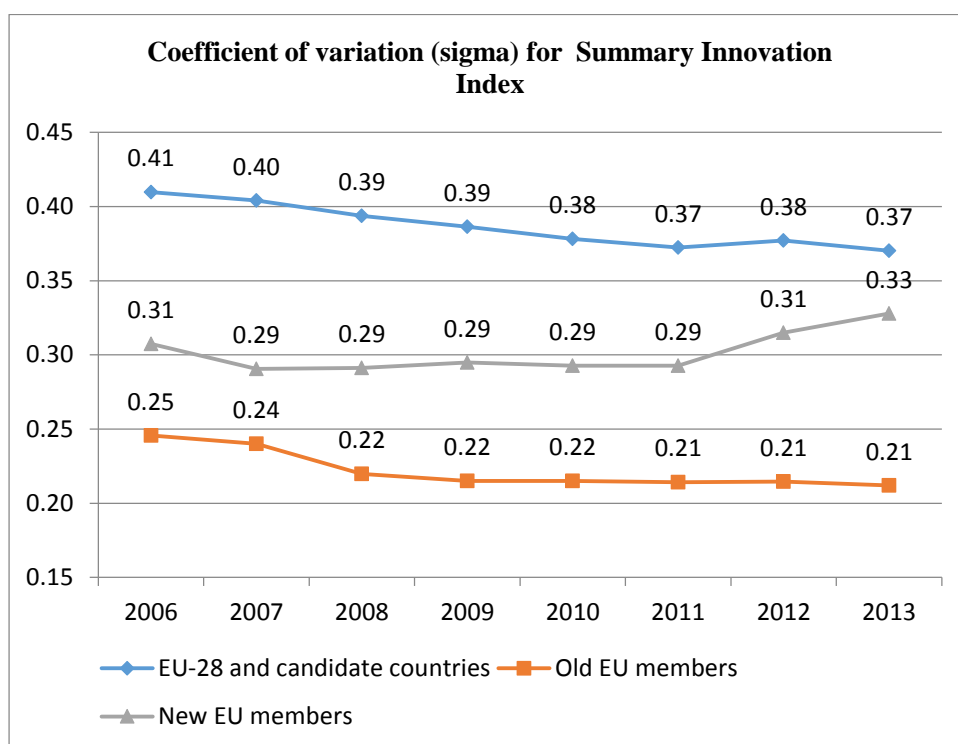
Fig.1. Sigma convergence/divergence for different groups of countries based on Summary Innovation Index
Source: processed by authors based on Eurostat data

The annual values computed for the coefficient of variation (sigma) based on the level of Summary Innovation Index indicate a significant declining trend over the period 2006-2013 (Figure 1) suggesting a process of convergence in R&D. Considering the sizeable heterogeneity that exists within the EU-28 and candidate countries and the subsequent loss of statistical significance in the results, we further defined two groups of countries that are likely to be more homogenous:
- old EU member countries: Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom;
- new EU member countries: Bulgaria, Croatia, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia, Slovakia.

As expected, the calculations for the two groups of countries show important differences between them in terms of both sigma coefficient levels and their trends (Figure 1). R&D systems are more homogenous across old EU member countries, as the dispersion of Summary Innovation Index values is relatively moderate and tends to decline, leveling at about 0.21 in the last few years, while the new EU members are more diverse in their R&D potential and performance and the distance between them increased following the recent economic crisis that impacted strongly (but unevenly) their R&D funding. For instance, the crisis changed the investment behavior and diminished companies' propensity for credits. Surveys indicate that companies' investments dedicated to innovation projects in 2011 were founded from internal rather than external sources (Eurobarometer, 2013)

In sum, only old EU countries converge, while the new members seem to diverge in terms of the research and development activity as captured by Summary Innovation Index.

Table 1. The results of the ADF test equation (dependent variable Δσ).

Variable/ statistic	EU-28 and candidate countries		Old EU Countries		New EU Countries	
	Coeficient	Std. Error	Coeficient	Std. Error	Coeficient	Std. Error
Sigma (-1)	-0.5032	0.4596	-0.8977***	0.0796	-0.3944	0.3336
Constant	0.1987	0.1903	0.1979***	0.0198	0.1003	0.0981
Trend	-0.0021	0.0030	-0.0010	0.0005	0.0050**	0.0014
R-Squared	0.379296		0.993468		0.747205	

Significance: *** $p<0.01$; ** $p<0.05$; * $p<0.1$

ADF and DF-GLS tests on sigma series

Test critical values		t-Statistic (Prob.[1])		
		EU-28 and candidate countries	Old EU Countries	New EU Countries
Augmented Dickey-Fuller test		-1.094883	-2.684558	-1.182227
1% level	-6.292057			
5% level	-4.450425			
10% level	-3.701534			
Elliott-Rothenberg-Stock DF-GLS test		-2.187864	-2.270814	-1.273446
1% level	-3.770000			
5% level	-3.190000			
10% level	-2.890000			

[1] MacKinnon (1996) one-sided p-values.

In order to test the existence of a systematic trend of convergence/divergence for the different groups of countries, we used Augmented Dickey - Fuller (ADF) and DF- GLS tests. The results from the ADF test equation on sigma series (Table 1) confirm the convergence trend for both EU-28 and candidate countries and old EU members, while new EU countries diverge. Both ADF and DF-GLS tests fail to reject the null hypothesis of unit root, indicating that sigma series does not display stationarity. This supports our hypotheses on sigma convergence/divergence in SII. Given the rather small sample size the results from these tests may however not be accurate.

We need to be aware that the Summary Innovation Index is a composite indicator that hides important inequalities between the countries as regards the groups of indicators (the eight innovation dimensions), as well as the underlying individual indicators. Consequently, we further calculated the sigma coefficient for each innovation dimension, annually. The results (Figure 2) reveal that despite the overall downturn trend in R&D dispersion (i.e. convergence trend), there are also divergence trends, especially in Finance and support dimension, since 2011.
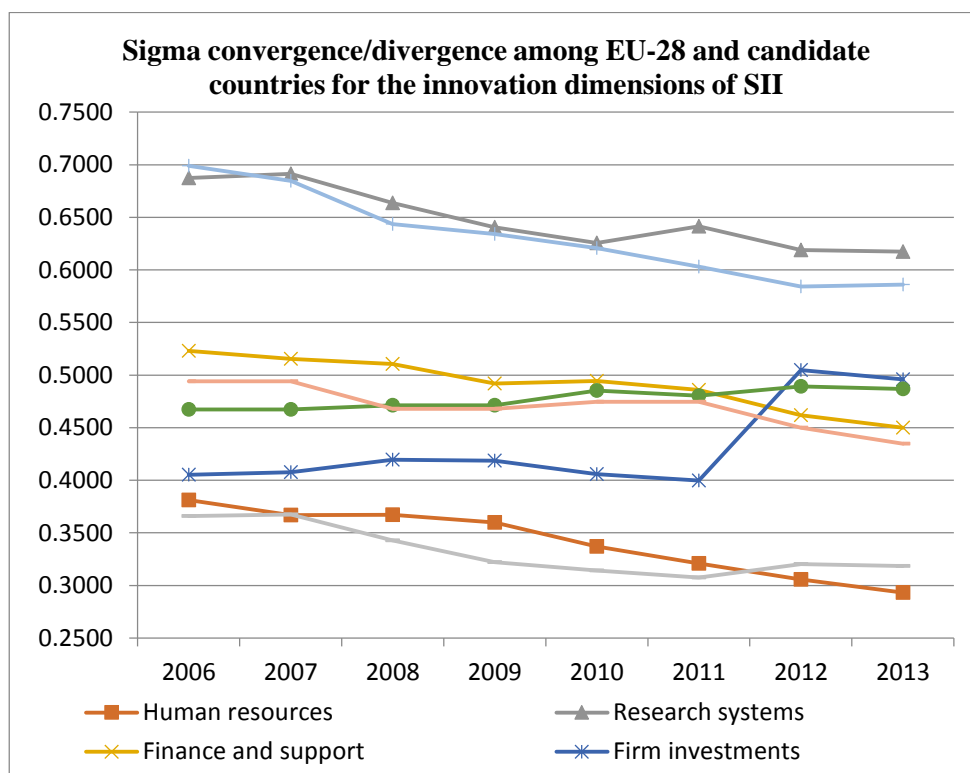
Figure 2. Sigma convergence/divergence trend among EU-28 and candidate countries for the eight innovation dimensions of the Summary Innovation Index (SII), 2006-2013
Source: processed by authors based on Eurostat data

Since results for the whole group of EU-28 and candidate countries can be misleading due to significant heterogeneity, we further performed separate analyses for old and new EU countries (Table 2). It is noteworthy that significant differences still persist within the two groups of EU members, but their amplitude is however considerably smaller inside each group of countries.

Old EU countries display significant lower dispersion than new EU members in all innovation dimensions, except for Human resources. The differences between the two country groups are very marked in the case of Linkages & entrepreneurship and Innovators (dispersion was more than double for the new members in 2013), as well as for Research systems and Intellectual assets.

Table 2. Sigma convergence/divergence for old and new EU countries
Coefficient of variation among old EU members for Summary Innovation Index (SII) and innovation dimensions

year	SII	Human resources	Research systems	Finance and support	Firm investments	Linkages & entrepreneurship	Intellectual assets	Innovators	Econ. effects
2006	0.246	0.295	0.329	0.343	0.295	0.314	0.404	0.288	0.250
2007	0.240	0.280	0.323	0.336	0.290	0.314	0.402	0.288	0.242
2008	0.220	0.276	0.306	0.327	0.310	0.302	0.371	0.261	0.204
2009	0.215	0.274	0.290	0.305	0.309	0.302	0.370	0.261	0.200
2010	0.215	0.274	0.283	0.321	0.327	0.282	0.364	0.250	0.199
2011	0.214	0.263	0.274	0.342	0.323	0.280	0.356	0.250	0.209
2012	0.215	0.244	0.270	0.349	0.356	0.277	0.355	0.254	0.188

2013 0.212 0.244 0.275 0.331 0.352 0.274 0.367 0.256 0.188

Coefficient of variation among new EU members for Summary Innovation Index and innovation dimensions

year	SII	Human resources	Research systems	Finance and support	Firm investments	Linkages & entrepreneurship	Intellectual assets	Innovators	Econ. effects
2006	0.307	0.252	0.436	0.395	0.432	0.521	0.552	0.588	0.330
2007	0.291	0.214	0.402	0.384	0.432	0.521	0.454	0.588	0.328
2008	0.291	0.214	0.439	0.342	0.492	0.548	0.420	0.557	0.334
2009	0.295	0.195	0.437	0.380	0.489	0.548	0.440	0.557	0.310
2010	0.293	0.183	0.431	0.463	0.352	0.620	0.448	0.590	0.317
2011	0.293	0.175	0.490	0.442	0.351	0.614	0.504	0.590	0.308
2012	0.315	0.194	0.472	0.448	0.551	0.623	0.500	0.577	0.342
2013	0.328	0.150	0.509	0.492	0.544	0.626	0.522	0.548	0.340

Source: processed by authors based on Eurostat data

Important differences between the two groups of countries also emerge as regards the trend of the sigma coefficients (Figures 3 and 4).

The group of developed EU countries display a stable downturn trend in sigma values, indicating persistent convergence (Figure 3). One notable exception is Firm investments that reversed the declining trend in 2010, in the context of the economic crisis that hit the national R&D systems with different intensity, depending on the specific R&D policies of the countries.
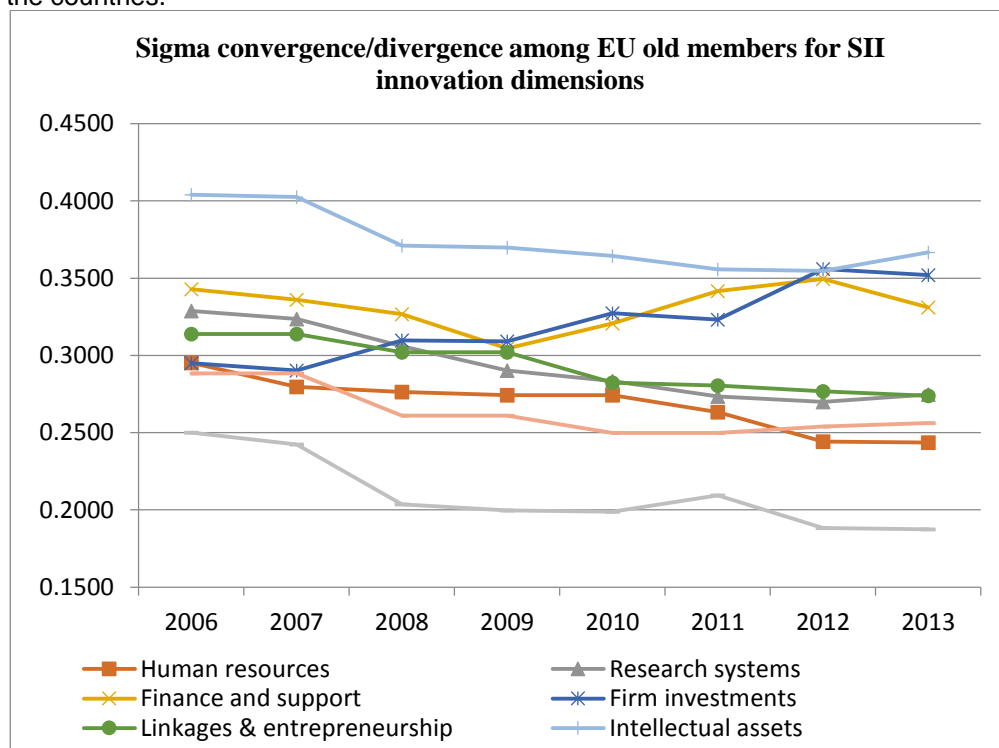
Figure 3. Sigma convergence/divergence trend among EU-old countries for the eight innovation dimensions of the Summary Innovation Index (SII), 2006-2013
Source: processed by authors based on Eurostat data

The new EU members provide more diverse results (Figure 4). Differences among them are rather moderate and rapidly declining as concerns Human resources, but high for all

other innovation dimensions, reaching values above 0.5 for Linkages & entrepreneurship, Innovators, Intellectual assets, Firm investments and Research systems. Moreover, many innovation dimensions display a pronounced rising trend indicating that a divergence process is taking place.

In conclusion there are many differences and divides between old and new member states in the R&D area. These inequalities arise from the larger economic environment. There are specific socio-economic characteristics which influence the innovative capacity and performance in each group.

Old EU countries represent developed, mature economies, owning important economic resources and being more stable, more resilient to shocks such as the recent crisis. They already achieved a certain level of convergence and therefore display lower dispersion than new EU members in all innovation dimensions.
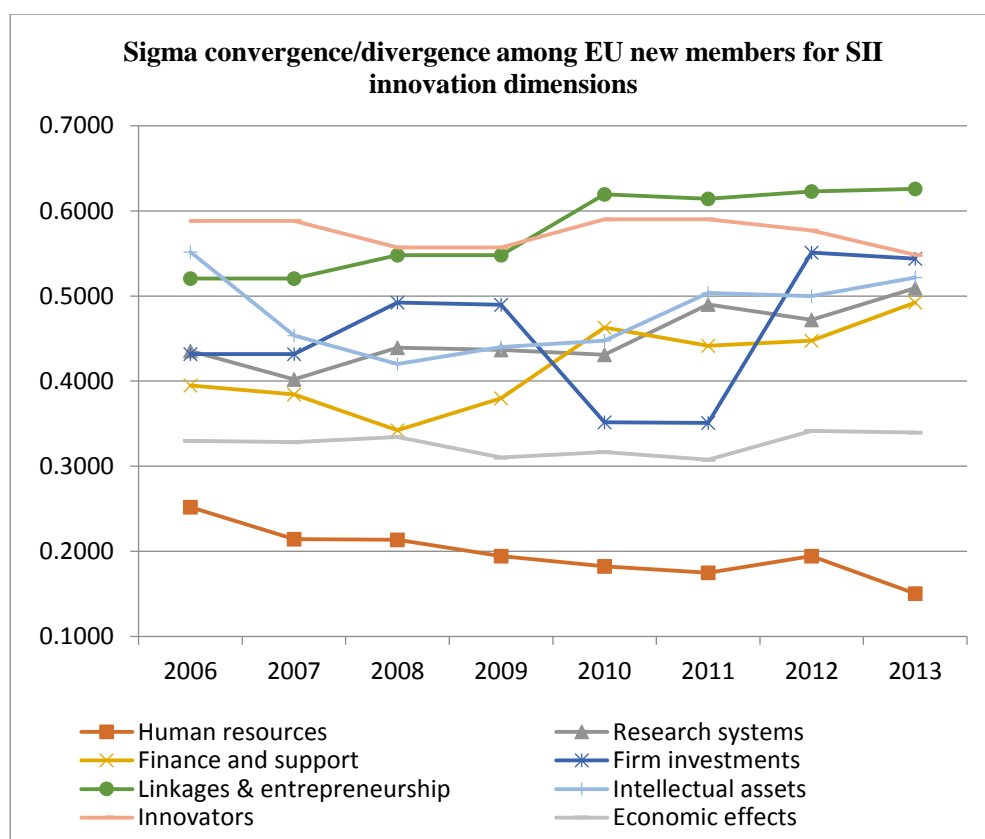
Figure 4. Sigma convergence/divergence trend among EU-new countries for the eight innovation dimensions of the Summary Innovation Index (SII), 2006-2013
Source: processed by authors based on Eurostat data

On the other part, the new EU countries are former socialist countries that only recently concluded the transition to the market economy, and the painful transformations in their economies left many unsolved problems, including a weak and poorly funded research system. Publicly funded research declined sharply in these countries, while most private companies were either not able or not interested to fill the gap by performing more research activities. FDIs in new member countries are not attracted in spending for R&D activity in host countries and were rather medium and low-technology level rarely provided

significant technical progress. Therefore, the R&D systems of these countries are less efficient and more vulnerable to economic crises.

Conclusion

Despite overall improvements in European R&D area and a certain degree of similarity and convergence, significant differences in innovation performance still persist among EU countries. The European research system does not respond adequately to the requirements of sustainable development. There is still need to improve the coordination of the national and regional funding through adequate programmes and infrastructure, to foster cooperation and to transfer best practices between countries.

Our research on the new trends in R&D disparities over 2006-2013, for different groups of EU countries, revealed a convergence process among EU-28 and candidate countries, and for the old EU members as well. On the contrary, the new EU countries seem to diverge in terms of the research and development activity as captured by the Summary Innovation Index. Augmented Dickey - Fuller (ADF) and DF- GLS stationarity tests confirmed that these trends are systematic and statistically significant.

Adequate R&D policies, as well as economic measures to secure recovery and sustainable growth are needed in order to address these differences in R&D systems' performance and to narrow the existing gaps.

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LABOUR MARKET INTEGRATION OF THE UNIVERSITY OF ORADEA STUDENTS. EXPLORATIVE STUDY

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Abstract: In the life of any young person, entering the labour market is one of the most important events. It can be an easy process or, on the contrary, it may be marked by many constraints and opportunities. The labour market for young graduates is different depending on the country in which he lives. Young labour market insertion can occur both after and during school graduation. He or she becomes, in the latter situation, an insider in the labour market. Many countries are reforming their education systems to provide their citizens with knowledge and skills that enable them to meet social and economic challenges of the society. Countries vary significantly from each other in their economic, socio-demographic and institutional characteristics. Our study focuses on the analysis of the University of Oradea graduates in the last four years. The sample includes 529 respondents from different academic specializations both BA and MA level. In this context, in our analysis we have 38% MA graduates and 62% BA graduates, of which 39% married and the remaining 61% unmarried. Of the total sample 78% have a job. More than half of the subjects (53,5%) considered as good or very good the professional training provided by the UO. Validating our hypotheses, the correlation of field of study with the domain of the current job is higher in the case of MA level graduates and, moreover, it predicts the level of satisfaction of our subjects with the development opportunities (personal and professional) provided by the educational programs of the University. It is clear, therefore, that MA graduates are more grateful to the University performance than BA degrees holders. It is proven, that the assessment of the academic programs on behalf of graduates depends heavily on their successful integration in the labor market. The limits of the study are related to our auto selected subjects that have responded to our online questionnaire.

Keywords: transition from school to active life, youth insertion on labor market, job, occupation.

JEL classification: J01; J62;

1. Introduction

Transition from school to work is one of the most important and difficult moments in the life of a young people. This period of time may be very unstable, involving different attempts of the young graduate to enter the labor market or, on the contrary, can be an easy process. During the transition, young people have to take difficult decisions, such as continuing studies or to leave school and look for a job, what kind of job to choose and how to respond to labor market opportunities and constraints (Agnieryka Dudyinska, 2010). The decision that young will take in this transition period will have long-term consequences such as leaving parental home and starting a family (Schoon and Silberesen, 2009).
National and international statistics (OECD, 2010 ECEA, 2012) emphasizes that university graduates have higher employment opportunities and find a job faster than high

school graduates. This is confirmed by a study conducted in Romania in 2010 (Voicu.B, Tufiş.C and Voicu, M, 2010).

Many countries are reforming their education systems to provide their citizens with knowledge and skills that enable them to engage actively in democratic societies and dynamic knowledge-based economies (OECD, 2000). Countries vary significantly from each other in their economic, socio-demographic and institutional characteristics.

The objective of this article is to investigate the integration into the labor market of an opportunity sample of MA and BA level graduates of University Oradea who have completed an online questionnaire delivered at between 2012 and 2013.

2.Theory

Transition from school to work designates the process by which graduates enter the labour market, respectively young people leave the education system. In this process, young people gain their first experiences as employees, even if they have or not have graduate. Transition from school to work generally begins during the last years of study and includes the first attempts of young people to enter the labour market in the formal economy, but also in the grey economy either. For OECD (OECD, 1999, p 45), the transition is defined as "the period beginning the first year of age at which less than 75% of the population is studying without working and ends in the last year 50% of the population that works without studying."

Investigation of the integration process into the labour market is hampered by replacing classical/ direct transition model in which work and school are succeeding with an indirect transition model, or dual, in which school and work may overlap for certain periods of time, alternating unemployment or inactivity.

To describe youth pathways in 2000, OECD adopted the concept of "itinerary" that allows comparisons between countries by describing the relationship between training methods and organization of the labour market. The education system provides various training opportunities and young people choose their own routes of transition, being influenced in their decisions by public authorities, employers and their families. The idea of itinerary or professional trajectory occupies a central position in the transition from school to work and requires a different way of seeing or thinking social and professional integration of young people.

It is widely accepted that the integration of young people into the labour market plays a decisive role in determining their economic and social well-being and their future development. In this direction, was developed concept of transition from school to "decent work ", arguing that a person does not successfully complete this transition until you get to handle a job that involves the practice of decent work Also, the problem can be extended to transition graduates / young the first job "significant" which means a busy job after leaving the education system for at least six months and for at least 20 hours work per week (Statistical Office of the European Union). Furthermore, analysis of labour market integration of young people should consider the degree of agreement between the qualifications held by graduates / young and occupations that they practice as an indicator of the quality of the transition from school to work.

The literature defines the differences between transition from school to work and insertion in the labour market by the fact that transition from school to work does not necessarily mean graduation, while the insertion on the labour market means finding a job after graduation (Hill, Carolyn and Holzer, Harry, 2006).

The differentiation between the two concepts is, however, often unclear because the sequence of school-work, no longer complies with the classic compulsory school and work may alternate with periods of inactivity and unemployment, can complement or even to change the sequence of classical (where forms of evening classes , part time , distance

learning , on- line , "blended ", etc. whose role is precisely to provide a second chance at education to those who already went through the process of entering the labour market) . In addition , school - work transition is different from one country to another , depending on the link between education and the labour market, the degree of standardization of the national education system, as the system provides educational and professional development options in choosing the during the studies, is widely recognized that the so-called dual model - in which education and practice occur simultaneously, allowing the student to become insiders in the labour market even before graduation. (Rolf K.W. van der Velden, Maarten H.J. Wolbers, 2001).

In a comparative study it is explored how patterns of institutional differentiation in higher education systems are related to educational inequalities at the time of transition from higher education to work. Measure institutional differentiation between countries on two dimensions: the degree which mainly structured social inequalities in occupational status attainment and occupational specifics which mainly structured into educational inequalities in labour market dynamics. Convergent processes led to similar patterns of institutional differentiation in higher education in five studied countries, post-socialist Central and Eastern European countries. Educational Inequalities in the transition from higher education to work should therefore also follow similar patterns in different countries. Empirical results show that the diploma is an important determinant of employment, the graduates of master occupying the highest position, followed by university graduates and vocational schools.(Noelke Clemens , Michael Gebel , Irena Kogan, 2012)

In one systematic comparative analysis (using data from 22 countries) of the consequences of labour market related fields of study, the conclusion was that the more university graduates are, the biggest differences in labour market opportunities for university graduates from different fields of study (David Reimer, Clemens Noelke şi Aleksander Kucel, 2008).

According to Aceleanu, M. and Co. (2009): "the high rate of youth unemployment than other age groups and that the time required to find a job is even lower as the level of training is higher, diploma gives greater weight to early career than during it. Graduates of a master's program find employment faster than graduates of an undergraduate program. There are some data that the link between level of education and increased chances of getting a job. "Higher education graduates had to the total unemployed persons, only a share of 4.6%. It is clear that a high level of education act as a protective factor against unemployment. "(Aceleanu & Co. 2009).

In a longitudinal research it shows that individuals with high self-efficacy beliefs and better grades were less likely to become unemployed and more likely to be satisfied with their jobs. (M. Pinquart, L. P. Juang, R. K. Silbereisen, 2003).

Provided the discussions from the previous paragraphs we can develop several hypotheses concerning the integration of BA and MA graduates into the labor market.

Given that graduating from a study program involves a large investment with the expectation that one will find a job in the domain of the graduated field of study, one can expect that the level of satisfaction with the personal and professional development made possible by the University of Oradea is in positive correlation with the correspondence of the field of study of graduation and the domain of the current job.

Moreover, because of the depth of professionalization that a MA delivers, compared with BA programs and the requirements of the current, largely segmented, labor market we expect that MA graduates find more often jobs correlated with their credentials compared with their younger colleagues holding BA degrees.

3. Methodology

Our study has as population the graduates of the University of Oradea. It's a opportunity sample (self-selected) and comprises 529 people, graduates of programs at the BA or MA programs of the University of Oradea. Questionnaires were distributed online and submitted electronically by the subjects. Completion period was March 2013 to March 2014 and includes graduates of the academic years 2009-2013.

3.1. Results:

In the first part of the analysis we make a presentation of our sample, building from existing data a synthetic picture of the graduate of the University of Oradea: regarding their situation concerning variables of gender, marital status, education completed, if he/she holds a job, how long it took to find a job, satisfaction regarding the training provided by University of Oradea and the manner in which he obtained a job.

The second part of the analysis focuses on the correlation between the actual activity, graduated specialization and degree of satisfaction with personal and professional development opportunity offered by graduating from University of Oradea (UO); correlation between the domain of specialization and that of current job.
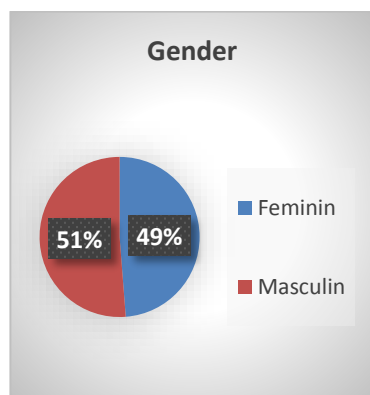
Fig 1: Percent of female vs. male
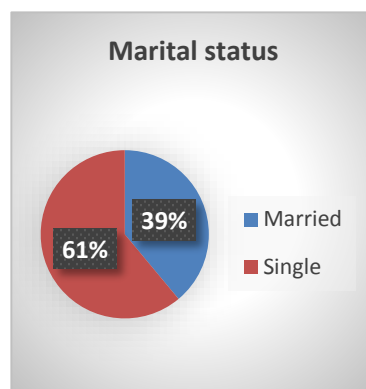
Fig 2: Marital status
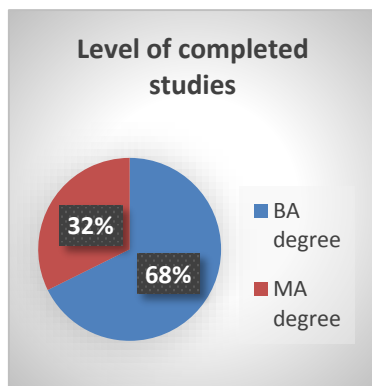
Fig. 3: Level of completed studies
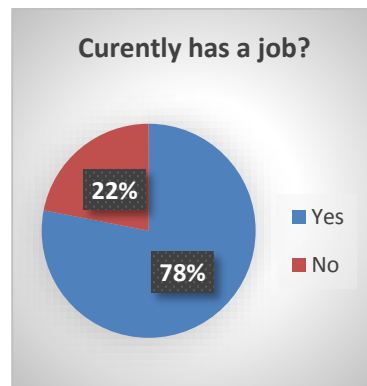
Fig 4: Number of employed graduates

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The ratio between subjects who have a job and those who were not employed at the moment is 4-1. Proportion of those who have managed to find a job is satisfactory in view of the general situation of the Romanian economy and the issues of youth unemployment across European Union.

Fig. 5: *Period in which graduates find a job*

It should be noted that more than half of the subjects had a job before graduation (21.6%) or were employed in the first three months after graduation (22.9%). It appears there is a significant connection between practical experience before or during their studies and labour market success. The figures are comparable with data from similar studies in Europe. They show that only 6.6% of university graduates need more than 24 months to find a job (Aceleanu & Co., 2009).
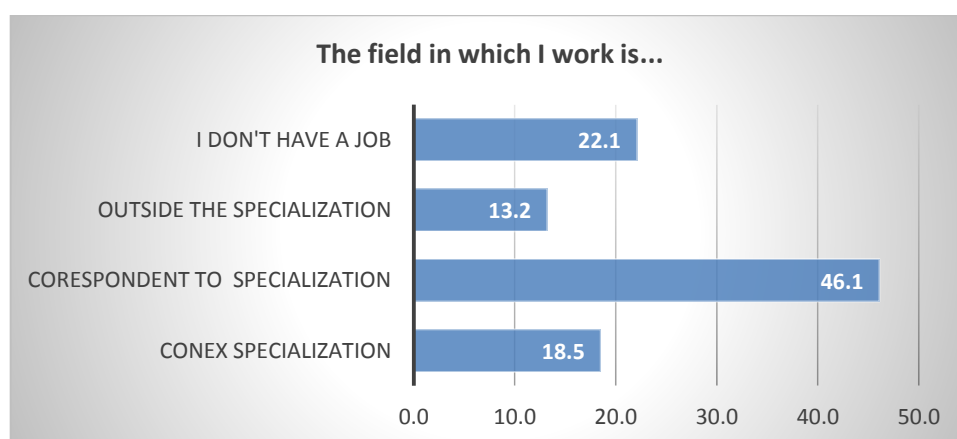
Fig. 6 *Domain of employability according to the specialization*

Most graduates working in the field of study (46.1%) or in related fields (18.5%).

Fig.7: *Level of satisfaction with the personal and professional development provided by UO*

More than half of the subjects considered as good (30.1%) or very good (23.4%) the professional development provided by the UO.
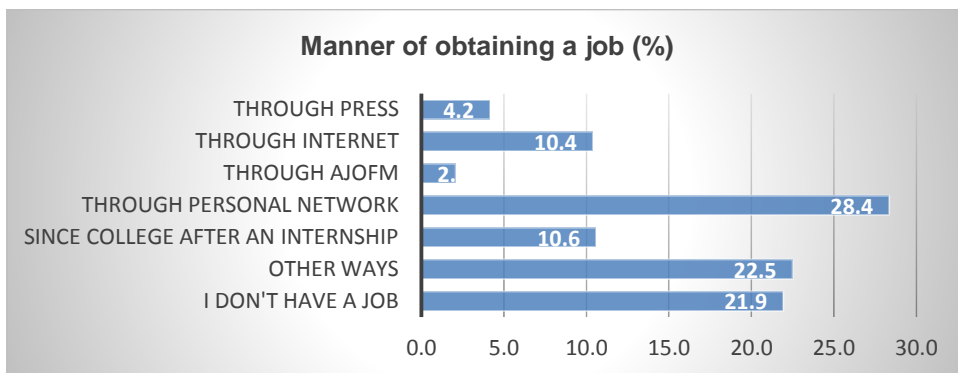
Fig. 8: *Manner in which graduates find a job*

3.2 Test of hypotheses

Level of satisfaction with personal and professional development opportunity offered by graduating from UO strongly correlated with the ratio of specialization / area completed and the current job. The vast majority of those working in jobs related to the field of study of graduation shows that level of satisfaction are more often good or very good, unlike the case of those working outside specialization which have a much higher level of dissatisfaction.
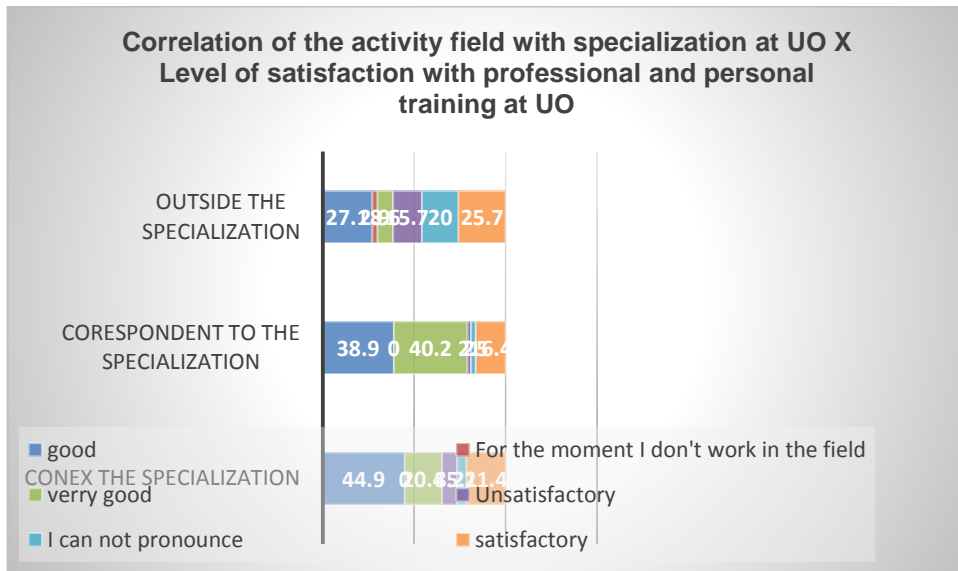
Fig. 9: *Correlation of the activity field with specialization at UO X Level of satisfaction with professional and personal training at UO*

Graduates of the master level studies are more likely to work in the areas of their graduation than the licentiates. It is unclear, however, if the graduate specialization is whether endogenous or exogenous to the job (if they followed a master program fit to the job or the graduated master's program helped them to find a job). Given that an overwhelming proportion master's students are employed, active people already holding a job; job endogenic hypothesis seems more likely.
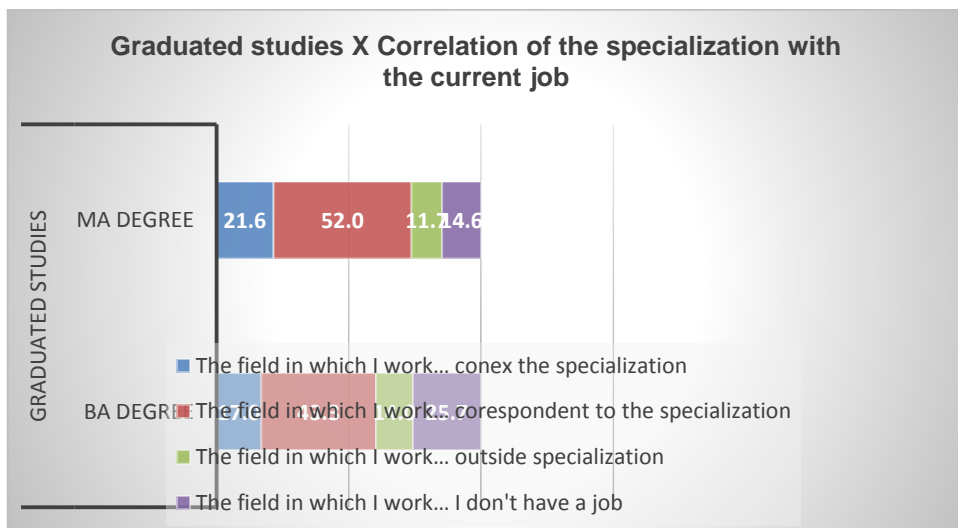
Fig. 10: *Correlation of the specialization with the current job*

To clarify the issue of the causal relationship between the program and the job completed we investigated period in finding a job and graduate program cycle, following the existence of a specific pattern on the employment before or after enrolment in a program of study.

Contingency table above shows several interesting things about the UO student's that completed our questionnaire and about their study programs:

- Taking into account the fact that graduates of BA programs do not have a job it turns out that 39.5% of BA programs' graduates did not really benefit from graduating, in sharp contrast with only 26.1% of MA programs graduates.
- A relatively high proportion of non-traditional students among the students that are the following programs at undergraduate level: 18.7% of them were working before enrolling in that program of study.
- Further data indicates that hiring is up to the master's program: only 7.6% of the graduates of the master states that were working that job.

4. Conclusion:

In our article we have investigated in a descriptive and explorative way the integration into the labor market of an opportunity sample of MA and BA level graduates of University Oradea who have completed an online questionnaire delivered at between 2012 and 2013. The socio-demographics of our sample of over 500 graduates suggests a very good representativity in terms of age, marital status and degree structure. Univariate, descriptive data show that most of the graduates of the University of Oradea either find a job before graduating, or get a job shortly after graduation or are still unemployed. Moreover, most of our subjects in our sample work in jobs in fields corresponding to the domain of their degrees and express a high or very high level of satisfaction with the personal and professional development opportunities provided by the University of Oradea.

In concord with our hypotheses, the correlation of field of study with the domain of the current job is higher in the case of MA level graduates and, moreover, predicts of the level of satisfaction of our subjects with the development opportunities (personal and professional) provided by the educational programs of the University. It is clear, therefore, that MA graduates are more grateful to the University performance than BA degrees holders. It is proven, therefore, that the assessment of the academic programs on behalf of graduates depends heavily on their successful integration in the labor market.

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EUROPEAN ENERGY INTERCONNECTION EFFECTS ON THE ROMANIAN ECONOMY

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Abstract: In this paper the author wants to exemplify the extent to which economic growth in Romania is influenced by the current power system infrastructure investments in Europe. Electricity transmission infrastructure in Romania is at a turning point. The high level of security of supply, delivery efficiency in a competitive internal market are dependent on significant investment, both within the country and across borders. Since the economic crisis makes investment financing is increasingly difficult, it is necessary that they be targeted as well. The European Union has initiated the "Connecting Europe" through which investments are allocated to European energy network interconnection of energy. The action plan for this strategy will put a greater emphasis on investments that require hundreds of billions of euro in new technologies, infrastructure, improve energy intensity, low carbon energy technologies. Romania's energy challenge will depend on the new interconnection modern and smart, both within the country and other European countries, energy saving practices and technologies. This challenge is particularly important as Romania has recovered severe gaps in the level of economic performance compared to developed countries. Such investment will have a significant impact on transmission costs, especially electricity, while network tariffs will rise slightly. Some costs will be higher due to support programs in renewable energy nationwide.Measures are more economically sustainable to maintain or even reinforce the electricity market, which system can be flexible in order to address any issues of adequacy. These measures include investments in border infrastructure (the higher the network, so it is easier to evenly distribute energy from renewable sources), to measure demand response and energy storage solutions.An integrated European infrastructure will ensure economic growth in countries interconnected and thus Romania. Huge energy potential of Romania is an opportunity economic recovery after the financial and economic crisis and the recent recession.Interconnected network of high quality will be a lasting investment with long-term positive consequences.

1. Introduction

Europe's energy infrastructure is aging. The current European electricity networks relies mainly on technology developed now more than 30 years, and the need for innovation so far has been limited. The network has been designed for uni- directional flow of energy from large centralized power and total control up to consumers at the other end of the network. A set of recent proposals is about to change this image and put under pressure from changing networks. The promoters of this movement are both outside the network (those who are preparing a future low carbon) and internal, such as the need to replace the aging structure. This challenge combines emergency needs reinvestment cycle after new requirements mainly due to the rapid growth of electricity production from renewable

sources arising from energy and climate policy objectives of the "Europe 2020 strategy".

2. European energy infrastructure development
2.1. The EU framework
Establishment and development of trans-European networks in the energy sector are set out in Article 154 of the Treaty establishing the European Community. Articles 155 and 156 of the European Community Treaty provides guidelines to define the objectives, priorities and broad lines of measures for them. EU Council established a legislative framework to ensure the proper functioning of a competitive internal market for electricity while maintaining security of electricity supply and ensuring sufficient interconnections between Member States, general, transparent and non-discriminatory.
In November 2010 the European Commission adopted an initiative entitled "Energy 2020 - A strategy for energy competitive, sustainable and secure energy". This strategy defines the energy priorities for a period of ten years and establishing actions to be taken to address a number of challenges, including achieving a market with competitive prices and reliable supply, facilitating positioning as a leader in technology and negotiating effectively with international partners. In the same month, the European Commission adopted an initiative entitled "Energy infrastructure priorities for 2020 and beyond - A Blueprint for an integrated European energy network". It defines EU priority corridors for the transport of electricity, gas and oil. It also proposed a set of tools to facilitate timely implementation of these priority infrastructure. In March 2011 he started the Agency for the Cooperation of Energy Regulators. As a supervisory body with an advisory role, the Agency shall advise the Commission on market regulation and development priorities of the transport infrastructure. As additional measures were adopted two regulations that were established cooperation structures transmission system operators in the European network (Entso): one for electricity (Entso-E) and one for gas (Entso-G). Entso, along with Acer, create technical codes and detailed rules on network access and ensure coordination of network operation through the exchange of operational information and the development of common standards and procedures for safety and emergencies. Entso are also responsible for writing a ten-year investment plan every two years interval, and these are then reviewed by Acer. In 2013, among other codes were developed network code on capacity allocation for cross-border gas and electricity capacity allocation for.

2.2.The need for cross-border investments in energy infrastructure
Recently adopted guidelines for trans-European energy infrastructure provide a new way to identify infrastructure projects of common interest and to accelerate their performance through enhanced regional cooperation, simplified authorization procedures through appropriate regulatory process and with assistance European financial mechanism provided by the proposed "Connecting Europe ". Despite variations between Member States, EU progress far enough to allow it to fulfill its commitment to have a 20% share of renewables in final energy consumption according to the objective set by the EU Directive on renewables. A significant share of renewable energy in the electricity mix (Figure 1) raises the question of the adequacy of generation capacity of electricity networks. This becomes a problem louder while the intermittent solar and wind power generation requires the consideration of other sources of energy as alternative sources.
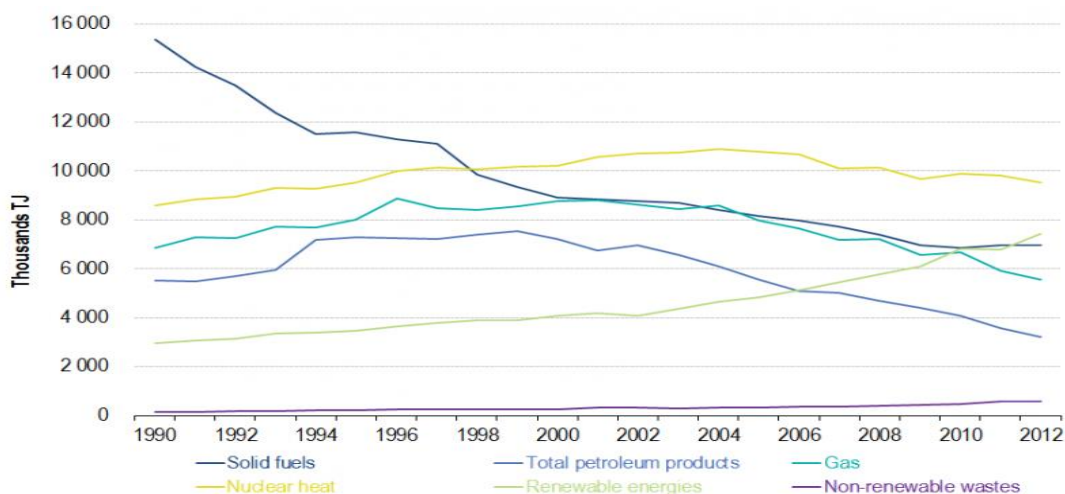
Figure 1: Primary energy production, EU-28
Source: Eurostat

Some Member States are considering the option of paying for the available production capacity at national level, and this ability is often based on fossil fuels. Such an approach is likely to be economically inefficient and is likely to maintain the internal electricity market fragmentation and maintain dominance of power generation capacity based on fossil fuels.

The European Commission has estimated that by 2020 would require investments of around 200 billion for energy infrastructure in Europe. Given this requirement , the Commission adopted the Communication "A budget for Europe 2020" under the next multiannual financial framework (2014-2020), proposing the Connecting Europe Facility (CEF) for supporting priority projects in energy, transport and digital infrastructure critical. MCE proposal, launched on 19 October 2011, allocated 9.1 billion euros (out of a total fund of 50 billion allocated MCE) for the development of trans-European energy infrastructure projects. To facilitate absorption MCE for projects of common interest, the Commission launched a proposal for a regulation on guidelines for trans-European energy infrastructure and repealing Decision No.1364/2006/EC, which was recently adopted by the Council and Parliament. Identifies 12 priority areas and corridors which include electricity and gas networks, as well as for the transport of oil and carbon dioxide and establishes measures for streamlining and expediting procedures for the authorization and regulation of projects of common interest. Commission proposed in 2013 a list of European projects of common interest, in accordance with the procedures and criteria set out in the Regulation.

2.3. Preparation grid in the European Union 2020

In order to integrate a high penetration of RES in the coming decades, Europe power system will have to face several infrastructure changes. significant investments will have to be made over time in order to accommodate variability of the high penetration RES variable. A single technological solution will not be enough to meet expected needs for arbitration. Complementarity and substitution potential response energy storage and demand on the electricity transmission must be understood in order to design efficient investment. However, optimal mix between these three technologies depend on their relative costs and on the future development of the European energy system. This development will be in fundamental forces of supply and demand, which are highly dependent not only on RES and carbon policies, but also on the socio–economic Europe.

If electricity operators (Entso-E) table below illustrates the estimated total cost of investment in the country for projects of pan-European by 2020. Total investment cost amounts to 104 billion euros, of which 23 billion euros for submarine cables.

Table 1: Ten-Year Network Development Plan 2012

Country	Billion EUR	Country	Billion EUR
Austria	1.1	Ireland	3.9
Belgium	1.9	Latvia	0.4
Bosnia - Herzegovina	0.0	Lithuania	0.7
Bulgaria	0.2	Luxembourg	0.3
Croatia	0.2	Montenegro	0.4
Czech Republic	1.7	Netherlands	3.3
Cyprus	0.0	Norway	6.5
Denmark	1.4	Poland	2.9
Estonia	0.3	Portugal	1.5
Finland	0.8	Romania	0.7
France	8.8	Serbia	0.2
Fyrom	0.1	Slovakia	0.3
Germany	30.1	Slovenia	0.3
Greece	0.3	Spain	4.8
Hungary	0.1	Sweden	2.0
Iceland	0.0	Switzerland	1.7
Italy	7.1	United Kingdom	19.0

Source: Entso-E

These figures do not include investment needs for smart grids, worth about 40 billion euros.

Priority Interconnection Plan (PIP) displays in detail the progress of forty-two projects declared of European interest within the guidelines for trans-European energy networks (TEN-E) adopted in 2006.

Sixty percent of the electricity network projects suffer delays, mainly due to the complexity and lack of harmonization of planning and authorization procedures. Financing difficulties and objections to the environment or health are equally obstacles.

Compared to the previous Action Plans, future Action Plan for this strategy will put a greater emphasis on investments that require hundreds of billion investment in new technology, infrastructure, improve energy intensity, low carbon energy technologies and training of people for economic decarbonisation. Since the economic crisis makes investment financing is increasingly difficult, it is necessary that they be targeted as well. Energy security will depend on the new interconnections, both within the EU and abroad, energy-saving practices and technologies, and transport networks for smart metering technologies.

In the current globalization, the economic and social objectives in 2020 is considered to be significant. These can result in the EU 60 billion reduction in spending on oil and gas imports by 2020, this means not only cost savings but also an essential step in ensuring energy security. The further integration of the European market by applying the provisions of the Third Package can lead to an increase of 0.6 % - 0.8 % of GDP in the Union.

There are two specific issues to be addressed, namely authorization and financing. Licensing and cross-border cooperation must become more efficient and transparent, in order to increase the responsiveness of the public and to speed up the achievement. Have found financial solutions that meet investment needs, estimated at one billion euros over the next ten years, half of this amount is needed only for energy networks. Regulated

tariffs and congestion charges will be the bulk of these network investments. However, the current regulatory framework does not accommodate the necessary investments and will facilitate their achievement with desired promptness, especially because of positive externalities or non- value added at regional and European projects with limited direct benefits to the national or local level. The slowdown in infrastructure investment was unfortunately exacerbated by the recession.

3. Infrastructure power generation in Romania

3.1. The current situation
Some failures demonstrates that the lack of coordination between national energy networks and a real separation between the functions of generation, transmission and supply. Network operators belonging to vertically integrated companies are not really keen to develop their interconnections with other networks and to expose new players so competition level of production or supply.

Infrastructures are increasingly exploited to limit their physical capacity, which prevents the integration of additional energy resources that are otherwise necessary for growth markets. Thus, mass production of electricity from renewable energy may be compromised in some regions. Network congestion threatens also cause temporary supply disruptions, and an increase in energy prices. In addition, many regions continue to be "energy islands" all or poorly connected to the rest of the internal market. Romania has set a strategic goal for 2020 to reduce primary energy consumption by 20 % by 2020 in a scenario of increasing efficiency and use of RES.

Table 2: Production and consumption of electricity in Romania (MWh)

Year	Production	Consumption	Export	Import
2007	60.5	53.37	3.38	1.30
2008	64.01	54.61	5.37	0.92
2009	56.69	49.92	3.15	0.68
2010	59.14	52.03	3.85	0.94
2011	60.39	53.74	2.94	1.04
2012	56.71	52.36	1.15	1.40
2013	58.57	49.78	2.46	0

Source: Romanian National Institute of Statistics

According to the National Statistics Institute (NSI), the final energy consumption in 2013 was 6% lower than that reported last year (table 2). A decrease of almost 10% was recorded in electricity consumption in the economy because energy-intensive industries have been replaced with more efficient, especially as EU directives gradually push toward revamping. A negative impact on total consumption and decreasing consumption had a population of 1.3%, while public lighting was reduced by 12.6% .At the same time, reduced the consumption of electricity for heating and buildings. Other explanations consist of more expensive electricity to industrial consumers as well as business interruption large consumers over the last year. The good part of this result is that Romania regained energy exporter as production increased by 3.2%. As a solution to decrease domestic consumption is increasing electricity exports by European infrastructure.

3.2. Energy outlooks from Romania
Romania has advantages interconnection European network. In case of electricity, the interconnected power systems of neighboring countries, Romania, for that matter any other country in the European Union takes advantage of power reserves in the event of

major incidents. For pan-European interconnection policy to be truly effective you have to increase interconnection capacity with Member States on high voltage power lines and the availability of natural gas high pressure pipeline. To increase interconnection capacity power lines required new production capacities and decommissioning old ones that produce only a quarter full. While reducing energy consumption Romania was confronted in 2013 (table 2). With surplus production, which, however, could not use to his advantage because of the lack of interconnection capacity.

4. Expected evolution of the Romanian energy system up to 2020

4.1. Investment needed in Romanian energy system
Under a steady annual decline of 3-5%, 4-6% oil and natural gas, as well as assessing the degree of reserve replacement run oil and 15-20%, respectively, 15-30 % for natural gas may conclude that the primary energy production in Romania based on both the harnessing of fossil primary energy , coal and hydrocarbons as well as those of uranium ore in the most optimistic case, will not grow in the next two to three decades, but the contrary.It follows that increasing coverage of primary energy demand in Romania will be achieved through increased use of renewable energy resources and imports of primary energy - gas, oil , coal, nuclear fuel. At the horizon examined, Romania will remain dependent on imports of primary energy. Dependence will depend on the discovery of new exploitable internal resources for the integration of renewable energy and the success of measures to increase energy efficiency. Theoretical energy potential of renewable energy sources available to Romania is significant. Potential that can be used for these sources is much lower due to natural limitations, technologies, economic efficiency and environmental restrictions.
Necessary investments in new capacity by 2020 energy are presented in table 3.

Table 3: The investment in Romania's energy system by 2020

	U.M.	2011 - 2015	2016 - 2020	Total 2011 - 2020
Total power required by new	MW	910	4500	5410
Total investment required	Mil. euro	1753	7084	8837

Source: Romanian National Research and Development Institute for Electrical Engineering

Total installed capacity is now steadily declining due to the decommissioning of old and uneconomic capacity to fulfill their normal operating life. The energy of these capabilities is not competitive electricity market, the old groups, low performance and overcome technical and economic.
Approximately 80 % of the energy groups in existence today were installed during 1970-1980, being today the normal operating limit, with yields of about 30%. These yields are 65-70% of yields modern groups currently in operation in most developed countries.

4.2. Aligning energy intensity in Romania to European values

Romania has established its National Reform Plan (NRP), a national target for 2020 to reduce primary energy consumption by 19% (estimated at around 10 Mtoe).
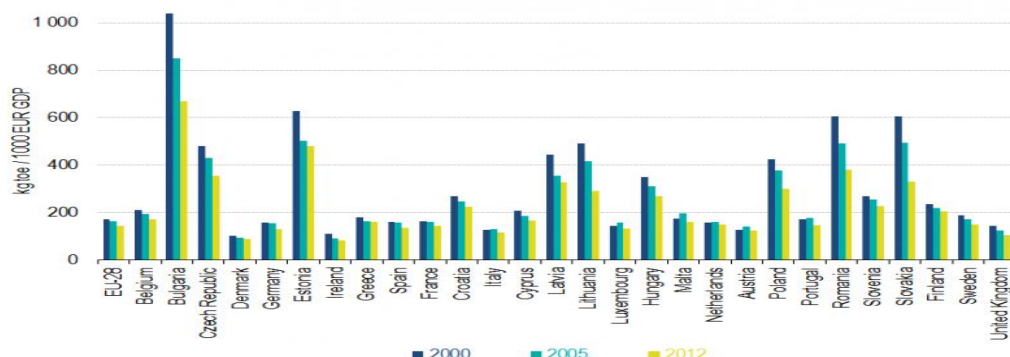
Figure 2: Energy intensity in the EU
Source: Eurostat

Representative synthetic indicator of energy use efficiency nationwide is energy intensity, energy to produce a unit of gross domestic product. In recent years, due to structural changes in the economy and the emergence of new economic units energy efficient, primary energy intensity dropped significantly. Primary energy intensity and final energy had a favorable outcome, but still above the EU average values (Figure 2). Comparing with the data plan is noted that the primary energy intensity in Romania is higher by 25% compared to the EU average intensity, although there is a decrease in time.

4.3. Economic consequences for Romania

Energy intensity is a measure of the energy efficiency of a nation's economy and shows how much energy is needed to produce a unit of GDP. There are various reasons for the observation of improvement in energy intensity: general transfer from industry to a service-based economy in Europe, a shift in the industry the less energy-intensive activities and production methods, the closing of inefficient, or more appliances energy efficient.

In table 4 shows the change in energy intensity and probable relative increase in GDP due to structural change and new energy investment until 2020.

Table 4: Variation of the energy intensity of GDP

	UM	2013	2014	2015	2016	2017	2018	2019	2020
Energy efficiency	Mil Toe	36000	36570	37210	37880	38490	39115	39750	40390
Energy intensity	Toe/1000 Eur	0.253	0.249	0.243	0.238	0.231	0.227	0.223	0.218
Relative growth of GDP	%	3.7	3.2	4.3	3.9	4.8	3.4	3.5	4.1

Source: Data obtained by the author

As in other European countries, reducing energy intensity in Romania increases relative domestic product of Romania, estimated in 2020 at around 4.1 %. As a nation with a high level of homeowners and low-income or a reduction in utility costs could help alleviate financial stress for many families.

5. In conclusions

Measures are economically sustainable to maintain or even reinforce the electricity market, which system can be flexible in order to address any issues of adequacy. These measures include investments in border infrastructure (the higher the network, so it is easier to evenly distribute energy from renewable sources), to measure demand response and energy storage solutions.

Developing energy potential of Europe is impossible without increasing the number of interconnections within the European Union and neighboring countries. Risk and cost of disruption and wastage will be much higher if urgent EU invests in smart energy networks, efficient and competitive. The new policy of the EU energy infrastructure was needed to coordinate and optimize network development on a continental scale. This policy will allow the EU to reap all the fruits of an integrated European network that exceeds its individual components. Given expectations regarding future generation portfolio, increasing electricity demand, and expanding cross-border transmission capacity electric network by Entso-E will reduce shipping costs by 1%. This reduction is greater for lower rates of growth in demand.

A strategy for fully integrated energy infrastructure based on intelligent technologies and low carbon, low carbon energy will reduce costs through economies of scale achieved by each Member State. A fully interconnected European market will improve security of supply and help stabilize prices for consumers, by providing optimal targeting electricity and gas. European networks include, as appropriate, neighboring countries will facilitate the competitive climate in the EU single energy market and will strengthen solidarity between Member States.

If doubling the share of renewable energy by 2020 and forecasts amounts to over 20% of the European energy mix, investments expected transboundary energy will reduce shipping costs by almost 3.7%.

For Romania, the increase interconnection network capacity by investing in new energy equipment requires investment of approximately Euro 7.084 million in 2020. Adequate interconnection network with low energy losses as a result would increase GDP by around 4.1%.

Integrated European infrastructure will ensure access to citizens and businesses in Romania affordable energy sources in terms of prices. This in turn will contribute to the achievement of the Europe 2020 strategy, maintaining a strong industrial base, diversified and competitive in Europe.

An integrated European infrastructure will ensure economic growth in countries interconnected and thus Romania. Huge energy potential of Romania is an opportunity economic recovery after the financial and economic crisis and the recent recession.

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THE SHEEPSKIN EFFECT IN THE HUNGARIAN LABOUR MARKET 2010-2012: ANALYSIS OF DATA FROM THE HUNGARIAN GRADUATE TRACKING SYSTEM

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Abstract: *The sheepskin effect is a wage increase connected to the attainment of a degree (or credential) in addition to the wage gap connected to the completion of a schooling level (school years, exams passed etc.). This effect is often referred to as a phenomenon supporting the signaling (or screening) hypothesis against human capital theory in the so called 'signaling vs. human capital debate' over the economic role of education. Many empirical studies in many countries have tested (mostly successfully) this hypothesis during the last decades, but it has never been tested in Hungary. Therefore the main goal of the current study is to identify and measure the sheepskin effect in Hungarian higher education based on the country-wide, representative databases of the Hungarian Graduate Career Tracking System (HGCTS). The 2 databases used in the analysis are two HGCTS surveys from the years 2011 and 2012. The first part of the article is a literature review that summarises the results of the existing empirical sheepskin research and highlights their connections to the signaling vs. human capital debate. In the second part, empirical research is carried out based on the HGCTS data. This research has two phases. In the first phase subjective data are analysed (according to the perceived negative effect of not obtaining the degree in time), while in the second, mean differences are tested between net hourly wages of responder groups (1) who have the educational credential and (2) do not have it (even though they have finished all courses and passed all exams at the given educational level). The statistical analysis identified significant wage gaps between graduated responders and those who had not graduated but had passed the state exam (and so had finished all the exams in higher education before graduating) on nearly all levels and in both samples (the only exemption was the post-Bologna master level in the 2011 sample). We can conclude that the existence of the sheepskin effect in the Hungarian higher education has been supported.*

Keywords: Sheepskin effect; labour market; higher education; graduate career tracking

JEL classification: I21; J21

1. Introduction
The aim of the current study is to identify and measure the sheepskin effect in Hungarian higher education based on the country-wide, representative databases of the Hungarian Graduate Career Tracking System (HGCTS). The two databases used in the analysis are 'Frissdiplomások2011', and 'Frissdiplomások2012'.

The expression 'the sheepskin effect' originates from the tradition that in many parts of the world, degree certificates were formerly written on lamb skin (Brown and Sessions, 2004: 96). According to the sheepskin effect hypothesis those who complete all courses in a school or university but do not graduate earn less on the labour market than those who earned the degree. Many empirical studies in many countries have tested this hypothesis, such as those by Layard and Psacharopoulos (1974), Groot and Oostrebeek (1994), Jeager and Page (1996), Crespo and Cortez (2005), van der Meer (2011), and Mora and Muro (2014). The launch of the HGCTS in 2010 established the opportunity to implement such a test in Hungary, too, but only within certain limits (questionnaire items, sample size). Although analysing specific sectors or geographical areas can also be interesting, this paper will analyse the available data only on a general level, focusing on the total population in order to provide a starting point for later studies.

In the second section the definitions of the sheepskin effect will be summarised as well as the basic underlying theories. The third section describes the sample and method of the empirical research, while the fourth presents the results. Conclusions, the limits of the findings and possible future research areas are dealt with in the last chapter.

2. Literature review

An operational definition of the sheepskin effect depends on the available data and methodology. According to what is probably the most commonly used definition, the sheepskin effect is the wage gap between credentialed and non-credentialed employees conditional on their years of schooling (see Belman and Heywood, 1997, among others). Unfortunately, the data required by this definition are sometimes not available. For those cases another definition - used by Hartog (1983) - is more adequate. In his work the sheepskin effect was the wage gap between those who obtained their diploma and those who attended the same level of education but did not obtain the credential. We can summarise these two descriptions of the examined phenomenon as follows: the sheepskin effect is a wage increase connected to the attainment of a degree (credential) above the wage gap connected to the completion of a schooling level (school years, exams passed etc.) without a credential.

The sheepskin effect as defined above is frequently referred to as a phenomenon supporting the signaling (or screening) hypothesis against human capital theory in the so called 'signaling vs. human capital debate' over the economic role of education. Regarding this debate, see among others Brown and Sessions (2004) or Kun (2013). Here we focus only on the role of the sheepskin effect in this debate.

Among others, Layard and Psacharopoulos (1974), Hungerford and Solon (1987), Hartog (1983), Groot and Oostrebeek (1994) and Park (1999) have used the sheepskin effect as a baseline to conduct their signaling vs. human capital research. Unfortunately, this goes against the common versions of both human capital and signaling/screening theories, and could only differentiate particular models. Differences in productivity can be shown when earning a degree, since one has to pass the final exam, write a thesis or face other challenges.

The assumption that having motivation, perseverance and "character" are non-observable, productivity-determining factors indicated by the presence of credentials has been confirmed by an investigation conducted by Arkes (1999).

Layard and Psacharopoulos (1974) approached this problem from another angle, considering the human capital hypothesis. Their starting point was that if education is a signal, the earned credential has significantly higher independent value (compared to school years), than when it is used only for increasing human capital. Thus it can be concluded that when credentials are attained the number of school years may increase wages more quickly than when credentials are not attained. Applying meta-analysis to several empirical studies it has been established that if one does not have any credential,

the return on school years is not significantly less than for those having credentials, which means the signaling/screening hypothesis can be discarded. However, this experience re-occurs in most of the models built on the informational role of education. See, e.g., the study by Riley (1976), where every educational level has the same return. They also argued that the results of Taubman and Wales (1973) – namely that the effect of education on wages decreases over age – supports human capital theory, since its probable explanation is that employers' knowledge of the real productivity of the employee increases, since the employers do not rely on credentials that much. Layard and Psacharopoulos also considered the non-existence of cheaper alternative screening methods as a reason for not signaling. According to them, if education was solely screening, companies would have already developed their own screening/testing methods. This latter argument is very weak, as Wiles (1974) and Stiglitz (1975) both pointed out; ensuring screening possibilities for companies is the external effect of education. Furthermore screening works very well here. In this way, it will always be relatively cheaper to use education as a screening device compared to the quality of information.

The uniqueness of the research by Groot and Oostrebeek (1994) on Dutch data derives from the fact that school years are analysed in more detail here than in the previous studies. They define effective (school) years, repeated years, skipped years, inefficient years and dropout years. The effect of repeated years is negative without screening and neutral in the case of human capital. The effect of dropout years ending without a degree is neutral assuming signaling, while positive in the case of human capital models. Skipped years have a positive effect in the screening model, although they have no effect in the human capital model. Inefficient years (when one reaches a given credential later or with more school types, than the others) have no effect in the case of screening, while in the case of human capital they have, assuming homogeneous resources, otherwise they do not. This categorization has been used to examine two predictions of signaling/screening. According to the first prediction, finishing school earlier indicates better abilities, while the other prediction is the sheepskin hypothesis, which means not having the credential makes school years worthless. Eventually, the screening hypothesis is discarded and the human capital hypothesis supported.

It is not only Arkes (1999), who assumes that both human capital and screening theories can be applied to explain the sheepskin effect. Frazis (2002), for instance, developed both of the models to a certain extent, making them appropriate tools to explain the phenomenon. Two abilities were inserted into the human capital model: constant inner productivity and the ability to acquire human capital. Similar models were applied in Willis and Rosen (1979), Garen (1984) and Frazis (1993). In the meantime, one additional factor has been inserted to the screening theory, too: the uncertainty of the employees concerning their own capabilities.

Crespo and Cortez (2005) have performed a really interesting analysis related to the sheepskin effect. They studied how intense was the effect between 1982 and 2002 in Brazil. According to their results, on the lowest school level the effect disappeared and, apart from the highest level, it decreased significantly on the other levels, as well. However, on the highest level it is still remarkable, although also reduced. the authors explain this by the higher demand from companies for higher educational degrees along with economic development – due to the new technology.

Jaeger and Page (1996) pointed out the different extent of the sheepskin effect (in every qualification higher than a high school certificate) measured by sex and minority, on "high school" and "college" levels. In different demographical groups the effect of various levels was also discrepant. Bitzan (2009) raised a similar question: the sheepskin effect shown in white and in black communities was assessed and compared in the USA labour market. A significant effect appeared in both of the groups, but while among white people

it was stronger on lower levels (college or lower); among black people the effect was the reverse, being stronger on higher levels (graduate degree). It is very similar to the phenomenon Ferrer and Riddell (2008) experienced between Canadian immigrants and non-immigrants. There, the effect of school years and experience was negligible in the case of immigrants, while the credentials earnt there provided much more benefit, compared to those of non-immigrants.

Gulasson (1999) has analysed the results of an American follow-up study that provided data of the same group 6 times between 1972 and 1986. It was found that the sheepskin effect did not appear when an individual worked in a job suitable for his/her credential, but did appear if this was not the case. Probably one of the most exciting research studies in this field is the one by Liu et al. (2013) that concluded there were beneficial health effects from earning a credential (given diseases appear with a lower probability). This supports the assumption that the earned credential is important not only because of the knowledge one can acquire in school, but also because it is able to predict other abilities e.g. health. Other interesting research papers examining the sheepskin effect include (among others): McGuinness (2002), Van der Meer (2011), Denny and Harmon (2001), Silles (2008), El-Hamidi (2006), and Gibson (2000).

3. Sample and method

This article uses two databases of the HGCTS from 2011 and 2012 ('Frissdiplomások 2011' and 'Frissdiplomások2012'). These data are the output of national graduate career tracking surveys regarding Hungarian higher education. Responding was voluntary, thus self-selection bias must be taken into consideration. The database from the 2011 survey contains responders who finished their higher education studies (with graduation or with a state exam only) in 2008 or 2010, while in the 2012 survey the responders' year of graduation or state exam was 2007, 2009 or 2011. The total number of responders was 20,453 in Frissdiplomások2011 (8,943 finished in 2008, 10,533 in 2010, and there was no finishing time data for 976 responders) and 24,890 in Frissdiplomások2012 (2007: 5,184, 2009: 8,333, 2011: 9,500, no data: 1,873). Both surveys contained multiple questionnaire items useful to measure the sheepskin effect: current earnings (in 2011 or in 2012, respectively), the level and area of education, whether the responder obtained the credential or only had a state exam, how long did it take to obtain the credential after the state exam (if it was not immediate), whether the responder felt any disadvantage in not having the credential (if he/she did not have it immediately). Unfortunately, the level and area of education data were far from complete, since these were only collected regarding one of the responder's degrees (HGCTS data collection is organised through higher education institutions and is unaware of multiple graduations).

The particular research definition of the sheepskin effect was adjusted to the possibilities of the databases used, and this also defined the limits of the methodology: it is the wage difference between those obtaining their credential and those who passed their state exam (the very last exam in Hungary before graduating) but who did not graduate (for some reason not connected to courses or exams, such as not having a foreign language certificate).

4. Results

This section will first summarise the subjective data (the perceived effect of the credential), then the more objective data of net earnings will be compared between those who were credentialed and those who were not.

4.1. Subjective data

In this subsection ratios of the subjective data will be summarised regarding the perceived handicap caused by not obtaining the credential in time (right after the state exam has been passed). Responders had to select from 3 options: if they experienced no disadvantage, minor disadvantage or major disadvantage. Table 1 summarises the answers, from which we can conclude the following: in every year and on every level not having the credential led to a perceived minor or major disadvantage in more than 50% of the valid cases.

Table 1: Perceived disadvantage from not obtaining the credential (people; valid%)

	Educational level and year of the survey							
	BA/BSc		MA/MSc		college		university	
Answer option	2011	2012	2011	2012	2011	2012	2011	2012
No disadvantage	270 (32%)	544 (25%)	74 (41%)	147 (44 %)	253 (31%)	380 (30 %)	303 (49%)	558 (37 %)
Minor disadvantage	410 (49%)	927 (43%)	87 (48%)	135 (41 %)	450 (54%)	590 (46 %)	271 (44%)	629 (42 %)
Major disadvantage	158 (19%)	559 (26%)	20 (11%)	51 (15 %)	123 (15%)	307 (24 %)	46 (7%)	319 (21%)
Total responding	838 (100%)	2030 (100%)	181 (100%)	333 (100%)	826 (100%)	1277 (100%)	620 (100%)	1506 (100%)
Not responding	1404	135	181	17	935	47	1128	205

Source: calculated from 'Frissdiplomások2011' and 'Frissdiplomások2012' databases
Note: college = pre-Bologna college level (3-4 years); university = pre-Bologna university level (5+ years)

4.1. The credential wage gap

Table 2 shows net hourly wage data (mean, standard deviation, values of two sample *t*-test statistics) in HUF from the 2011 survey per educational level and per having or not having a degree. Table 3 contains similar data but from the 2012 survey. In both tables the significance of the mean difference was tested with two independent samples *t*-statistics.

Table 2: Hourly wage gap between credentialed and non-credentialed employees (2011) (HUF)

Education level	Degree	*N*	Mean	Standard deviation	*t*-test
BA/BSc	No	542	0.8965	0.81768	-1.8887*
	Yes	1872	0.9610	0.66146	
Pre-Bologna college	No	482	0.8907	0.70194	-2.5042**
	Yes	2757	1.0054	0.96283	
Pre-Bologna or undivided university	No	351	1.0118	0.66912	-4.1184***
	Yes	3191	1.1732	0.91425	
MSc	No	92	1.0129	0.65569	-1.4081
	Yes	691	1.1336	0.78706	

Source: calculated from database Frissdiplomások2011
Note: *N* is the number of cases; *** p ≤ 0.01; ** p ≤ 0.05; * p ≤ 0.10

The reader can recognise that on every educational level the degree always leads to a higher mean net hourly wage, although this is significant only on the BA/BSc, pre-Bologna college and pre-Bologna or undivided university levels.

Table 3: Hourly wage gap between credentialed and non-credentialed employees (2012) (HUF)

Education level	Degree	*N*	Mean	Standard deviation	*t*-test
BA/BSc	No	643	0.8222	0.52281	-6.7901***
	Yes	2951	0.9867	0.68965	
Pre-Bologna college	No	602	0.9333	0.67808	-4.9919***
	Yes	3846	1.0867	0.70487	
Pre-Bologna or undivided university	No	319	1.0466	0.74284	-4.8409***
	Yes	4037	1.2612	0.97727	
MSc	No	102	0.8842	0.36669	-5.8487***
	Yes	961	1.1416	0.76829	

Source: calculated from database Frissdiplomások2012
Note: *N* is the number of cases; *** $p \leq 0.01$; ** $p \leq 0.05$; * $p \leq 0.10$

Data from the 2012 survey (just like the one conducted in 2011) revealed a positive contribution of credentials to the net hourly wage, but this time these wage gaps are highly significant ($p \leq 0,01$) for all examined educational levels.

5. Conclusions

The current study examined the existence of the sheepskin effect in Hungarian higher education. In the first part of the article the phenomenon was defined (an adjusted definition was selected to fit the available database), then the place of the sheepskin effect in the signaling vs. human capital debate was briefly described with a literature review (focusing on the empirical works). In the second part two broad-brush examinations of the Hungarian credential wage gap were implemented 1) using a subjective measure of the responders' perceptions and 2) performing independent sample *t*-tests. Both were implemented on the Hungarian Graduate Career Tracking Survey databases from 2011 and 2012. The subjective data showed that more than half of those responders who did not have the credential felt a minor or major disadvantage in every year and on every educational level. The *t*-tests identified significant wage gaps between graduate responders and those ones who were non-graduate but had passed the state exam (and so had finished all the exams in higher education before graduating) on nearly all levels in both samples (the only exception was the post-Bologna master level in the 2011 sample). Based on this, we can conclude that the existence of the sheepskin effect in the Hungarian labour market is confirmed. Nevertheless, it is still unclear how the above mentioned phenomenon is distributed among different sectors of the labour and/or higher education market. Subsequent research should also identify the effect of influencing factors, such as geographical area, background, or labour market experience.

6. Acknowledgements

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CREDIT AND ECONOMIC DEVELOPMENT: STRUCTURAL DIFFERENCES AMONG THE ITALIAN REGIONS

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Abstract: *The international economic crisis of 2007 has had long-lasting negative effects on the financial markets and the real economy of many countries. The occurred uncertainty and the complications of the balance sheets of many banks, due to the strong international connections, particularly impacted on the ability and willingness of financial market, on granting credit to consumer households and companies. Credit, and the financial system in general, represent according to the economic literature, one of the determinants of economic development and, particularly, its efficiency determines the speed of growth and the potential level. The difficulties in the transmission of monetary policy and the structural inefficiency have worsened the negative effects of the economic crisis in many European countries, including Italy, where large differences in the socio-economic context of the various macro-areas still persist. The role of banks is to exploit tools and knowledge to the best addressing of funds, by subjects in excess to those in deficit, or towards who may exploit them for productive purposes. In addition, banks are locally a guidance to entrepreneurs and an entity aware of the local needs and potentials. In this paper we combine several variables on the credit and the quality of banking contracts, in addition to real economic and R&D variables, with reference to the Italian regions. The aim is to identify structural differences among the Italian regions in terms of financial and economic development, and in addition to observe the discrepancy between the various macro areas, even considering the effects of the international financial crisis broken out in the U.S. in 2007. We consider data over sufficiently long periods before and after the advent of the crisis and the long subsequent period of economic recession. The detail of the analysis is regional, in order to have a sufficient number of contexts that are grouped into homogeneous groups, helping to clarify and explain the dynamics of the socioeconomic differences that still exist. We use a Multidimensional scaling analysis with the aim of exploring the relationship between credit and socioeconomic development in the different Italian areas, observing in particular the structural differences that could lead to a deeper distance of the wellbeing of the poorest regions in the South compared to that of North-central.*

Keywords: Credit; Economic growth; Economic development.

JEL classification: E51; O11.

1. Introduction

The economic crisis of 2007, with financial origin and strong real effects worldwide, led long-term negative consequences, undermining the financial structure and the climate of trust in many countries. Structural weaknesses have been revealed, causing in some cases a long period of instability and uncertainty in financial and real markets, leading to the so-called "Great Recession". The origin of the financial crisis has rapidly expanded its effects worldwide due to the interconnections of the global market, and the financial market has suffered from the persistent adverse effects, just due to the nature of the crisis. In Italy, households and businesses have accused banks to have interrupted the regular flow of funding, directed to consumption and investment, in a context of general economic slowdown and rising unemployment. The European financial system has been affected as early 2008, the year following the outbreak of the speculative bubble. Limits and constraints were immediately imposed by supervisory authorities, to prevent infection by the institutions with balance sheets at risk, severely restricting the work of some banks. The control and supervisor authority have found a sort of trade-off between restrictive policies on banks activities and the rising risk of bank default (Bernauer and Koubi, 2002), in a context of rising risk for the financial system for the period of economic downturn.

The lack of liquidity in the European system of banks, the growing perception of default risk and the more stringent rules on the choice of new debtors, have imposed a restriction in the normal function of the banks. On the other hand, there was the continuing deterioration of corporate balance sheets and the difficulty in repaying maturity debts, so the rising share of the so-called marginal borrowers (Woo, 2003), with few chance of getting restructuring of the bonds to maturity, and a greater risk of bankruptcy. In summary, the real financial origin of the crisis has had a relevant impact on the financial needs of businesses (Bernauer and Koubi, 2002) and households.

The persistence of economic difficulties and the general financial instability have worsened the situation of many banks, causing the decrease of the value of the banks' assets, alarm for the future hoarding of capital, network effects among banks, the uncertainty and the scarcity of private savings, with the imposed requirement to hold additional funds (among others see Brunnermeier, 2009). On one hand the wrong choices in the composition of the credit securities portfolio of some banks has made it difficult to grant other loans during the recession (e.g. in some cases under-capitalization and low liquidity later), even risking of going outside the parameters of control of the budget. On the other hand, the economic difficulties for businesses and households have induced delays and problems in repaying debts, and structural change in the demand for loans, because of missing signs of economic recovery.

These problems have occurred in Europe, in a period of strong austerity imposed on the public accounts. The Mediterranean area has greatly suffered for the international financial crisis; in countries such as Italy the numerous local weaknesses have been added to the exogenous difficulty. Not all banks were affected from hazard on their balance sheets, and not in all the Italian regions credit flows have serious disturbances, as seen in this work.

The periods of economic relevance considered in our analysis are 2004-07 and 2008-12. For these purposes we consider the average values of credit, socioeconomic and R&D variables. For these two stages, we use a *Multidimensional Scaling Analysis* (MDS), with the aim of observing the conditions of distance and proximity of the Italian regions and the variations in the two periods, considering simultaneously all the chosen variables. Such information will be useful to provide an overview on the development differentials still present in the various Italian macro-areas. The first period begins with the early signs of inversion of the growing trend of the value of real estate in the U.S., performance related to high lending by the U.S. banks, and that has led the formation of the speculative bubble. During the same period were observed the first effects of the military intervention of the U.S. led coalition in Iraq, which started about a year earlier, with huge economic and social costs recorded, and the prospect of a long participation of the countries involved. The second period begins with the initially effects of the economic crisis in Italy, the year following the burst of the speculative bubble in the U.S., and continues with the subsequent lack of recovery and the prolonged economic recession. It is useful to note that in particular 2010, represents the year in which it was expected economic recovery in those countries that were most affected by the undesirable exogenous effects.

The paper is composed as follows: after the introduction we propose a chapter on the economic literature that draws the general outline of the relationship between credit and economic development; follows a chapter on the observation of the time series of relevant variables related to the activity of the banks and then the MDS for two separate periods for the Italian regions, followed by the conclusions.

2. The credit as a leverage for local and national development

The connections among the financial market, in particular the flows in the granting of credit, and the economic growth and development are multiple and in both directions (Fry, 1988). The financial market redirect resources towards the production sector, having the information (and economies of scale) to do so efficiently (among others Stiglitz and Weiss, 1981), i.e. moves from areas or sector in surplus to those in deficit. At the same time, the evolution of the economic environment needs and promotes a stronger and more secure financial market. According to this, there is full efficiency in the allocation of capital when economic agents are free to act, and there are multiple sources of debt financing, accessible to different levels of investment risk.

The efficiency of financial intermediation affects the degree and the rapidity of development of the economic context. Only banks may have the expertise and convenience of structuring financial products for the various categories of borrowers, as well as reducing the structural limitations and imperfection of the credit market.

Already Schumpeter (1934) observed that the intermediation role of banks, considering the saving of households and the needs of entrepreneurs, had a key role in the innovation and development. In a context of economic recession and scarcity of resources, the latter must be allocated according to local development and policy plans, in fact a strong expansion of private credit (to households), compared to that for the purchase of real estate, can be a forecaster of crises for the banking system, because of the increasing balance sheets' vulnerability, while is less for businesses credit, the latter that is moderated by the expected and associated increase in income thanks to the same financed investments (Büyükkarabacak and Valev, 2010).

The credit is an essential resource for economic development of a country, and especially in conditions of economic recession, it is necessary to create virtuous circles which are based on the local economy. At the local level, an efficient financial system should include banks that provide the appropriate tools for business and, in the case of SMEs, that support by consulting the decision-making processes of production and investment. The Italian entrepreneurial system is largely composed of SMEs, severely affected by the economic recession, and in conditions of scarce financial resources to borrow, the smallest enterprises could be forced to make greater use of the so-called trade credit (Atanasova and Wilson, 2003), that are payment terms agreements between suppliers and customers.

The knowledge of the local area is useful to banks on one hand to advise local businesses in a professional manner, on the other hand to find the strengths and weaknesses of the businesses, and thus decreasing the risk for their funding. Moreover, the best and closer relations among households, businesses and banks "conscious" of the territory would make difficult speculative behaviour or conduct contrary to the general welfare.

3. The context of the Italian macro-areas during the "Great Recession"

The efficiency of the financial system is a determinant of the economic development by supporting consumption and investment. The imperfections of the credit market (e.g. rationing, adverse selection, moral hazard) are already strong restrictions on the chances of borrowers to receive funding based on personal potential and guarantees. The above mentioned imperfections are considered to be a limit to the development of developing countries, but major differences remain even today in some areas of the more advanced countries.

In Italy, the paths of economic development of different macro-areas are historically distant, in 2012, the average income (considering *Italy = 100*) was 122 and 120 in the areas of the North West and North East, 111 in the Centre, 66 in the southern and insular areas.

We have developed the mean values of the time series of bank loans and non-performing loans related to different categories of borrowers in order to observe the consequences of the international financial crisis on the Italian situation, highlighting the structural differences between the different macro-areas

(a) Loans to non-financial companies

(b) Loans to consumer households and others

(c) Irrecoverable debts – businesses

(d) Irrecoverable debts – consumer households and others
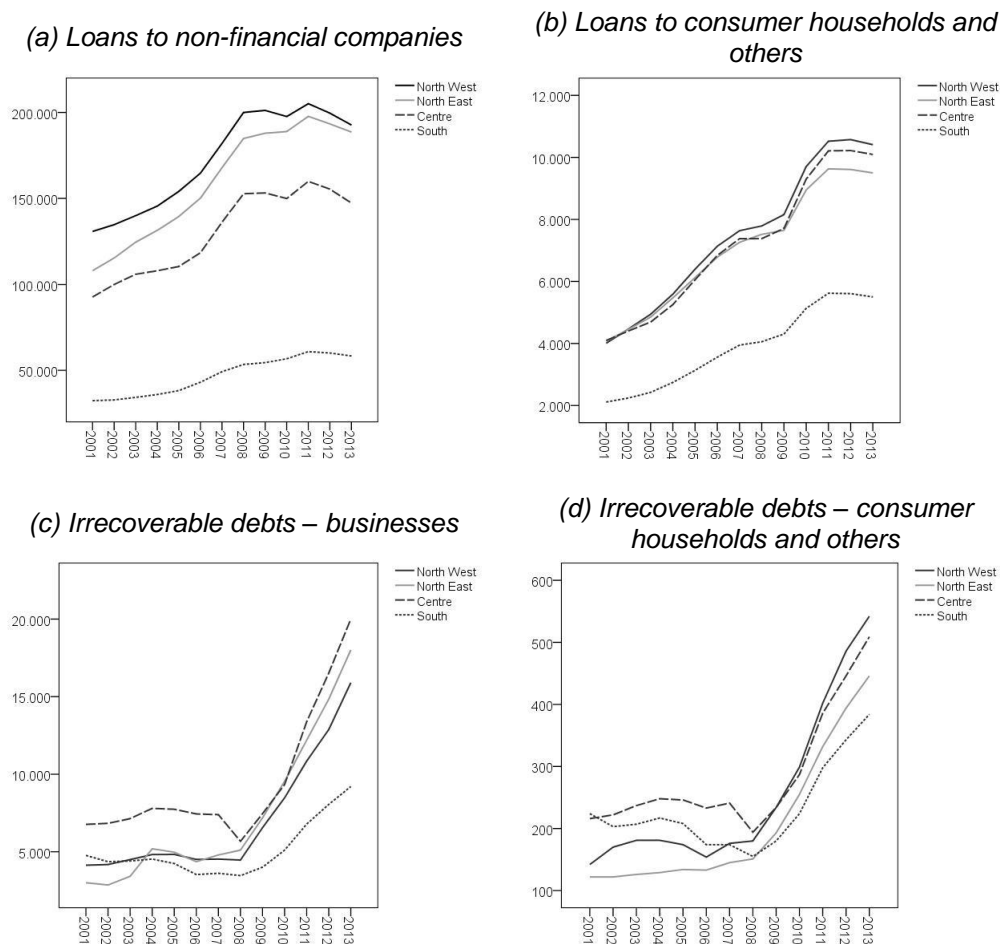
Figure 1: Values of per capita loans and irrecoverable debts for businesses and households in the Italian macro areas
Source: Our elaborations on *Banca d'Italia*, *Istat* and *Unioncamere* data

As can be seen from the above graphs (Fig. 1), are evident the variations of the variables for each area from 2008, the year in which the consequences of the bursting of the speculative bubble in the U.S. (in 2007) were more evident in Italy. The first two graphs show the evolution of the average bank lending, according to the two main categories of borrowers: non-financial companies (Fig. 1 a) and consumer households (Fig. 1 b). The same distinction is made for the two graphs below, considering the non-performing loans, i.e. the irrecoverable debts, for all types of businesses (financial, non-financial, producer households in Fig. 1 c) and households (Fig. 1 d). The graphs show our estimates of the mean values calculated for the Italian macro-areas, considering in our processing the resident population and the number of businesses for each period.

Since 2008, the trend of loans to businesses (Figure 1 a) is affected by a halt in the upward trend, having a decrease in value, to resume to grow slightly after 2010. In this case we refer to the so-called credit crunch, in the sense of the increased fear on banks side to lend to businesses in an unstable climate with a negative outlook, but also the general slowdown in domestic economic activities. The loans to households (Figure 2 b) instead show a strong increase in mean values, indicating that the resources lent by the banks are going to support consumption rather than investment, in a situation of rising unemployment. For households the trend in loan flows was interrupted only from 2010 onwards, due to the lack of the expected domestic economic recovery. Such situations are confirmed in the central and northern regions, while the poor economic vitality of the South has limited the phenomena just described. Furthermore, looking at the absolute values, in 2010 and 2011 in the wealthiest areas of the country loans to households have surpassed in value that for non-financial companies of the construction industry, a category of high relevance for the internal dynamics. In the southern areas, the values for consumption were historically higher respect to the productive purposes, but, over the last decade, the distance from the potentially productive funds, as for enterprises, has increased. The prolonged crisis have gone to decrease the values of the consumer credit and credit commitments, and the difficulties of companies resulted in a slight increase in factoring, which showed a negative trend before 2007.

4. Credit and economic development: data, methodology and results

In this section we propose the analysis that aims to determine the changes that occurred in the relations between Italian regions in terms of credit, economic development and R&D, using a multidimensional scaling analysis (see also Mattoscio et al., 2012 and 2013). We consider two separate periods, the years before the effects of the international financial crisis (2004-07) and the following years of the prolonged economic recession (2008-12). The details of our analysis is regional, so as to observe the relationship between the granting of credit and economic development to be different in the various areas of the country, still marked by deep structural differences. In particular, it is expected that the enduring weaknesses in the southern areas have caused an increase in the distance from the wealthiest zones. In fact, the MDS allows to produce a graphical representation of a pattern of objects, in this case the 20 Italian regions, based on the degree of similarity/dissimilarity between them, and providing a representative map that best approximates the distances observed between regions. This statistical method attempts to build a configuration of the various entities, merged in a small number of dimensions (two in our case). This is done by defining relations between regions in terms of proximity/distance with respect to the considered indicators. The resulting positioning map has the property to partition the regions into homogeneous groups, so as that the degree of association between two regions is maximal if they belong to the same group and minimal otherwise. We consider a matrix of 20 regions and 12 indicators, 4 variables for each socioeconomic aspect considered in the analysis: the granting of credit, the economic situation, the R&D level.

The variables chosen for each group are: loans to companies, loans to households, leasing, factoring, *per capita* GDP, labour productivity, export capability, capital intensity, science graduates, employed in science sectors, public spending in R&D, private spending in R&D.

The source of the variables on credit is the *Bank of Italy*, the average values were obtained considering the resident population (*Istat* data) and the number of firms (*Unioncamere* data). The data source for the other variables is *Istat*. The two selected periods (2004-07 and 2008-12) are sufficiently long time series to represent the period just before the exogenous effects of the international crisis and the subsequent economic downturn.

Data were normalized within each considered variable, in order to avoid possible distortions due to different ranges and magnitudes. The model's goodness of fit was assessed via the *RSQ* (0,95 for the first period and 0,97 for the second period, respectively), that indicates the proportion of variability explained by the corresponding dissimilarity distances, and the *Stress Index* (0,11 for the first period and 0,08 for the second period, respectively). As a general rule, results are found to be robust when the size *k* achieves an *Stress Index* value lower than 0,15. A two-dimensional model was judged to be acceptable according to the values of the previous indexes. The correlations between dimensions and variables for the two considered periods (see Table 1) were useful for naming the axes. The resulting two-dimensional images are shown in Figure 2 and 3. The horizontal axis represents the variables concerning bank loans, economic development and the emphasis on R&D by private enterprises; the vertical one is related to capital intensity and public spending in R&D.

Table 1: Correlations between variables and dimensions (r > |0,5|)

Variables	2004-2007 configuration		2008-2012 configuration	
	Dimension 1	Dimension 2	Dimension 1	Dimension 2
Loans to companies	0,92		0,95	
Loans to households	0,85		0,90	
Leasing	0,86		0,86	
Factoring	0,72		0,70	
Per capita GDP	0,86		0,84	
Labour productivity	0,64		0,78	
Export capability	0,58		0,72	
Capital intensity		-0,59		-0,62
Science graduates	0,67	0,56	0,75	0,50
Employed in science sectors	0,90		0,95	
Public spending in R&D		0,72		0,85
Private spending in R&D	0,68		0,84	

Source: Our elaborations on *Banca d'Italia* and *Istat* data
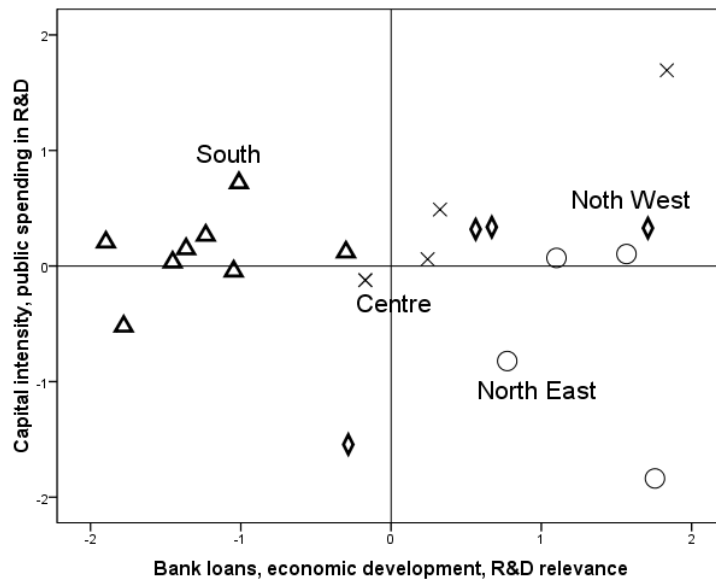
Figure 2: Cluster of 20 Italian regions in a two dimensional space (mean values calculated for the period 2004-07)
Source: Our elaborations on *Banca d'Italia*, *Istat* and *Unioncamere* data
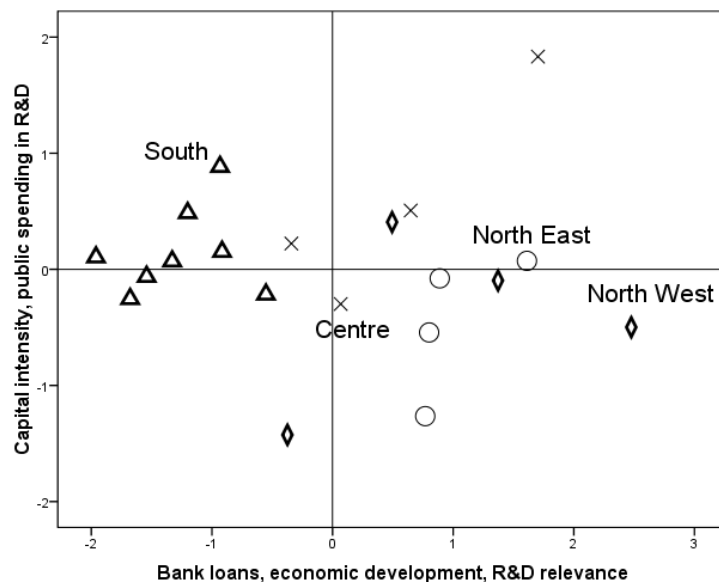
Figure 3: Cluster of 20 Italian regions in a two dimensional space (mean values calculated for the period 2008-12)
Source: Our elaborations on *Banca d'Italia*, *Istat* and *Unioncamere* data

The two above graphs (Fig. 2 and 3) show the presence of a few outlier cases, which mark the extreme values on the vertical axis. All other regions are arranged in an orderly manner on the most important horizontal axis. The latter represents the majority of the variables considered, and watching it from the left (negative values) in ascending, it is possible to find almost all the regions, but in separate groups, those of the South (left area), followed by the centre (origin of axes) and those of the North (N. East and N. West). Being on the right side of the graph means receiving on average more loans from banks, have a richer socio-economic context and be more careful to innovation. In the second period, then characterized by the negative effects of the international crisis, there was a further distancing of the regions, in particular the North West compared to the South. This is due to a better response of the financial and the real market. The northern regions were those that were affected before by the "imported" crisis, being more open to international trade. The same openness to exports, however, has allowed a partial faster recovery; also the financial system of these regions is more efficient, making possible higher levels of average loans, even in a climate of uncertainty. This means a support to household consumption and business investment, and in general a sustain to the aggregate demand. In summary, the importance of the financial system is essential for growth and economic development especially in times of a general slowdown in economic activity, lack of resources and rising unemployment. Observing the Italian case, it became evident as the structural weaknesses of the South have expanded the difficulties of an exogenous crisis with financial and real effects, while the highest level of dynamicity of the North, strengthened by a local financial system more active and confident, at least partially assisted against the increasing economic and social difficulties.

5. Conclusions

In this paper we observed the theoretical and empirical relations that link the efficiency of the financial system, particularly the credit, with the processes of economic growth and development (also considering variables related to R&D activities). We have analysed the case of the Italian regions, characterized by deep structural inequalities, in the light of the international financial crisis of 2007. After estimating the *per capita* values of several variables, in order to observe the trend of the time series in recent years and outline a general framework, we applied the *Multidimensional scaling analysis* for two separate periods for the 20 regions. These are representative periods before the negative effects of the financial crisis and then the years of economic recession in Italy. The aim is to observe how the regions, and then the macro areas of socio-economic interest, have reacted to these phenomena. In summary it can be said that since 2008, several resources granted by the banks were transferred from businesses to households. This was caused by a climate of increasing uncertainty in the production and investment, a general slowdown in economic activity, and the simultaneous increase in unemployment. The increase in loans to households has alleged consumption, and in the early period of the crisis has caused difficulties for companies, already struggling. After the lack of economic recovery in 2010, however, have been observed significant differences between the efficiency of the financial systems of the macro areas.

The richest regions in the North, more open to international trade and for this first hit by the "imported" effects of the crisis, have had the opportunity to stimulate aggregate demand due to consumer support, resume productive investment and restore the position of the businesses in difficulty, thanks to a more efficient local financial system. The possibility of obtaining on average more resources to the Centre-north in the years of the economic downturn, resulted in a slight deviation of these regions from those of the South.

Structural interventions that include the creation of a widespread trust in consumption and investment seems therefore essential to boost the economy in the poorer areas of the country. The primary focus should be on the optimization of the services, infrastructure and the financial system in general, with the aim of creating competitive conditions for businesses to participate in the international market, the only possible source for the economic recovery.

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COMPULSORY LEARNING ROMANIA IN EUROPEAN CONTEXT

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Although in many respects, the EU imposes a unitary global policy (European Aquis) in compulsory education it gives freedom to the member countries in implementing their policies in national testing of pupils in monitoring schools and education systems.
Currently national tests play a very important role in the development of educational policies, their results are analyzed in order to establish measures to reduce disparities between the levels of knowledge or improving vocational training of teachers.
The results of these tests are used for many purposes including monitoring of standards, student progress from year to year, providing feedback to students and parents, guidance of teachers' work. However, normally there should be a direct and proportional connection between the results of the assessment and the budget given to each educational institution, the funding being the evaluation result. It should work as a stimulant in obtaining superior results. This link, although it seems to be implied, was difficult to be proved as long as the test results are not made public, nor is it confirmed by the implemented educational policies.
Following comparisons made over time between Canada, the U.S. and EU countries it was found that the results of national tests in Europe are not used as a tool for empowerment, involving sanctions or rewards and subsequently to influence the allocation of resources.

1. Introduction

National testing of pupils became very important as a means of measuring and monitoring the quality of teaching, as well as for the structure of European educational systems.

National testing of pupils, is defined as "the national administration of standardized tests and examinations established at the centre" being one of the tools used to measure and monitor the performance of individual students, schools and not least of the national education system. National tests "evolve according to the national policy agenda, with structural contexts and often in conjunction with other forms of assessment" (National Testing of Pupils in Europe: Objectives, Organization and Use of Results, 2009).

Summative tests or " learning assessment " is usually performed at the end of each quarter, school year or education level and it is used by teachers to report the acquisitions to parents and pupils themselves or to take decisions that may affect their school career (Harlen , W. , Assessment of Learning , 2007.) The results of these tests are used for many purposes including monitoring of standards , student progress from year to year, providing feedback to students and parents , teachers' activity guidance and last but not least granting certificates of graduation. (National Testing of Pupils in Europe: Objectives , Organization and Use of Results , 2009) . Currently national tests play a very important role in the development of educational policies, their results are analyzed in order to establish measures to reduce disparities between the levels of knowledge or improving vocational life long training of teachers.

In other words, national tests were introduced so that they function as a "mirror" for schools and teachers in order to improve performance at their own initiative. (Thélot C., Évaluer l'École, Études 2002). Often, they are limited to two basic subjects, which are the language in which the teaching is performed and mathematics supplemented in some

countries with science and / or a foreign language. (National Testing of Pupils in Europe: Objectives, Organization and Use of Results, 2009)

In Sweden the national tests were introduced in 1962 being used for comparing classes results with a national standard, in Ireland ten years later the "read English", and in France in 1977 after the educational reform. In Romania, the national examinations were initiated in 1995 to test students in primary education.

One of the notable achievements made by OECD in education is the PISA project implementation (Program for International Student Assessment) in order to monitor educational skills, making them comparable both between participating countries and over time. (PISA in Romania: how public institutions (do not) use the scientific expertise, 2010). The results of international research on the development and maintenance of education at the highest level were influenced by other programs such as PIRLS (Progress in International Reading Literacy Study) and TIMSS (Trends in International Mathematics and Science Study), which intensified the debate on education systems in Europe.

2 . Research Methodology

In order to achieve the main objective there were used the following **research methods**: analysis and synthesis, induction, used in the selection of experts' opinions in the field on issues studied and inference, by cross method, following the evolution of the measures adopted over time.

   To achieve the objectives we used a series of bibliographical sources consisting of books, studies and articles published in various national and international bodies in the field.

In this regard, we collected data from Institution of Education Sciences (IES), Ministry of Education and Research (MER), Eurostat, Education Audiovisual & Culture Executive Agency (EACEA), Eurydice, in order to make a comparative analysis of the focus group type in terms of the principles of EU education system 2010/2011. To achieve the goal, we tried to juxtapose the national evaluation results and funding of public and private educational institutions, trying to make out how they interact.

3. Results of research

3.1. National Testing

Although in many respects, the EU imposes a unitary global (European Aquis) in compulsory education member countries are being given freedom in implementing their policies in national testing of pupils in monitoring schools and education systems. Table 1 presents the countries national test types and classes who receive them in the 2010-2011 school year.

Table 1 : Types of national tests and classes who received them, 2010/2011

Country	1	2	3	4	5	6	7	8	9	10	11	12	13	14
BE		🟢			🟢	🟥		🔶🔶		🟢🔶				
BG			🔶			🔶						🟥		
CZ													🟥	
DK		🟢	🟢			🟢	🟢	🟢	🟥					
DE										🟥				
EE			🔶			🔶			🟥					
IE			🔶				🔶				🟥🟥			
EL														
ES				🔶				🔶						
FR		🟢			🔶									
IT			🔶		🔶	🔶		🔶		🔶			🟥	
CY						🟢								
LV			🔶		🔶				🔶			🟥		
LT			🔶		🔶		🔶		🔶🔶			🟥		
LU			🔶							🔶			🔶	
HU				🟢										
MT			🟢	🟢	🟢	🟢	🟢	🟢	🟥	🟥		🟥		
NL								🟥			🟥	🟥		
AT														
PL						🔶				🟥				
PT		🟢		🔶		🔶		🟥	🟥	🟢 🟥	🟢			
RO				🔶										
SI						🔶		🔶				🟥		
SK								🟥			🟥			
FI						🔶					🟥			
SE		🟢			🟢				🟥	🟥	🟥			
UK	🟢	🟢	🔶🔶	🔶🔶	🔶🔶	🔶🔶	🔶	🔶🔶	🟥					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
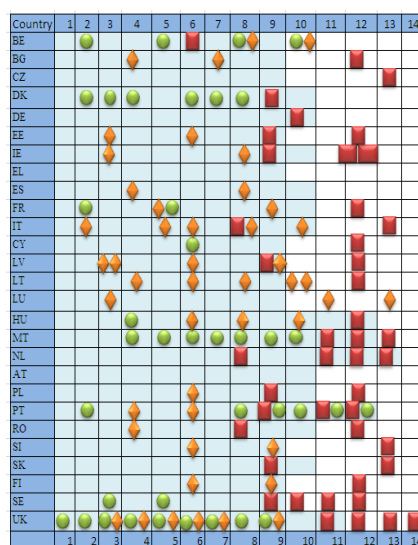
Legend:

🟢 Identifying the needs of individual learning
🟥 A decision to be made as to the school of students
🔶 Monitoring schools and/or of the system of education
Background: compulsory education

Made by the authors: source Education , Audiovisual & Culture Executive Agency (Eurydice).

Both compulsory education and the frequency with which students take national tests vary greatly in the Europe Union. In countries such as Belgium, Bulgaria, Czech Republic, Estonia, Greece, Cyprus, Latvia, Lithuania compulsory education is nine classes, while in the Netherlands compulsory education is thirteen classes. Completion of compulsory education in some countries is done entirely while in other countries is done in two successive levels (primary and secondary). In Bulgaria education has a unique structure; students are required to have a certificate of graduation from primary school (four years / national test) in order to enroll in the fifth grade. This certificate is obtained in Greece, Belgium, Cyprus, Lithuania, Poland-based on activities during the year.

In France, Italy, Malta, Ireland, Portugal, Spain and Romania fourth graders are required to pass the class to get through the fifth grade. In Austria, Germany, Luxembourg, the transition to lower secondary education is realized by decision of the class or the school board.

National testing (standardized tests and examinations set centrally) of students is an evaluation method widely used in the European Union. National tests are used both to assess students and to monitor schools and school systems. In the European Union there are three types of national tests, but in most countries at least one national test reflects the students' standards and represents an important point in making decisions about their schooling.

First national test conducted at EU level is the most important, largely reflecting the achievements of pupils at the end of an educational phase. It is mandatory for all students; only the exam period differs at the end of sixth grade in Belgium, eight in Italy, the

Netherlands and Romania, or more often at the end of secondary education. The second national test aims to assess and monitor the schools, the evaluation of the education system. It is usually mandatory, but in some Member States, it is optional or done on samples. With the help of the third type of national test one can identify specific learning needs of students, being conducted in 12 countries, in some being mandatory, and in others is optional.

The number of national tests taken in the Member states such as Norway, the United Kingdom, Malta and Denmark is very high. They are made almost every grade of compulsory education. In contrast, there are countries such as Cyprus, Belgium, Spain, and Slovakia with only two tests or Germany with a single national test. In Norway, Portugal, Lithuania, Latvia, France and Ireland educational system is more demanding and national tests are carried out by two of the same class. The only types of tests organized in Belgium, Spain, Luxembourg and Ireland are to monitor schools and / or the educational system.

In the United Kingdom, Slovakia, the Netherlands, Germany, Czech Republic all national tests aimed at providing the necessary information to make decisions about the student's school. National tests taken at the level of these countries are made in later stages of schooling (at the end of primary, lower secondary and upper secondary education).

Austria has implemented in the school year 2012/2013, 2 national tests: Bildungsstandards mandatory for all students in grades IV and VIII, and since the school year 2013/2014 new final tests entered the in secondary education. Also, since the school year 2013/2014 in Romania it has been introduced a new set of national tests mandatory for all students in Grades II, IV and VI.

In Italy, Portugal, Slovakia and Cyprus are tested only 2 subjects second language of instruction and mathematics. In Germany, Slovenia, Austria, Iceland and Norway a foreign language is added. In Luxembourg we test the two official languages (German and French) and mathematics and in Italy sciences and English as a Foreign Language. In other countries in the European Union it is tested a larger number of subjects either by adding substantial numbers every year, or by rotation of disciplines at some tests. Denmark and Malta are the countries with the highest number of national tests to a large number of subjects.

In Malta in the primary education students take the exam in five disciplines such as the two official state languages, Maltese and English, mathematics, religion and social studies. In the five annual examinations held in secondary education students are tested in ten subjects: Maltese, English, mathematics, religion, social studies, science and a range of compulsory and optional subjects: art, science, languages and humanities.

3.2. Annual expenditure per pupil / student

Annual expenditure per pupil / student in public / private institutions, include staff costs, current expenses and capital expenditures, measure how much is spent per pupil / student by central, regional and local governments, households and other private entities. Public expenditure on education level differs from one country to another because they are influenced by the structural differences between education systems, including the duration of each level of education, total duration of compulsory education participation rates in post-compulsory education.

Indicator increased in the last decade in almost all European countries reaching in nominal terms, the value of 6900.1 / EUR PPS (purchasing power standard) in the EU-27 in 2010, compared to 5074.0 in 2001. However, due to the financial crisis of 2008, several states have been forced to reduce total annual unit cost per pupil / student (Estonia, Croatia, Italy, Latvia, Lithuania, Romania and Sweden). In most countries the share is stable or it registers an upward trend, especially in the Nordic countries (Figure 1).
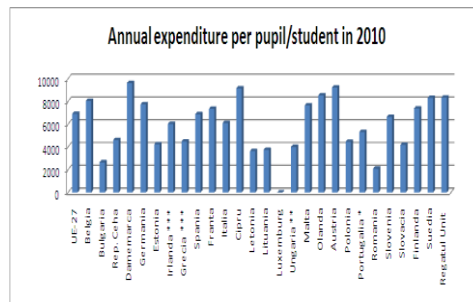
Annual expenditure per pupil/student in 2010

Expenditure per pupil / student increases generally with the increasing of level of education, being in higher secondary education than in primary education, however, there are exceptions, in some countries (Italy, Latvia, Slovenia and Iceland) are noted minor differences between levels of education, higher education unit cost being comparable to that of primary education.

4. Conclusion

Normally there should be a direct and proportional connection between the results of the assessment and the budget given to educational institutions, funding being the result of evaluation. It should work as a stimulant in obtaining superior results. This link, although it seems to be implied, it proved difficult as long as the test results are not made public, and the implemented educational policies do not confirm it.

Following comparisons made over time between Canada, the U.S. and European Union countries it was found that the results of national tests in Europe are not used as a tool for empowerment to involve sanctions or rewards and subsequently to influence the allocation of resources, as it does in the American states.

In the European Union countries such as Belgium, Spain and Slovenia centralized public schools results in national tests due to official documents prohibiting this, so as not to perform comparative rankings between schools. In Poland, Sweden, the Netherlands, Malta, United Kingdom and Romania national tests are centralized at school level being subsequently considered by the authorities in the assessment or audit of schools, but obviously not for their financing.

In the United Kingdom, Hungary and Romania schools are required to include the collective results of national tests and publish the information on their website. Schools that have registered low results on standardized tests at ISCED level 1, in Portugal, are required to prepare a set of corrective measures with deadlines. They may also propose additional aid for children with poor results. In the Netherlands, schools have a high degree of autonomy in terms of student assessment, often using intermediate tests in order to evaluate the progress of students. One such test is the test for admission Entreetoets which gives an insight into the progress and outcomes of education in terms of language, arithmetic / mathematics and cognitive skills.

According to the classification made by"Person", Finland ranks first in the world in education among developed countries in all segments of the educational system starting from kindergarten up to university. In the National Assessment there are no criteria of hierarchy for children, no marks lists only appreciation (admitted rejected), there are no

bad schools or good schools. In the Finnish education system children receive the same quality regardless of school or social level.

Compulsory education is nine years for all children, including those with special needs or children of immigrants. Finland is registering a huge factor in terms of completion of compulsory education (99% of children), and 86% of young people complete their upper secondary education (two years of high school) until age 25, although they are not forced to do so. Finland is the only country where all teachers have master degree of three years, 100% subsidized by the state. This is one of the few European countries where they can make a direct correlation between national test results and financing of educational institutions.

In the education system in Romania there can be implemented and processed principles of the Finnish education system that led to a quality education and to being first in the world in the PISA tests (Reading, Science and Mathematics). Some of these principles, which can be implemented in our country too, regard primarily the financial stimulation and teacher training, vocational education through counseling services. Clearly, *the financial aspect is the most pressing and the delay in resolving it leads each day closer to a total failure*. (Gabriela Puskas, 2010)

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ASPECTS OF ECOFEMINISM IN ROMANIA

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Abstract: *Ecofeminism can be understood as the relationship between the manner in which women are treated in society and on how the environment is treated and protected. Ecofeminism starts from the idea according to which "nature is a feminist issue". The explanation for this is based on the feminist philosophy according to which the connection between woman and nature is a strong one, due to the fact that she is the one who gives birth, thus helping nature to regenerate itself. Without women, female plants and animals, the planet could not develop, perpetuate and the end would be death. Furthermore, another explanation related to the first is that animals and people in their capacity as mothers are able to provide a greater amount of love, care, protection, both to their offspring and to nature. This paper aims to analyze the manner in which women are harmed by the environmental degradation in Romania and also the principles that have governed and still govern the current economy. Nowadays society is lead largely by male gender persons. The main accusations against current policies is that they seek concrete and immediate results, such as those related to economic growth, inflation rate etc. in terms of strictly economic indicators such as: gross domestic product, net national product, gross national product etc.. On the contrary, ecofeminist policies suggest that the emphasis should be placed on quality of life issues, which within itself analyzes both economic and also social and environmental aspects. Is not this the reproach for decades now that is brought to current economic policies? The fact that they do not take into account issues related to environmental degradation, in time led to negative consequences in the world whose costs are unimaginable.*

Keywords: ecofeminism, sustainable development, environment

JEL classification: Q53, Q56, Q59

This idea has appeared since 1974, when a number of 27 women from Reni city, placed in the northern part of India, had a simple yet efficient initiative to stop the cutting down of trees. Each tree which the lumberjacks intended to cut these women would hug. Soon other people joined these women in their initiative, which was entitled "Chipko", a term that in Hindu means "hug". Subsequent to this peaceful protest 12000 square kilometers of forest and hydrographic basin were saved.
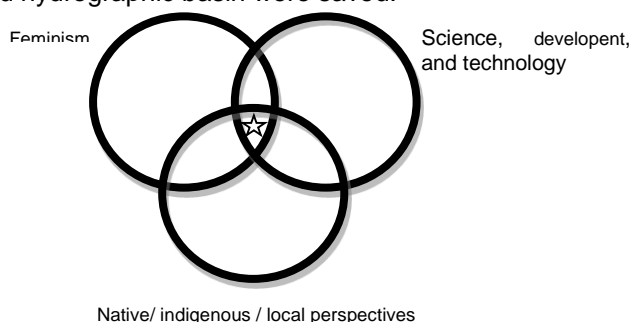
Figure 1: Ecofeminism triangle

According to the ecofeminist theory, between women, nature and development there is a powerful interconnection, as the one represented in figure no. 1. More specifically, Waren states that between women and nature there is a historical, symbolical and theoretical connection. His philosophy is based on four fundamental principles, namely:
- There is a vital connection between the oppression of women and that of nature,
- Understanding the manners in which the connection between nature and women is made represent the main way of understanding on how they are oppressed,
- The feminist theory always has an ecological side,
- Environmental issues comprise feminist solution possibilities.

The "ecofeminism" term has been introduced in literature by the Frenchman Francoise d'Eaubonne in 1974 in order to represent the existing interconnection between the oppression of women and the ecological crisis. Nowadays, ecofeminism intends to highlight the efforts made by women for their better integration in the current society and also for solving existent ecological, social and political issues.

Judith Plant, the biologist, in her paper entitled "learning to live with differences. The challenges of Ecofeminism community" states that mankind seems to be blind, because it does not notice the tight bond between human needs and nature. Subsequent to the analyses and examples presented in the paper, Judith concludes that women are those who can better understand the existing connection between the environment and each individual.

A not so different point of view is that of the naturalist Danielle Wirth and the sociologist Betty Wells in their paper entitled "Remediating Development through an ecofeminism lens", in which it is highlighted the urgent need to focus more on three essential elements necessary for sustainable development, namely: human nature, culture and feminism.

The sociologist Mary Mellor in her studies concludes that women are much more harmed then men by the environmental degradation, which make them more involved in environmental protection campaigns and movements.

Is not this the reproach for decades now that is brought to current economic policies? The fact that they do not take into account issues related to environmental degradation, in time led to negative consequences in the world whose costs are unimaginable.

The pyramid shows, from top to bottom:

EU*

*EU - strengthening the relationships between the governments of some countries, creating new common economic, monetary and environmental policies

Governments - increasing the role of the state

Money - The emergence of trade between goods and then with money, under their different forms

Social relations - The emergence of the groups, tribes and later on of the states

Mother nature - which comprises the entire amount of resources necessary for the emergence and development of human being
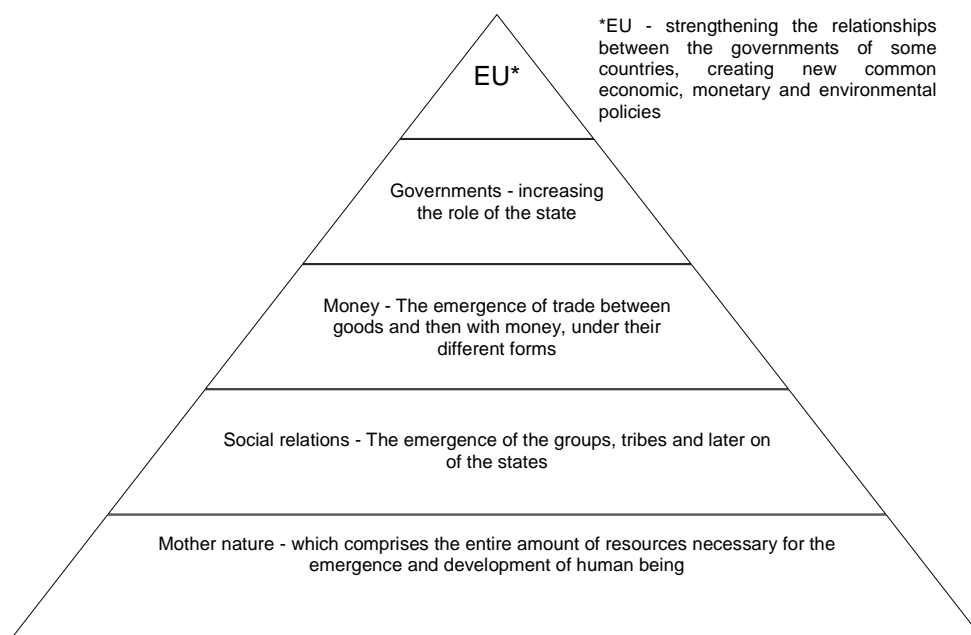
Figure 2: Human, social and economic development pyramid
Source: Made by the author

The above pyramid represents an evolution of the current society, from the emergence of man when he was perfectly integrated in nature, which just as a mother provided everything he needed to survive and develop, until modern society which is governed by laws, diplomatic relationships and trade.

Women's emancipation issue as well the implementation of ecofeminist policies must be seen differently depending on the country, region to which we refer. For example if we talk about India or about any less developed country, or where the woman is seen as a bipedal animal needed at man's house, then their empowerment becomes a necessity primarily because with the increase of the level of education, the access to information, the infant mortality rate would decrease at least proportionally with these. Furthermore, we must not forget that the women without a minimum level of culture will be those who will give birth and educate, at least in the first years of life, future doctors, teachers and possibly even country leaders. Instead, if we refer to developed countries, where woman's role in society is a significant one, then the problem refers only to the level of the indicators which the authors suggest as being necessary to be considered.

In 2010 Women`s Environmental Network published a report, which presented with real data the fact that women are more affected by environmental degradation than men, presenting both on how women are affected and concrete examples such as:

Natural disasters. We know that subsequent to natural disasters an impressive number of victims arise, but according to statistical data the most affected persons are women and children. For example, in case of flooding the majority of the victims are women, due to the fact that on one hand they do not know how to swim because they were not taught and on the other because of some laws which prevent them to leave their house unless they are accompanied by specific persons. According to a study published by K Peterson, children and women are 14 times more susceptible to death than men due to natural

disasters. For example, subsequent to the cyclone that hit Bangladesh in 1991, 71% of the victims were women with ages between 20 and 44 years old, compared to 15% men of the same age.

Migration. Climatic changes determine the migration of people from the affected areas or that have an increased risk of various natural disasters such as hurricanes, storms, etc. According to some data published by the International Organization for Migration, of all people who have left their homes due to natural disasters 80% were women and children. In Romania the situation is not so dramatic, but if we carefully analyze the figure below we can notice that mostly women have the tendency to migrate. For example, during 2004-2008, the period of economic growth, the number of women who have left the country is almost double that the number of men. Of course the explanation is different than the one for the less developed countries.
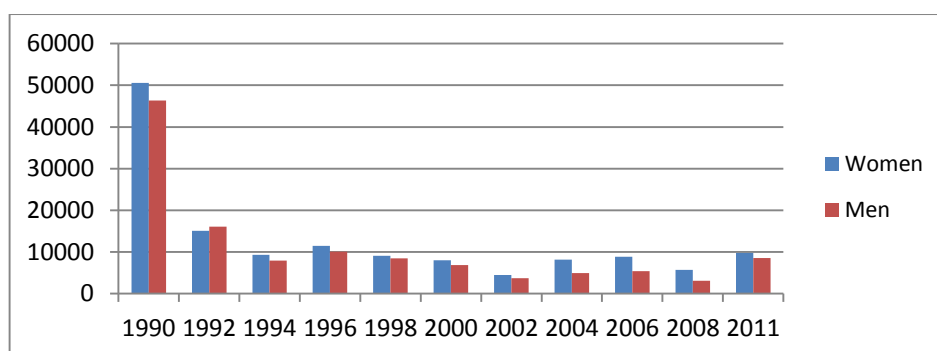
Figure 3: The evolution of migration in Romania during 1990-2011
Source: Figure made by the authors based on the data provided by the National Institute of Statistics, available online on https://statistici.insse.ro/shop/, accessed on the 25.03.2014

The need of water and energy. Even if at present, in spite of the alarming pace of the technological progress, a third of world's population does not have access to running water. Furthermore, according to the latest data, global temperatures are in a warming process and the glaciers are fewer, which make water resources decrease. Thus, in many countries the lack of running water causes women, even from an early age, to travel miles and miles to bring water necessary for the entire family.

Food safety. Climate changes are most likely caused by the increasing level of environmental pollution, which obviously influences food production and that according to the economic fundamental law will increase food prices. Obviously we will ask ourselves on how this increase affects females. The way in which women will be harmed depends on the development level of the country, for example, if we refer to developed countries, these will tend to buy lower quality products for them, but they will not compromise on those for children, which will not dramatically affect nutrition and health. All those stated can be easily noticed from the figure below, where the number of women suffering from nutritional or metabolic diseases is greater, calculated both in absolute and in relative value.
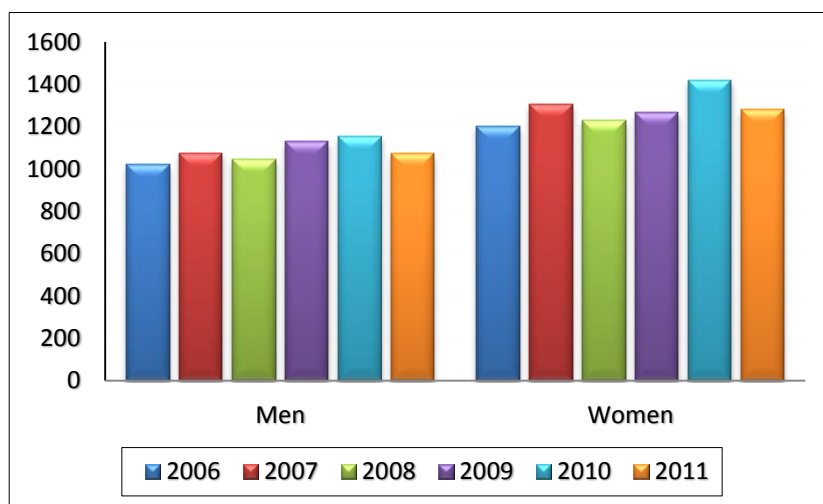
Figure 4: Number of patients with nutrition and metabolic diseases grouped by gender
Source: Figure made by the author based on the data provided by the Bihor National Institute of Statistics

A serious situation is observed in poor countries, where providing food is a problem even in the years with increased agricultural productivity. In these cases there is an unwritten law according to which children have priority to food, who often are in a large number, then men and in the end the women, which inevitably will have an affected life and health quality.

Level of health. Even if statistical studies show that women have a higher life expectancy than men, their quality of life is sometimes lower. As previously mentioned, poor nutrition represents only one of the causes that reduce the quality of life. For example, for Romania the percentage of females who appreciate their health as being a "bad" one is almost double than that of men. In addition, what can be easily noticed is the tighter connection between the health of women and the macro-economic indicators, situation which is not valid for males. In the following, we will explain some of the reasons that were the basis of this information.
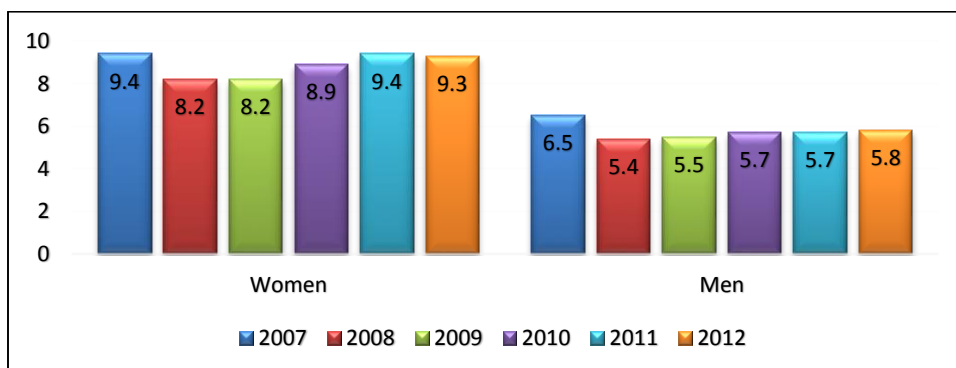
Figure 5: The evolution regarding the bad opinion on health
Source: Figure made by the authors based on the data provided by the National Institute of Statistics, available online on https://statistici.insse.ro/shop/index.jsp ?page=tempo3&lang=ro&ind=CAV103A, accessed on the 12.04.2014

In the following, we will explain some of the reasons that were the basis of this information, namely we will analyze the weight of females compared to males, who suffer from a chronic disease and that were not able to consult a medical specialist or those who have not been able to see a dentist and the list could continue.
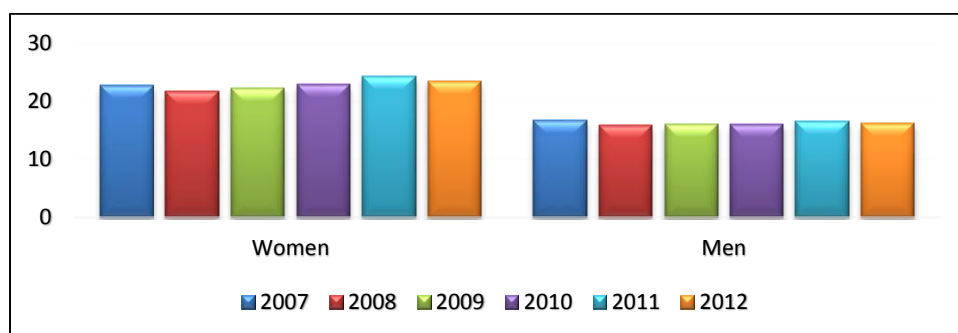
Figure 6: Weight of females/males who have a cronic disease
Source: Figure made by the authors based on the data provided by the National Institute of Statistics, available online on - https://statistici.insse.ro/shop/?lang=ro, accessed on the 12.04.2014

We cannot say with certainty whether poor nutrition, the sacrifice or culture of women are responsible for the increased percentage of women suffering from an incurable disease compared to the percentage of men, which is on average 30% higher. We are tempted to say that between macroeconomic indicators and welfare of females there is an inversely proportional relationship, namely women are more affected than men by the emergence of the economic crisis.
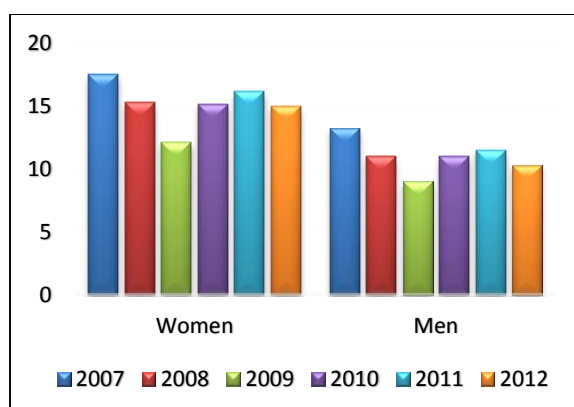
Figure 7: The weight of people who have not been able to see a medical specialist
Source: Figure made by the authors based on the data provided by the National Institute of Statistics, available online on- https://statistici.insse.ro/shop/?lang=ro, accessed on the 12.04.2014
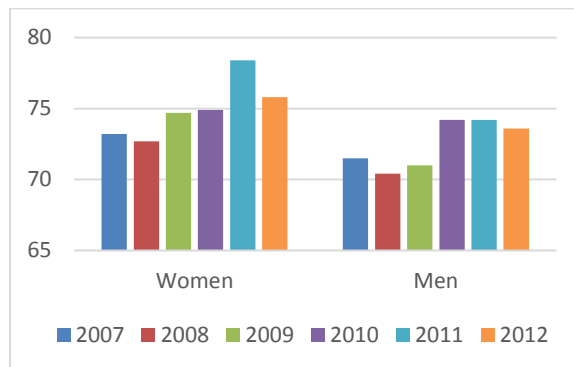
Figure 8: The weight of people who have not been able to see a medical specialist because they cannot afford it
Source: Figure made by the authors based on the data provided by the National Institute of Statistics, available online on- https://statistici.insse.ro/shop/?lang=ro, accessed on the 12.04.2014

All females face a greater risk to sexually transmitted incurable diseases such as HIV or AIDS, on one hand due to poverty because in some cases this situation forces them into prostitution in order to provide food to children, and on the other due to the fact that the incidence of rape cases is still high both nationally and internationally. We must not overlook that even if we live in the XXI century, there are places and cultures where women are treated like animals, respectively sold that gives the "owner" all the rights over them.
This paper is meant to emphasize the major role of women in achieving a sustainable development on one hand because they are directly affected by environmental degradation and on the other because despite the fact that we live in a society where it is intended to eliminate discrimination related to gender, ethnicity, color, etc., women are in most cases the first affected by the increase of pollution and thus by the degradation of nature.

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COMPETITIVE ADVANTAGE IN THE ENTERPRISE PERFORMANCE

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Abstract: *Rapid changes in market characteristics and the technological innovations are common and faster challenges, resulting in products, processes and technologies. The competitive advantage is volatile, difficult to obtain and more difficult to maintain and strengthened with consumers who through their individual choices polarization confirms the recognition performance and award competitive advantages, thus causing the competitive ranking of companies present in a particular market. The competitive advantage lies in the focus of the performance of companies in competitive markets and innovation is a source for obtaining and consolidating it. Companies will need to demonstrate the capacity to adapt to changes in the business environment so as to maintain the helded positions. This paper treats this aspect behavior that companies should adopt to get on the account of innovation a sustainable competitive advantage. I started of the work in the elaboration from the theory of developed by Michael Porter in his book "Competitive Advantage: Creating and Sustaining Superior Performance" we applied methods listed thus trying to point out possible ways of creating competitive advantage by companies. We have presented the sources of competitive advantage and the factors on which depends its creation. Walking theoretical research revealed how lack of competitive advantage leads to a lack of competitiveness of companies and the benefits that arise with the creation of this type of asset. Among the most important benefits is to increase performances. Once the competitive advantage is achieved, it must be maintained and updated market conditions and the methods that can be created a sustainable competitive advantage represent the answers to many of the companies questions are fighting for survival in an environment of fierce competition. The implementation of methods for obtaining competitive advantages, but also exist dangers, that every company should know them once they develop a strategy for obtaining a competitive advantage. The purpose of this paper is to present the importance of having competitive advantage; the ways in which it ppoate obtain and hazards that may arise with its implementation by companies.*

1. Introduction

The concept of competitive advantage in the literature has been introduced by M. Porter in an attempt to identify objectives. In his book "Competitive Advantage: Creating and Sustaining Superior Performance," Porter says the goal of all businesses is getting a competitive advantage in relations with competitors on the market. This advantage can be achieved by two ways, ie selling products at a lower price, or their differentiation (M.Porter 1985). The advantages gained by companies from the use of these two methods can lead to the determination of its position in the card industry in competes. Also after acquiring a competitive advantage, the company's profits will be higher than average profits of competitors. In order to hold a competitive edge for a long time, the company must capitalize the available resources to it and this topic has to be one that we will analyze. A special attention shall be granted to the influence of the advantage over

companies. "Superiority is on how customers perceive as customers using the company can progress the idea of competitive advantage should be analyzed from their perspective". (Bamberger 1989)

2. The sources of competitive advantage
To highlight the sources of competitive advantage of a company must know the factors on which depends its creation. The most important are the internal, ie those in the "inside" of the company, such as structure, resources, capabilities and competencies of the organization. An effective organizational structure will facilitate communication between departments, thereby increasing work efficiency. A part of the internal characteristics of the organization that are essential in creating competitive advantage are: physical resources, financial, human and organizational assets that are used for its development and performance. Physical resources include assets used in business operations and organizational resources are given by the history, relationships and organizational culture. Sustainability of competitive advantage depends on the following characteristics: durability, transferability and replicability. Sustainability assumes time period in which held competitive advantage, portability: the more the resource is less transferable by both will be greater the competitive advantage sustainability and replicability of the latter, which means unable to be copied (Sadler, 2003). Just holding the necessary resources to create the competitive advantage is not enough, they should be exploited, so the company must have the ability to sell them, and create new ones. We can say about a company that has a competitive advantage when in its implementation creates a valuable addition (Clulow, 2003). The companies that use their internal capabilities to neutralize potential threats and avoid weaknesses have the chance to develop a competitive advantage.

3. Strategies to create a competitive advantage

In specialized literature, besides the variants for obtaining a competitive advantage presented by M. Porter, namely the low cost and differentiation also meet proposed variants by Carlos Johnson in 2003 and in 2010, acquiring the companies of the company's flexibility and sensitivity customer reaction. According to Porter, if a company's earnings is higher than the costs, it has a competitive advantage. "Competitive advantage is given to the company's ability to increase its earnings despite the competitive pressure" (M. Porter). Through strategies to create a competitive advantage for a company we understand those activities that add value to the company. Main activities such as: accounting, marketing, product development. In terms of human capital as being important we can refer the following departments: human resources management, procurement. For bringing a default value and create a competitive advantage of the organization of these functions must all linked and that they need to use their resources in an efficient way to satisfy the demands of consumers. An important role is given to the company's flexibility is its ability to adapt to market changes. The SWOT analysis of the company plays an important role in observing and creating competitive advantage."Firms that use their internal strenghts in exploiting envirnomental opportunities and neutralizing environmental threats, while avoidind internal weaknesess, are more likely to gain competitive advantages than other kinds of firms" (Jay B. Barney).

3.1. Low Cost Strategy
Companies using this strategy, aim to practice the lowest costs in the industry. In theory, if the sale price may equal the average market prices, having the lowest cost of production, the company will even find highest profits. Practicing with the lowest prices on the market requires investment in different departments of the company. There is a difference between the strategy based on low costs and one based on the optimal costs.

In adopting the strategy based on low costs, companies will compete in prices. The strategy based on the optimal cost will consider getting the best quality products at a relatively low price. The acquisition of high capacity production equipment, with which the company will produce a greater amount of material is essential and can be considered a barrier to market entry of many companies, because it represents a substantial investment. The next step would be the actual manufacture of the product, which must be executed by specialized personnel trained in the field to have fewer rejects. Must be carrying out an analysis of operating costs and identifying cost the categories with a higher share. Distribution channels must also be more efficient and take into account the characteristics of the products, for example, if the product is fragile it must be handled with care during transport of the products must be well calculated to occur fewer unpredictable situations, such as immobilization product for a longer period of time because instead of air travel, a ground transportation by the choice of company. An example of the application of this method is the Renault company. "In 2013 the Renault profit has increased by 59% due to increased sales of low-cost Dacia models. Overall a profit before taxes and exceptional items increased in 2013 to € 1.24 billion surpassing analysts' estimates of 1.06 billion euros. Revenues increased 0.5% last year to 40.9 billion euros. (Bloomberg.com). During the crisis, Renault has decided to reduce its production costs with Dacia brand cars, it has a noticeable reduction in the final price of the car. A first drawback of this method would be eroding revenues as a result of price reduction and is not compensated by increased sales volume and decrease of the profit which may arise. The methods used in diminurea costs can easily be addressed and competitors. Another trap for the companies using this method is the appearance of ignoring customer's interest, with the company's focus solely on cost reductions.

3.2. The products differentiation strategy

It is the strategy that can be used in those market segments where consumer needs are not met, where there is competition, and the price is not the main feature of choosing products. The differentiation is on the company's ability to provide products that are distinct from those of their competitors. It can be called as positional advantage after its adopting would result the company's position in the industry. Companies that are able to create a competitive advantage based on differentiation requires investment in research product development, sales team is able to communicate with the products strengths. An important role in the process of differentiation is innovation, and product quality. Company's reputation in terms of quality of products is it essential, and it can not be created than using technologies in production and of course respecting environmental standards. It is very important that the product are not imitable, to be rare and valuable, non-substitutable and is specifically to the company. A study carried out by those from Global Direct in 2010, states that two-thirds of the 1,000 companies have increased spending on research development after the recession. Once implemented, the strategy based on product differentiation will be considered an entry barrier to potential competitors and that due to building a brand, getting the customers loyalty and brand association that certain features of products offered such as: quality and utility. A company can not implement multiple strategies of the competitve advantage (eg cost and differentiation) at the same time, because each of them requires special attention during the implementation and fixing the second main objective of the strategy will decrease the efficiency of the organizational processes Porter (1980). There are few cases where companies was located in an advantageous position due to rarity or because of their resources to benefit both cost-based competitive advantage and one based on product differentiation. Some authors argue that the competitive advantage based on product differentiation leads to greater financial performance of the company than the one cost-based (Caves Ghemawat 1992, Wong, 1998). One of the companies that have approached this method is Appleby

creating unique and attractive products for consumers. Its success lies in ensuring customer loyalty through innovative advertising campaigns, retail strategy used by Apple is called "Minimum advertised price" (MAP). This is a price policy which prohibits sellers or dealers charging a lower price than that imposed by Apple. There are only two super supermarkets reselling Apple products where they offer a minimum discount and the final price paid by buyers will be close to that suggested by the manufacturer. A 30% the annual marketing budget is spent in order to communicate the strategy of differentiation, ie unique products, creating a strong brand and loyal customers. In implementing the method of differentiation existing hazards also:

- adoption of a premium price that the buyer would see as too high;
- failures in signaling value of the product to the customer (marketing errors).

4. The focus or market segmentation

This method of obtaining a competitive advantage complements the one of the above, that cost or differentiation. When a company uses the method of obtaining a competitive advantage differentiation, "differentiation focus" will be used to refer to a narrow market segment receiving personalized unique products. Regarding the offered quantities they are much smaller. Customers have needs and demands of these markets different from those whom it is addressed the main products of the company and therefore the prices will be higher and the quantity produced will be much lower. And in this market segment companies will seek to practice the lowest prices, and provide the best quality. The companies that will benefit by using this method will be those capable of producing large quantities of customized products. We have to consider that we are talking about a niche of consumers and quantities will be considerably lower than those of the masses market. Another case in which companies will benefit by using this strategy is that competitors do not have the technology to manufacture or creation of products for this market. And in this narrow market segment can be created barriers to entry, but companies will be able to create shall be those who already possess some advantages such as a known brand, appropriate marketing processes, advanced production equipment, or the small target that market segment where consumers are not vulnerable to substitute products and the competition is weak. The disadvantages of using this kind of trading strategy are:

- preferences of the people within the niche in terms of product attributes translates to the majority of buyers in the sector - the segment becomes part of the overall market;
- the segment becomes so attractive that will attract a large number of competitors, causing dispersion of total profit.

5. Outsourcing the competitive advantage

The reasons why majority of companies choose to outsource some of the ways to obtain a competitive advantage are usually financial ones. Outsourcing certain activities will allow the company to focus on flexibility, development and quality. Indeed, the specialists outside the firm can perform certain activities better or cheaper. If once the outsourcing process has made by a differentiation of products or services when competitive advantage is lost. Therefore companies before outsource activities should keep aware of the benefits of outsourcing and by added value brought products or services. Outsourcing works best when it facilitates access to the adoption of new technologies and reduce spending takes place. Accelerate the decision making is with outsourcing and coordination costs are reduced, which will allow the company to focus on main activities.

6. Sustainability of the competitive advantage

To qualify for the competitive advantages created as much time, companies must consider the following main characteristics of it: durability, transferability and replicability. Sustainability is the date time in which the benefits will be used effectively created, transferability is the date their property to be used only by the company that created them and the replicability meaning unable to be copied by competitors. Replicability occurs when competitors are able to create identical copies of products / services offered by the company, giving consumers a lower price. These three characteristics have an influence on the competitive position of the company. Because of their companies produce changes in the market positions. The company's ability to estimate the gains which it will get from exploiting its resources is an important factor in creating sustainability. Long-term competitive advantage owned by a company that is subjected to depreciation and its ability to imitate rivals. The speed with which they will depreciate however depends on the characteristics of company resources and capacity competition. The company's potential is less subject to impairment than its resources as performing companies are able to maintain it by replacing some resources even the staff. The company's ability to maintain competitive advantages obtained depends on the speed with which competitors will outperform and speed to which they fail to get the responses you want from these problems. First one is the finding out the competitive advantages of the company in the cause and how were these achieved? The second issue by resources and potential of the company, how could accumulate resources the company competitors to imitate its successful strategy? To imitate competitors want to know what skills are determined the competitive advantage of the company's success, then they will have to determine their replication resources is often necessary. Obtaining a competitive potential by coordinating a large number of resources is more difficult to understand and imitated by competitors, than one that relies solely on a single holding resources. The competitors will not be able to copy resources to obtain the competitive advantage of companies whose market position is well established and older. In retail, the competitive advantages that are obtained by the practice by some players in overtime or electronic outlets the opening can be easily copied by competitors. Is harder to copy specificities of companie's from organizational routines. For example, Google's ability to motivate employees and Silcotub Tenaris ability to work iron, representing the companie's routines based organizational culture. Some abilities seem simple however are difficult to copy. The benefits of customer service offered by Xerox are a skill that is not located in a specific department, however is present throughout the company part of the organizational culture. Creating sustainable competitive advantages can derive from the sale of intagibile goods owned by the company such as patents, copyrights, brands but the knowledge gained of certain employees. It is risky for a company to depend on the skills of certain employees because eventually they will be able to negotiate added value contribution to the company. The degree of control exercised by the company and the balance between it and the individual employee depends on the relationship between individual skills and organizational culture. For example, the ability of drug companies to use their recent studies on the production of nutritional supplements as a competitive advantage. This is due to the research team that was used as a corporate asset and not just some enlightened minds of some individuals. If the individual's contribution to company productivity is identified, and it offers a productivity skills similar to other companies when it is in position to negotiate the contribution. But as it is less identifiable the individual contribution and skills as it is used in specific operations of the company with both the added value will be higher.

7. Employee engagement:the key to realizing competitive advantage

Along with EU accession there has been a migration of highly skilled labor to countries in Europe. Thus the Romanian population has decreased in the last decade to nearly 3 million. In June 2012, of those 20 000 licensees working abroad, over 3,500 they were the IT industry. (Insse.ro) Exodus IT engineers to more developed countries, where their intelligence is better rewarded many signs of sneezing questions from IT companies from Romania. They realized the benefits of IT engineers once were benefiting from tax refund companies gone from abroad here we refer to both European companies and to those in India or China. It has become necessary to create the means for obtaining competitive advantages. In 2003 The Brookings Institute studied the main sources of market value and changes in the time. They concluded that in the year 1982 62% of the market value of a company is owed 38% of the tangible and intangible goods. Tangible goods including: machinery, products; and intangibles include intellectual property, brand, and quality workforce. In 2002, the market value occurred in 80% of the intangible goods and 20% of the tangible goods. With the development of technology has become easier to copy products, processes, quality and talent instead of a company are impossible to copy. Using human capital as a source of competitive advantage has led to the development of various programs that are stimulated and motivated employees at their workplace. The challenge of this type of program is to create situations whose purpose is win-win for both employees and the company. We have to realize that a workforce is involved; this can lead to superior financial performance of the company. The companies whose employees are "engaged" topped by up to 202% the performance of companies whose employees aren't, according to a survey conducted by Gallup in 2009. „The performance engagement of employees involved in employee programs increasing it by 20% and the chances that they leave the company is less than 87%.˝ (Nancy R, 2007). A study conducted by Hewitt Research has shown that the involvement of the employees in companies is 60-70% the total of shareholder is 24%. At the level of involvement of the employees is between 40 and 60% total of shareholder return is 9.1%. Also in cases where the employees are involved is less than 25% total of shareholder return is negative. This means that the level of involvement of employees in the company is in close contact with their welfare.

Necessary elements for getting this type of engagement are: confidence, basic meeting the needs and dialogue with staff. The first element, trust is the most important because a company managers and executives must fulfill promises at any hierarchical level. The second element, the satisfaction of basic needs is the compensation and benefits that must exist in every competitive organization.The third element of the dialogue with staff should contain the following question: Why remain employees in the company? In dialogue with employees must discuss the reasons behind this choice. As an example we can take the company Endava, an IT company. Endava delivers business solutions and IT services particularly for large organizations from areas such as banking, insurance, electronic payments, retail, telecommunications, media and publishing. Endava is specialized in the delivery of Software Development, Digital Media, Software Testing, Application Management Software, Cloud Services and currently has over 800 employees nationwide and over the next three years is expected to reach 1,000. Endava Romania has received the funding from the state budget and the total value of the investment project is 20.7 million and includes activities to achieve custom software 'Regional Development Endava 1000 +'. The project is implemented in Bucharest, Iasi and Cluj, and the company has made the creation of 500 jobs. The amount of state aid is 9.5 million.

Employee Engagement Program is implemented talent management team being present in each of the company's locations in Cluj, Iasi and Bucharest. Creative team of this program has 17 members which deal with training and mentoring new employees and their main purpose is to create an open organizational environment in which all employees are involved. Endava in 2013, it was the top IT companies in the country, namely the 3rd.

Due to lack of motivation and appreciation more and more IT engineers preferred to leave the company. In 2008 the company's turnover was Euro 3 million, Euro 4 million in 2010 and 2012, reaching a turnover of 50 million Euro. Endava used involving human capital as a source of competitive advantage, in addition to jobs created annually, the company develops and various employee engagement programs that are designed to integrate, develop, and defaults of employees, following the application of these programs as they may be most efficient and increasing the company's financial performance. The following scheme represents the steps to achieving the company's performance using the competitive advantage employee engagement programs.

The employee in the right place
Efficient leadership
▼

Collaboration
Growth and development
Support and recognition

Loyalty

Personal Development

Ability to work ▼

Satisfied customers

Customer loyalty

Higher profits

Increasing revenues
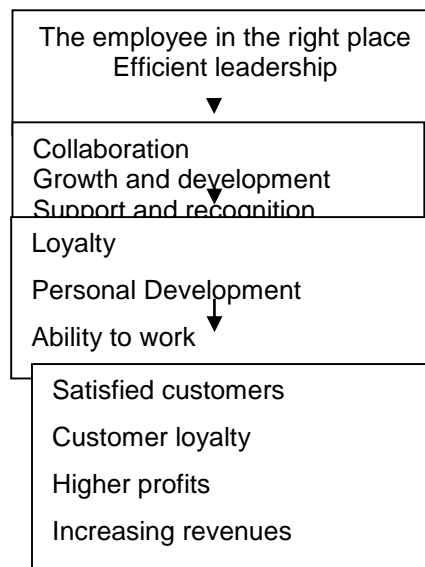
Figure nr.1: Employee engagement factors

Source: Development Dimensions International 2009.

Conclusions
The competitive advantage can be created by simply preserving and identifying specific opportunities and threats the company. The creation it depends on the uniqueness of each company's resources and capacity to exploit them. Is necessary to study the trends in the business sector, not just observing them. Factors that may lead to a competitive advantage can be both external and internal. The sources of creating competitive advantage are not necessary to be independent however for creating a sustainable competitive advantage they need to work together. However, the success factors of obtaining a competitive advantage lie within the company and among them we can mention elaboration of a functional management plan, capitalizing intangible assets. We can say that of the company resources and capabilities are essential to formulate strategy to obtain a competitive advantage, they can be considered and the main sources of income of the company.

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THE EXCISE DUTY FRAUD IN THE CASE OF CROSSBORDER OPERATIONS WITH PETROLEUM PRODUCTS

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Abstract: *I appreciated that the work can be divided into five chapters designed to explain, if possible, the negative effects of fraud and tax evasion, being serious social and economic phenomena that the countries of the world are facing. The indisputable negative effects that the phenomenon of fraud and tax evasion generates are felt directly on the level of tax revenue receipts, causing major distortions in the functioning of the market mechanism. In Romania, the fiscal and budgetary revenues are dependent on the revenues from indirect taxes (VAT, excises, customs duties etc.), while, in the European Union, the contributions of the three major categories of taxes (direct and indirect taxes, social contributions) to the formation of revenues are closely related. Fiscal policy, using taxes, generates psychological, financial, economic, social effects on the social-economic environment. The public power that realizes the reality of the consequences of the tax action adopts as a solution changes in the structure of the tax system in order to modulate the effects consistent with the expected outcomes. Therefore, the extent of the outcomes pursued influences the technical characteristics of the taxes, and these on the micro and macroeconomic effects. In this regard I will show that reducing tax evasion allows the creation of budgetary resources necessary to the allocation of funds for economic growth. Tax settlement strategies based on state taxation policy, the influence of fiscal discipline to combat the underground economy and tax evasion, the improvement of methods and procedures used by the tax system in the tax settlement, perception and control are issues of utmost importance to ensure the feeding of the state budget systems with minimal resources required. In Romania, one of the basic economic problems is the lack of investment resources allocated, these being the main contributor to economic growth, in which the reduction of fraud and tax evasion is the solution to increase this allocation which can be rated as one of the priority tasks of the state.*

Keywords: *tax evasion; tax fraud; excises; VAT; crossborder operations.*

JEL classification: E62; H21;

1. Introduction
Although tax evasion is one of the aspects which specialized doctrine attaches special attention in studying the discipline of tax law, the terminology used to describe this phenomenon is unclear, and the area it explores, particularly in cross-border activities, is uncertain. (Hoanţă, 2010)
There are several interpretations, names and meanings of this phenomenon, therefore it is normal for it to be difficult to define. They use phrases like "fraud, illegal fraud, international tax evasion, legal fraud, statutory fraud in law, underground economy". Not only the terminology is an element of confusion, but also the ambiguous law, the boundary between licit and illicit being very fragile.
In Romania the tax evasion phenomenon has taken in the last twenty years a special amplitude, seriously affecting economic growth of the country. However, tax evasion is still very difficult to control and quantify. This is due to several factors, among which I mention the imperfections and particularities of tax law, low living standards of the majority

of the population, low level of civilization, culture and civic consciousness, aggressive fiscal policies that the state promotes and not least the corruption which is present in the structures of the bodies with responsibilities in fighting against the tax evasion phenomenon.

Tax evasion and fraud are one of the most studied chapters both by theorists and technocrats regarding tax matters, they are complex socio-economic phenomena particularly important that all states are currently facing and whose undesirable consequences seek to limit them as much as possible, their eradication being actually impossible. The states should be systematically and effectively concerned to prevent and limit these phenomena.

In Romania and at the level of European Union, tax evasion and fraud have serious consequences on the budgets of the Member States and on their own resource system, leading to violations of the principle of fair and transparent taxation, and it can distort competition thus impairing the functioning of the domestic market.

According to art. 1 of Law no. 87/1994, tax evasion is "elusion by any means, in whole or in part, from taxes and other amounts owed to the state social insurance budget and extra-budgetary special funds by natural or legal persons, Romanian or foreign, hereinafter taxpayers". The new Law no. 241/2005 on preventing and fighting against tax evasion does not yet give us a definition of the notion of tax evasion.

I believe that, no matter how this phenomenon is defined, tax evasion is, ultimately, failure, the non-compliance in bad faith by the taxpayer, with the tax liability. Regarding crimes of tax evasion, they include facts alleged as such in the criminal law. (Florescu, 2013)

Tax evasion has a direct and immediate effect on levels of tax revenue, which leads directly to imbalances in market mechanisms and unlawful enrichment of the practitioners of this method of cheating that affects the state and ultimately, each of us, honest taxpayers.

Due to the Romanian legislation in the field, supporting the existence of a legitimate (or legal) tax avoidance and of an illicit (or illegal) tax avoidance lacks legal basis.

2.Excises

Excises are special consumption tax that are due to the state budget for the following products from domestic production or which are imported: alcohol, wine, beer and other fermented beverages, intermediate products, processed tobacco, energy products and electricity.

According to the legal norms applicable in Romania, the keeping of an excisable product outside a fiscal warehouse, if the excise duty has not been paid for that product.

Outside the customs warehouse may be held only products for which excise duty has been paid and, on the economic cycle, it can be demonstrated that they come from an authorized warehouse keeper, from an operator registered, from a non-registered operator or from an importer.

In the case of energy, they are treated as such when they are intended for use, offered for sale or used as heating fuel or motor fuel. Excise duty is set depending on the destination, to the level that applies to the period of heating fuel or motor equivalent.

Besides clearly defined energy products, any product intended for use, offered for sale or used as motor fuel or as an additive or to increase the final volume of motor fuel will be subject to the excise applicable to the fuel for motor equivalent.

For products for which the economic operator does not fulfill the obligations set out in the case of motor fuel and additives, is due the excise applicable to leaded gasoline and in the case of heating fuel, the excise duty is that for diesel.

Energy products are subject to excise duty where: products are made in order to be used as heating fuel or motor fuel, the products are sold as heating fuel or motor fuel.

Where, on the economic cycle, an operator cannot prove that the excise goods in its possession for commercial purposes, come from an authorized warehouse keeper, from a registered operator, from a non-registered operator or from an importer, this one owes excise duty on them, within 5 days from the date of discovery.

The movement of excise goods from a tax warehouse to a recipient is based on the accompanying administrative document (AAD).

During the movement of excise goods under suspension, the duty may be suspended if the conditions provided by law are complied with. Thus, if the movement of excise goods in duty suspension from a tax warehouse in Romania to a Member State, including if the move is made by a customs office of exit from the EU, and between a customs office of entry into the EU and a fiscal warehouse in Romania, the containers in which the products are must be sealed by the competent tax authorities and accompanied by the accompanying administrative document.

Excise goods under suspension which are displaced, the excise will be further suspended on receipt if the goods are placed in a tax warehouse or dispatched to another tax warehouse, the receiving tax warehouse the obligation to write on the accompanying administrative document the type and quantity of each product and any possible discrepancies, in this case the accompanying document must be certified by the competent tax authority.

For all excise goods, at the time of release for consumption in Romania, the duty becomes payable. (www.mfinante.ro)

3. Tax fraud in the case of excise goods

With the integration of our country into the European Union, some operators in Romania quickly assimilated criminal fraud practices of tax obligations used successfully for many years in the Community. The mechanism itself is structured in the current transitional arrangements for the taxation of intra-Community trade, which requires, as a general rule, the taxation of intra-Community goods carried between taxable persons, in the Member State of destination. (www.mfinante.ro)

Regarding excise goods, the current legislative framework creates problems both in their storage duty suspension, leading to the postponement of the incurrence of excise duty payment to the state budget and the transfer from a tax warehouse to another warehouse. This situation often leads only to achieving the document writing circuit.

Tax fraud in excise goods is reflected mainly in:
- Use of excise duties lower than those legal;
- Production of excise goods outside the authorized tax warehouses;
- Failure to include in the tax base of all the taxable amounts of money;
- Failure to include excises in the sale prices of the excise goods;
- Failure to record the obligation to pay excises in the accounting records.

In the case of energy products the most used methods of fraud are:
- Intra-community acquisitions or imports of goods poorly excised (fuel, Light Fuel Oil, etc.) with physical-chemical characteristics similar to those of some fuels (gasoline) and the subsequent sale of as diesel;
- Intra-community acquisitions or registered imports of low excised products (fuel, Light Fuel Oil, etc.), but in fact the product is fuel (diesel) and the subsequent sale at the selling price of diesel;
- Intra-community acquisitions or registered imports of low excised goods (fuel, Light Fuel Oil, etc.) but in fact the product is fuel (diesel) and the subsequent sale at the selling price of diesel ;

- Fictitious production of low excised products (fuel, Light Fuel Oil etc.) in authorized tax warehouses, using diesel as a raw material under suspension of payment of excise duty, in reality the final product actually being harnessed being diesel;
- Trade of fuels (petrol, diesel) produced by the mixture of products derived by non-excised products;
- Trade of heavily excised fuel (petrol, diesel) directly from the warehouses without payment of excise duty;
- Unlawful trade of heavily excised fuel (petrol, diesel) resulting from management pluses created in oil terminals;
- Unlawful trade of heavily excised fuel (petrol, diesel) with reduced excise duty rate for special purposes: agriculture, other activities stipulated by law;
- Fictitious exports of weak excised products previously purchased from the EU Member States or obtained from domestic production, with physical-chemical characteristics similar to those of some fuels (diesel), the merchandise being capitalized in Romania.

This type of fraud involves a chain of successive selling-buying operations made within the Community market and in Romania, made by a group of operators who sometimes seek to exploit, in an apparent hint of legality, and the differences between the tax rates applied by the EU Member States, in order to "cheapen" goods subject to such transactions and, as a consequence, to create a comparative advantage in the market, in terms of selling price, resorting to the use of some "phantom" type firms in the documentary and banking circuit. (Cristuş, 2011)

The practice has shown that phantom companies are major players in the tax evasion, being established with the help of forged documents or genuine documents belonging to unidentifiable foreign citizens. The establishment and operation of phantom firms mainly aim to circumvent the tax legislation by trading of illegal business, after which they disappear from the world of "business", after they previously accumulate large debts to the state budget, thereof tax authorities being unable to execute them.

Most times they do not work in the declared headquarters and are an important "supplier" of fiscal documents which record unreal transactions, the amounts of money being taken from accounts through successive withdrawals in cash or through ATMs, by controlled persons. Registering false transactions or false expenses means preparing some false documents for expenses, in that they were not made, or their level is much lower. The regulatory framework defines fictitious operations as "the concealment of reality by creating the apparent existence of an operation which, in fact, does not exist."

4. Excise fraud for cross-border operations with petroleum products

In Romania, since the early days of 1990, there were interest groups specialized in smuggling operations for both export and import operations, in speculation operations with critical products, highly taxed products, in supply of services, etc.

Tax fraud related to intra-community transactions is an undeniable presence within intra-community, estimates of its size being worrying. With the integration of our country into the European Union, some operators in Romania quickly assimilated criminal practices to fraud tax obligations, used successfully for many years in the Community, the carousel type fraud on value added tax related to intra-community transactions being an undeniable presence within intra-community, estimates of its size being worrying. The mechanism of this type of fraud is divided into the current transitional arrangements for the taxation of intra-community trade, which requires, as a general rule, taxation of intra-community goods carried out between taxable persons, in the Member State of destination.

This type of fraud is based on a fairly simple mechanism, namely the home trader invoices without VAT and the trader in the country of destination shall apply the reverse charge system for this operation.

Besides classical fraud for the VAT related to cross-border transactions, since 2008 the excise fraud on alcohol and tobacco products has become an undeniable presence, culminating with petroleum products, in 2010.

As noted above, the methods are many, but the most used are those relating to intra-community acquisitions of weakly excised oil products (registered) and mimicking the production of such products in authorized warehouses, in which this paper analyzed public data on such situations, they having the largest share in the petroleum products fraud.

In this view, a company X in an EU Member State delivers oil products to a company Y in Romania. In the period 2009-2012 most of the transactions of this kind focused on the sale of oil and other industrial oils (lower excised products between 14.4 and 15 Euro /ton). These mineral oils were received by companies in Romania, invoices being recorded in the accounting system and their value was paid abroad, mainly through bank transfer. Also, companies in Romania recorded in accounting invoices for petroleum products, this time diesel or petrol (products with excise between 283 and 330 Euro / liter), the quantities of mineral oils purchased being close to those of diesel or gasoline, representing the value of such invoices, the payments being generally made through bank transfer (in the beginning appeared as being cash payments). Subsequently both mineral oils and diesel / gasoline were recorded as being delivered to other companies in Romania or EU / (Z) or the company (Q) in Romania which have as their object the trade with heavily excised petroleum products, in general automotive fuel, through the pump. It can be noted that two circuits were created, one for weakly excised products and one for diesel, the first circuit having a fictitious trade and the second having fictitious purchases. Generally, the intra-community oil acquisitions were made from partners from Slovakia and Austria, while the intra-community deliveries were made to partners in Bulgaria and Belgium.

For the intra-community acquisitions and deliveries of goods made by companies involved in this fraud were made purchase invoices, receipt notes, bills of sale, purchase and sales journals, trial balances and Bill of Lading /AWB.

The mention in the transport documents of the same transport companies (even if the shipments were made on the same day) and the method of payment or receipt of the value of the goods (payment in cash, based on documents that do not meet the substantive and the form of basic accounting documents) are obvious clues as to the veracity of operations performed. However, the failure to confirm the intra-community supplies of goods by the partners could be established by competent authorities that the goods purchased were sold in Romania, causing the state budget a damage consisting of excises and value added tax

Based on the data provided by the National Institute of Statistics, it is clear that tax evasion is at a very high level in Romania, accounting for 13.8% of GDP in 2012. The NIS data show that about 60% of tax evasion is generated from VAT, in 2010 representing 9.6% of GDP, the same level as in 1996. It is worth noting that in 2010, tax evasion increased from 8% to 9.6% of GDP, while in 2010 the rate of VAT increased from 19% to 24%, in which case, normally, the levels should have lowered. The evolution of tax evasion is shown in Table 1.

Table 1. Evolution of tax evasion on the main taxes (% of GDP).

Year	2007/% of GDP	2008/% of GDP	2009/% of GDP	2010/% of GDP	2011/% of GDP	2012/% of GDP
Income tax	0.57	0.58	0.87	0.97	0.98	1.01
Profit tax	0.87	0.96	0.71	0.83	0.84	0.85
HIC	1.93	1.82	2.8	3.13	3.15	3.24
VAT	7.1	7.4	8.0	9.6	8.4	8.3
Excises	0.74	0.42	0.55	0.67	0.45	0.39

Source: NIS

Recording the growth for the majority of revenue stations in 2012 and 2013, shows that Romania continues to rely on large indirect taxes, on high social contributions, but very poorly collected. Little still are discussed the effects, positive or negative, which different fiscal policies induce in economy, but also in shaping the behavior of taxpayers. And not to talk about the implications that such measures have on the costs of administration, bureaucracy inevitably associated with the collection of any tax.

Level of excise duties during 2008 - 2013, for diesel and fuel products that are being analyzed in this report is shown below:

Table 2. Evolution of excise duties for diesel and fuel products

Type product	UM	2008	Excise 2009	Euro/UM 2010	2011	2012	2013
Diesel	1000 liters	274.625	283.92	293.215	302.51	316.03	330.395
Fuel	1000 kg	13.7	14.4	15	15	15	15

Source: Processing author from www.insse.ro, www.mfinante.ro.

The exchange rate used for the excise computation is presented below:

Table 3. The exchange rate of excise

Period	Exchange rate lei/Euro
2008	3.3565
2009	3.7364
2010	4.2688
2011	4.2655
2012	4.3001
2013	4.5223

Source: Processing author from www.insse.ro, www.mfinante.ro.

The value in RON of excise was determined by converting the amounts expressed in euro equivalent, based on the exchange rate set on the first working day of October of the previous year, published in the Official Journal of the Union, in accordance with Art. 218 of Law no. 571/2003 regarding the Fiscal Code.

The public data processed and analyzed in this paper showed that during 2010 - 2011 there were several operators involved in rigging the state budget in terms of excise duty. In this regard, I will provide as an example the situations in which, as noted above, the

initiators of the fraudulent group (operator A) created a fictitious procurement circuit involving 26 companies, which issued bills of diesel, and fictitious circuit of weakly excised products. Thus, operator A delivered diesel without paying the excise duty and goods and deducted expenses with the merchandise based on documents that do not reflect real commercial operations, diminishing the tax base in terms of income tax, thus deducting also VAT in an unjustified manner and avoiding the calculation of VAT on excise duty not included in the VAT tax base.

The calculation of tax obligations which the economic operator A, based in Romania, had to pay to the state budget, is shown in Table 4.

Table 4. Calculation of tax obligations for the economic operator A.

No	Name	Excises	VAT	Tax profit	Total damage
1	SC 1	476,802	479,935	327,868	1,284,605
2	SC 2	182,506	257,368	187,530	627,404
No	Name	Excises	VAT	Tax profit	Total damage
3	SC 3	561,866	463,563	300,470	1,325,899
4	SC 4	268,249	172,717	102,526	543,492
5	SC 5	36,388	33,504	16,514	86,406
6	SC 6	387,087	349,025	170,750	906,862
7	SC 7	1,005,422	972,486	487,456	2,465,364
8	SC 8	591,767	937,901	530,585	2,060,253
9	SC 9	104,626	150,244	83,423	338,293
10	SC 10	3,071	46,018	30,187	79,276
11	SC 11	620,179	574,595	384,641	1,579,415
12	SC 12	2,954,759	1,996,600	1,208,586	6,159,945
13	SC 13	833,732	624,062	392,129	1,849,923
14	SC 14	1,733,684	1,531,839	1,012,581	4,278,104
15	SC 15	1,239,908	798,843	467,129	2,505,880
16	SC 16	2,473,104	2,199,819	1,070,849	5,743,772
17	SC 17	2,190,911	2,358,491	1,221,782	5,771,184
18	SC 18	2,152,810	2,129,621	1,075,298	5,357,729
19	SC 19	599,260	622,061	427,959	1,649,280
20	SC 20	2,266,648	1,693,247	953,802	4,913,697
21	SC 21	205,964	220,391	113,973	540,328
22	SC 22	912,162	598,678	358,204	1,869,044
23	SC 23	2,949,161	2,169,550	1,351,790	6,470,501
24	SC 24	1,061,536	1,165,210	811,384	3,038,130
25	SC 25	252,523	256,180	130,383	639,086
26	SC 26	0	441,540	294,360	735,900
	Total	5,811,788	5,182,841	3,012,946	14,007,575

Source: Processing author from www.insse.ro, www.mfinante.ro, eurojust romania, www.just.ro

By holding and sale of excisable products outside a fiscal warehouse for which it could not be established that they originate from an authorized warehouse, from a registered

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consignee or importer and that the excise duty payment was recorded as well as the entry in the accounting record of some documents attesting unreal operations, the *company A* has defrauded the consolidated state budget amounting to Euro 14,007,575, as follows:
- ■ 5,811,788 Euro – Excises;
- ■ 5,182,841 Euro – VAT;
- ■ 3,012,946 Euro – tax profit.

As seen, the excise fraud leads to a chain reaction regarding tax obligations, leading finally to a total fraud of about 3 times higher than the initial amount.

In addition to this case, there were identified in 2009-2010 other operations similar as operating mode and situations where operators prepared delivery documents of diesel to Poland (operator B) to Slovakia (operator C) and mimicking production of weakly excised products in diesel warehouse (operator D), where this product has been released for free circulation as diesel, without paying the excise duties.

The entire activity was conducted through intermediaries with a low level of education and no training in the development of commercial operations in which there are sums of money of hundreds of millions of euros, being also used base companies to be able to issue entry documents to beneficiaries of diesel exempted from excise duty and VAT, who needed justification if they were controlled, therefore being able to justify the origin of fuels. In the case of operator D, the so-called production being made in the tax warehouse, it basically avoids the payment of excise duty and VAT for the sale of diesel, resulting from the documents that it could produce other types of fuel such as heavy liquid fuel, etc..

The analysis of public data, consisting of tax audits and probate and criminal cases prosecuted, after removal of companies that were nothing but accomplices in the networks formed, made us determine that tax fraud can be attributed to the five groups which conducted the sale of these products on the Romanian territory, without paying the excise duties, the situation being presented in Table 5.

Table 5. Calculation of excise duty for the identified economic operators (2010-2011).

Name	Quantity (t)	Excises	VAT	Tax profit	Total
Op. A1	21,230	5,811,788	5,182,841	3,012,946	14,007,575
Op. A2	17,004	4,654,905	4,151,155	2,413,195	11,219,255
Op. B	5,706	1,562,037	1,392,995	809,791	3,764,823
Op. C	5,565	1,523,438	1,358,573	789,780	3,671,791
Op. D	990,000	271,016,021	241,686,886	140,500,073	653,202,980
Total	1,039,505	284,568,189	253,772,450	147,525,785	685,866,424

Source: Processing author from www.insse.ro, www.mfinante.ro, eurojust romania, www.just.ro

The data above shows that the excise duty not paid by the five operators, for energy products, is EUR 284,568,189, in case that the excise duty not being paid had negative influences on the budget totaling 685,866,424 Euro.

These data are public but the situation is more serious both for the period 2010 - 2011 and 2012. As noted above, the total excise tax evasion was calculated by the NIS to 0.67% of GDP in 2010, 0.45% of GDP in 2011 and 0.39% of GDP for 2012.

However, in addition to data calculated in table. 5, there are indications that in the period 2010-2011, the amount of petroleum products released into circulation without the payment of excise duty was much higher, over 2,000,000 tons respectively, in which the unpaid excise duty is over 547,507,113 Euro, the total amount that was affected being over 1,319,601,978 Euro.

5.Conclusions and proposals

The Euro zone countries need improving fiscal discipline and community mechanisms which sanction the countries that violate budget rules, in the near future being unrealistic to draw up a common fiscal policy of the euro area, but there can be taken measures to ensure the stability of individual fiscal policies, starting right from the application of sanctions for the countries that violate the budgetary discipline rules.

Taxes do not have to model the behavior of taxpayers, they should be the same regardless of the type of income and should not include distortions. To be reasonable, the tax burden should be distributed as widely as possible.

Those shown lead to the conclusion that it is necessary as soon as possible the restructuring of the Romanian tax and the way in which the administration is made, so that the tax system function more effectively, and lead to a better collection, which would have a major impact on the growth of budgetary resources and in this way it could lead to economic growth.

The changes in fiscal policy should be made public after comprehensive analyses and after it was previously estimated their impact on the economy, the fiscal consolidation should aim at increasing tax revenues and the accelerated absorption of European funds could much alleviate the pro-cyclical nature of tax consolidation.

The tax reform is necessary to balance the budget within European revenues and expenses in relation to PIB. Imposing tough constraints to bad payers and reducing the level of nominal income tax should bring the broadening of the scope and the increase of collection efficiency.

The development and implementation of a modern and predictable tax strategy on medium and long term would be essential in the context of competition that occurs between the European states to attract new investments and create new jobs.

Although they exist and have enough personnel, local tax offices do not have the expected efficiency, in many situations due to the operating system of these institutions, being necessary a consolidation at the local level and due to delays in terms of controlling and improving tax provisions it is necessary to use and improve the IT systems. To improve the collection of taxes it is absolutely necessary a profound reform of the administration of taxes in Romania.

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OPPORTUNITIES TO PROMOTE ROMANIAN AGRO-FOOD PRODUCTS TO NON-EUROPEAN MARKETS

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Summary *This paper is an analysis of promoting opportunities of Romanian food products and non -European countries to which we are going to export, through promotion and advertising action and, public relations , designed to highlight the intrinsic characteristics and advantages of romanian products , especially in terms of quality, food safety , specific production methods , nutritional and health aspects , labeling , animal welfare and emvironmental protection . To cover large non -European freight , promotion campaigns should focus on products with PDO (protected designation of origin) / PGI (protected geographical indication) / TSG (traditional specialty guaranteed) and organic products .*
As from the top 40 countries where Romania exports , 23 countries (Turkey , Syria , Saudi Arabia , Egypt , Pakistan , Jordan, Ukraine, United Kingdom , South Korea , Moldavia , Israel , Russia , Bosnia - Herzegovina , Japan, South Africa, Algeria, UAE, Lebanon, Libya , Serbia , Morocco , Switzerland , Uzbekistan) are outside the European Union , the export prospects for this area are very high.
Through participation at events, fairs and exhibitions of national and international importance , in particular by means of stands aimed at enhancing the image of Community products , Romanian exports to non -EU area will grow considerably in the coming years.

Keywords *The agro-food products, promotion, non-European markets*

Introduction

Year 2014 marks a new stage in the agricultural economy and rural development of our country.

In the new context of international trade, taking into account the experience of the EU countries , the prospects for market development both inside and outside the Union,the activity and promotion of agricultural products proposed by professional organizations and inter-level organizations national represented, is a necessary part of the common agricultural policy. In this way they complement and reinforce actions developed by Member States by boosting product image to consumers in terms of quality , nutritional value and food safety, production methods, nutritional aspects, health, labeling and environmental protection . Helping to open up new markets in third countries, as well as maintaining markets within the EU, actions and promotion programs also produce a multiplying effect of the beneficial effects of national and private initiatives, especially for products for which there are stocks, increasing the competitiveness of the agricultural sector.

Financial support and promotion programs prepared, presented and implemented in accordance with Community and national legal framework usefully complements and reinforces action by Member States by promoting in particular:

- product image to consumers in the European Community and to consumers in third countries,
- the quality, nutritional value and food safety,
- specific production methods, increasing the volume of information on the products and their trade flows .

Chapter I. National and Community legislation on the promotion of Romanian agro-foods

Information and promotion actions for agricultural products is an instrument of the common agricultural policy, funded by the European Agricultural Guarantee Fund (EAGF) for financing of market measures, export refunds and direct payments to farmers .

Support and promotion programs complement and reinforce the actions undertaken by Member States, by promoting the image in agricultural products to consumers in the EU and third countries, especially in terms of quality, nutritional value and food safety and methods of production , contributing to the multiplication of national and private initiatives, with the expected effect of increasing trade flows and the volume of information on those products.

Information and promotion actions have the aim of agricultural products and their production methods and agro-products based on agricultural product, without being guided by certain brands and not encouraging consumption of a product because of its specific origin. The origin of products subject to these measures may be indicated when these systems are regulated by the appellations of origin (PDO), Protected Geographical Indication (PGI), traditional specialty guaranteed (TSG) or optional quality terms, in accordance with Regulation (EU) No 111/2012 .

Legislation:

• Regulation (EC) no.3/2008 of 17 December 2007 on information and promotion actions for agricultural products on the internal market and in third countries;

• Regulation (EC) no.501/2008 laying down detailed rules for implementing Regulation (EC) no.3/2008 on the provision and promotion measures for agricultural products on the internal market and in third countries;

• Emergency Ordinance no.76/2008 for the designation of competent national authorities for coordination, monitoring, management and implementation grants to finance programs and promotion of agricultural products on the internal market and in third countries, as well as Law no.1/2004 on the establishment, organization and functioning of the Agency for Payments and Intervention for Agriculture, approved by Law no.36 of 13 March 2009;

• Emergency Ordinance no.34/2006 regarding the award of public procurement contracts, public works concession contracts and services concession.

Table no. 1. Methods and programs to promote Romanian food products

Involved parties	• At EU level: - European Commission • National level: - M.A.D.R., A.P.I.A.
Organizations which propose programs:	-professional organization / interprofessional representative at Community or national level;
Implementing Bodies:	Media & advertising agencies: - Agencies of communication - Public relations agency. Each proposing organization chooses, as an appropriate competitive procedure validated by the Member State, one or more organizations implementing the actions.
GENERAL RULES:	- The actions are not guided by certain brands trading and do not encourage the consumption of a product because of its specific origin - Origin of the product covered by these measures may be indicated when it is a designation conferred under Community law; - In programs to promote agricultural products, information or promotion is made in third countries or domestic markets.

	Central message of the campaign and promotion should be based on the intrinsic qualities of those products or their characteristics and the reference to the origin of the products must be secondary to the main message.
Who can propose programs?	1. Professional and interprofessional organizations of the sector or sectors from one or more Member States, at national or community representative; 2. The Member States, in the absence of internal market programs can propose information campaigns on the EU system of PDO / PGI / TSG and ecological agriculture and other Community schemes relating to the quality, labeling of agricultural and food products , graphic symbols laid down by Community"s applicable law.
Running programs	Minimum: 1 year; Maximum: 3 years.
Target Markets	Programs may cover one target country or more, including Moldavia, Republic of China, Republic of Azerbaijan, Russian Federation.
Format of the programs	Programs must be submitted in the format prescribed by the Commission and available on its website: http://ec.europa.eu/agriculture/prom/documents_en.htm Programs submitted must: - Comply with Community law and marketing products concerned; - To comply with the specification, which contains the exclusion, selection and award criteria distributed to that purpose by the Member State concerned (see the website of M.A.R.D.) - Be sufficiently detailed to be able to assess compliance with applicable law and the cost / benefit of them.
ELIGIBLE ACTIVITIES	Internal Market (I) • promotion and advertising, public relations, designed to highlight the intrinsic characteristics and advantages of EU products, especially in terms of quality, food safety, specific production methods, nutritional and health aspects, labeling, animal welfare and environmental protection; • information campaigns on the EU system of PDO (Protected Designation of Origin)/PGI (Protected Geographical Indication)/TSG (traditional specialty guaranteed) and organic agriculture on other Community schemes for quality standards and labeling of agricultural products and food, and the graphic symbols laid down by Community"s applicable law;
ELIGIBLE ACTIVITIES	• information campaigns on the Community system covering wines with designation of origin or geographical indication, wines with an indication of the wine grape varieties used and spirit drinks with a protected geographical indication; • studies to evaluate the results of the information and promotion;

	• information campaigns on responsible patterns of behavior regarding drinking and harm linked to hazardous alcohol consumption • participation at events, fairs and exhibitions of national and European importance, in particular by means of stands aimed enhancing the image of Community products.
	In third countries (II)
	Information and promotion actions for agricultural products in third countries and their production methods and food-based agricultural products, may take the following forms: • promotion and advertising, public relations , designed to highlight the intrinsic characteristics and advantages of EU products, especially in terms of quality, food safety, specific production methods, nutritional and health aspects, labeling, animal welfare and environmental protection; • information campaigns on the EU system of PDO (Protected Designation of Origin) / PGI (Protected Geographical Indication) / TSG (Traditional Speciality Guaranteed) and organic farming on other Community schemes for quality standards and labeling of agricultural products and food , and the graphic symbols laid down by Community law applicable ; • information campaigns on the Community system covering wines with designation of origin or geographical indication , wines with an indication of the wine grape varieties used and spirit drinks with a protected geographical indication; • studies to evaluate the results of the information and promotion campain; • information campaigns on the EU system of table wine; • participation at events, fairs and exhibitions of international importance, especially by means of stands aimed enhancing the image of Community products; • studies of new markets, necessary for the expansion of markets; • high-level trade missions.
ELIGIBLE THEMES AND PRODUCTS	INTERNĂL MARKET: • fruit and vegetables, • processed fruit and vegetables, • flax textiles • living plants and products of ornamental horticulture, • olive oil and table olives, • seed oil, • milk and dairy products • fresh, chilled or frozen, produced according to quality standards at Community or national level, • marking of eggs for human consumption• miere şi produse apicole,

	• wines with protected designation of origin or geographical indication, wines with an indication of the wine grape varieties, • Graphic symbol for the outermost regions as referred to agricultural legislation: PDO, PGI, TSG under Reg. nr.509/2006 and Reg. No. 510/2006 and products made under these regulations, • ecological agriculture under Reg. (EC) no. 834/2007 on organic production and labeling of organic products and repealing Reg. (EEC) no. 2092/91 and produced from organic agriculture • poultry meat. In messages to be disseminated, any reference to the health effects of consuming the products concerned must be based on generally accepted scientific data. Messages referring to such effects must be approved by the competent national authority in public health. In Annex I to Reg. 501/2008 and subsequent amendments established guidelines aimed at providing of guidance in terms of messages, target groups and instruments which must be at the core of information and promotion of different product categories.
ELIGIBLE PRODUCTS	THIRD COUNTRIES Products may be subject to the information and promotion on third country markets are especially produced for direct consumption or processing for which it is possible to export and the possibility of opening new markets in third countries, particularly in cases where no refunds are alloweded and tipical or quality products or who have a high added value: • beef or pork, fresh, chilled or frozen food preparations based on these products • poultry meat of high quality • dairy products • olive oil and table olives, • wines with protected designation of origin or geographical indication, protected geographical indication wine grape varieties, • spirit drinks with geographical indication, • fresh and processed fruits and vegetables, • products processed from cereals and rice • flax textiles, • living plants and products of ornamental horticulture, • products carrying a protected designation of origin (PDO) Protected Geographical Indication (PGI) or traditional specialty guaranteed (TSG) as Reg. (EC) no. 509/2006 or Reg. (EC) no. 510/2006, • Organic farming products under Reg. (EC) no. 834/2007 on organic production and labeling of organic products and repealing Reg. (EEC) no. 2092/91.
The Message	Message of the campaign and promotion should be based on the intrinsic qualities of those products or their

	characteristics and the reference to the origin of the products must be secondary to the main message.

Agriculture is an important sector in the national economy, with a share of about 7% of the GDP in 2011 (compared to less than 2% share of the EU average). Romania has a significant agricultural potential, reflected by crop production and yields crops, witk a potential that can fully cover domestic demand and export substantial quantities.

The main agricultural crops are: cereals, oilseeds, sugar beet, potatoes, vegetables, fruit and grapes for wine. Livestock is composed mainly of pigs and cattle, sheep and goats.

In terms of agricultural production made by EU countries in 2010 Romania was ranked ot 3rd place in honey production, 5th place at oilseeds, vegetables and melons on the 6th place, 7th grain, effective of animals on 8th, meat and wine on 10th place.

In the last decade, the agricultural area of Romanian organic crops has expanded to 300,000 ha, ie 2.25% of the total cultivated area. Our country is an attractive market for organic agricultural production, but especially primary supplier of processed agricultural products, holding the most fertile and organic soil in Europe. The efficiency of use of the fertilizer is less than 70 kg/ha, compared to the European average of 200-500 kg/ha. The main organic agricultural products grown and processed in Romania are cereals, vegetables, oilseeds, honey and berries.

There are more than 10,000 Romanian producers of organic agricultural products who are processing vegetals. Organic livestock farms have been developed, notably in sheep and goats, while the number of units of organic meat has doubled to more than 70 in the last years.

Chapter II. International trade of food products

In 2011, Romania's international trade in food products was 8.4% of total national trade food products. Trade balance for food products was constantly in deficit. However, the sharp increase in exports than that of imports of processed agricultural products resulted in a restriction of the primary trade deficit in the last five years, from 2.2 billion Euro in 2007 to 0.43 billion Euro at the end of 2011. For processed food products, Romania's trade balance deficit has reduced over 20% between 2007 and 2011.

Chart no. 1 - Romania - Trade balance with agricultural food products - 2007-2011
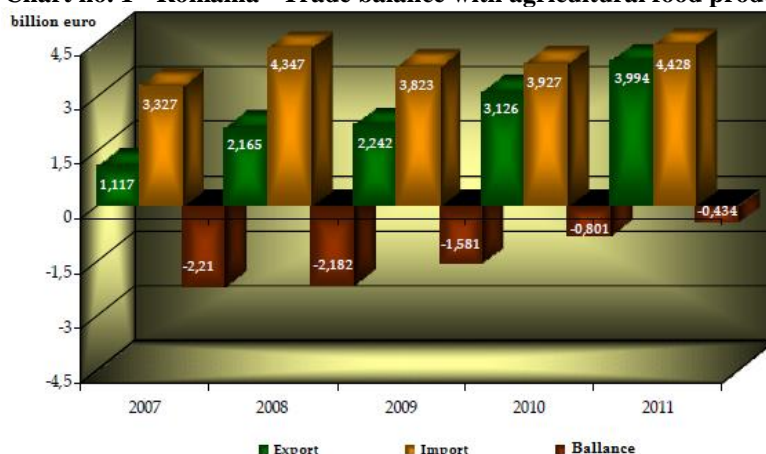
Romanian exports of agricultural products increased their share in total exports from less than 5% in 2007 to nearly 9% in 2011. Over those five years, exports of food sector increased more than 3 times, exceeding 3.9 billion euro in 2011, while imports of agricultural products rose by over 30%.

Chart no. 2 - Structure of agro-food exports in 2011
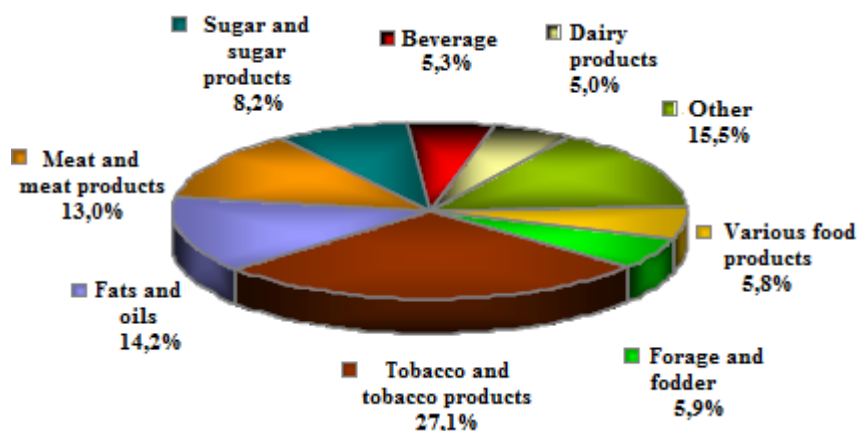
Source: ITC / UNCTAD / WTO Trademap and National Institute of Statistics

Organic agricultural exports reached 100 million annually, which places Romania in the top 20 exporters of such products worldwide. The main markets for organic agricultural products originating in Romania are European countries: Austria, Germany, France, Italy, Denmark, and non-EU Switzerland.

Chart no. 3 - Structure of agricultural exports in 2011
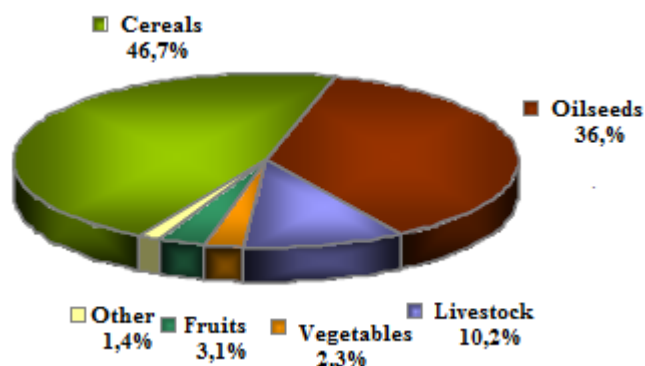
Source: ITC / UNCTAD / WTO Trademap and National Institute of Statistics

Exports of basic agricultural products (nearly 60% of total Romanian exports of agricultural products and foodstuffs) are represented mainly by cereals (wheat and corn), oilseeds (sunflower seed and rapeseed), tobacco and fat and oil. Exports of agricultural products are very diverse, covering a wide range - from live animals, meat and meat products or tobacco products to cheese and dairy products, sugar and sugar products and drinks.

Chapter III. Exports to non-EU countries

Among non-European countries to which we export, we mention Moldavia, where we mainly export animals and vegetables, fats and oils, Republic of China and Republic of Azerbaijan.

Between China and Romania exist the "Cooperation Agreement on agriculture between the Ministry of Agriculture and Rural Development of Romania and the Ministry of Agriculture of China", signed on 20 October 2009 in Bucharest and Cooperation Agreement between ASAS and Academia of Hebei, completed in 2003 and renewed in 2010.

Usually, the Chinese side gives annually through China Embassy in Bucharest, scholarships in specialized courses on various topics in the field of food products. These scholarships were attended by a large number of specialists in agro-food.

Directions of cooperation between China and Romania :

- The establishment of a ministerial agreement on bilateral cooperation in agriculture
- Cooperation in rice cultivation in Romania;
- Continued cooperation in sunflower seeds (ongoing cooperation at Fundulea) - Chinese side is interested in purchasing seeds and sunflower seedlings;
- Cooperation in the wine sector - the Chinese side is interested in purchasing of Romanian wines;
- Cooperation in fisheries:
- Institute at Nucet is interested in purchasing from China wild broodstock genetic background fresheners Chinese species naturalized in Romania, as well as from North American sturgeon acclimated in Romania and China;
- The Chinese side is interested in cooperation/import of products: honey, grapes and wine, high prolificacy breeds of swine, aquaculture.

Areas of interest for **Romanian-Chinese cooperation in the field of agrifood** in addition to those mentioned above:

- Exchange of technical documentation about technology of breeding species on categories;
- use of modern biotechnology and breeding on fish species - Asian cyprinides;
- trade specialist breeders, especially breeds of pigs with high fecundity;
- collaboration on complex exploitation of fishery potential of storage lakes;
- collaboration on new technologies for production of canned fish - Asian cyprinides;
- collaboration on fish stock market organization.

Between Romania and the **Republic of Azerbaijan** exists the agreement on cooperation between the Ministry of Agriculture and Rural Development of Romania and the Ministry of Agriculture of the Republic of Azerbaijan, signed in Baku on 18 April 2011.

The main areas of cooperation proposed in that document are vegetable sector (collaboration on the production, certification and marketing of organic products, effective exploitation of land, land improvements, agro-technical measures and advanced irrigation methods, encouraging mutual investments in production and processing of agricultural products with the use of modern technology, and marketing of agricultural products), livestock (exchange of experience in genetic material and high biological value).

Real possibilities of future cooperation with the Republic of Azerbaijan:

• Crop production: Exchange of existing and new varieties of plants for field vegetables and fruit, production of seeds and seedlings, exchange genetic

material and biological development cooperation and combined production of natural feed, cooperation in plant protection, plant quarantine certificates under EU Council Regulation no. 2092/91;

• Animal production: cooperation in artificial insemination and selection, exchange of genetic material, exchange of experience in advanced methods of breeding;

• Exchange of experience in the efficient use of land, agro-technical measures and advanced irrigation methods;

• Cooperation in the field of agricultural scientific research by establishing direct links between research units in the agricultural sector.

Table no. 2. - Top 40 trading partners for trade in food products in 2011 (export)

Market outlets	Import	
	Value Million euros	Share %
Export - total, of which:	3.993,5	100,0
1. Italy	531,4	13,3
2. Hungary	414,5	10,4
3. Bulgaria	375,7	9,4
4. Netherlands	304,4	7,6
5. Germany	287,2	7,2
6. Spain	205,1	5,1
7. Turkey	196,5	4,9
8. Greece	163,7	4,1
9. France	159,4	4,0
10. Belgium	135,6	3,4
11. Syria	103,8	2,6
12. Saudi Arabia	101,9	2,6
13. Egypt	82,8	2,1
14. Pakistan	77,6	1,9
15. Jordan	75,9	1,9
16. Slovakia	69,0	1,7
17. Austria	48,7	1,2
18. Ukraine	47,3	1,2
19. Croatia	44,8	1,1
20. Great Britain	42,2	1,1
21. Poland	39,1	1,0
22. South Korea	38,0	1,0
23. Cyprus	30,1	0,8
24. Moldavia	29,2	0,7
25. Israel	28,6	0,7
26. Russia	27,9	0,7
27. Czech	27,7	0,7
28. Bosnia-Herzegovina	26,2	0,7
29. Portugal	25,8	0,6
30. Japan	20,3	0,5
31. South Africa	18,6	0,5
32. Algeria	17,4	0,4

33. UAE	16,3	0,4
34. Lebanon	16,0	0,4
35. Denmark	14,8	0,4
36. Libya	12,1	0,3
37. Serbia	12,1	0,3
38. Morocco	12,1	0,3
39. Switzerland	11,4	0,3
40. Uzbekistan	8,9	0,2

Source: Data processed by the author according to the National Institute of Statistics, Romanian Center for Trade and Investment

It is noted that non -European countries Turkey, Syria , Saudi Arabia , Egypt , Pakistan , Jordan, Ukraine, United Kingdom , are in the first half of the top 40 countries in which Romania exports food products. Turkey ranks on 7th place, with a share of 4.9% of total exports, ie 196.5 million euros. Seats 11, 12, 13 , 14 and 15 are taken by the countries Syria , Saudi Arabia , Egypt , Pakistan and Jordan. Syria has a share of 2.6% of total exports , the same as Saudi Arabia. Egypt, accounting for 2.1% of total exports , has 82.8 million euros of the total export of 3993.5 million euros. On seats 14 and 15, Pakistan and Jordan have a share of 1.9 percent of total exports. Ukraine holds 1.2% of export , namely 47 million from the total. On the 20th place, exactly at the half of the classification, is the UK, with a percentage of 1.1%, or 42.2 million euros obtained from export. This being observed, it can be said that there are great prospects for further cooperation with these countries for export of agricultural products.

It can be seen that out of 40 countries belonging to the classification, 23 countries are from outside the European Union, which means that more than half of the top 40 countries import Romanian agro-food. In the second half of the ranking, from 20 countries listed, 15 are non-European.

Looking at this ranking, it is very easy to see the tendency of Romanian exports to countries outside the European Union, which encourages efforts to promote food products in these markets in order to increase the value of exports.

Conclusions

In order to streamline promotion of Romanian agri-food on non-European markets, there must be implemented promotional programs including strategic and marketing analysis for each of the target countries and the products that are intended to be exported, in order to to allow a proper evaluation of the program and strategy communication. Should be taken into account: the average of annual output and imports and exports of the program, trends in demand/consumption of these products and export opportunities or development of new distribution channels, the volume of existing information on products wanted for the export.

Due to high shipping costs outside the European Union, the promotion programs must bring to the fore food products with high added value, such as products with protected designation of origin (PDO), protected geographical indication (PGI), traditional specialty guaranteed (STG).

With the help of well-made marketing programs, Romania will succeed in the following years to make food products more well known to non-European markets, managing to increase the value of exports to these countries.

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SECTION: FINANCE, BANKING, ACCOUNTING AND AUDIT

SUB-SECTIONS: ACCOUNTING, AUDIT

ACCOUNTING MANIPULATION: AN EMPIRICAL STUDY REGARDING MANAGERS' BEHAVIOUR

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Abstract: The study analyses managers' behaviour from Romania when dealing with creative accounting. For this we realized an empirical study within the Arad county space, having as main objective the identification of the managers' perception regarding the usefulness of accounting information and of other factors considered when making decisions. Another aspect was to interpret the managers' tendency towards manipulation or strategic management of results. The empirical research was carried out between December 2013 and January 2014, and the research method used was the survey, and as an instrument of the research we used the questionnaire. The questionnaires were posted on a website but some of them were applied directly in the field to ensure a response rate of at least 30%. For the analysis and confirmation of the feasibility of the questionnaire and of the measurement scale, we used Cronbach Alpha method. The results obtained after statistically processing the answers received from respondents and after testing the research hypotheses show that there is an increased interest of the managers from the investigated Arad firms to improve the quality of the financial accounting information and to give the users as beautiful an image as possible of the company's performances; it is noticed their inclination to the manipulation of the accounting figures. On the other hand the results obtained demonstrate that, despite the fact that most of the managers from the sample consider that using ethics is a priority in making decisions, this idea is not an obstacle for more than a half to change an accounting policy that would affect the true image but would be favorable to the image of the company The utility of such research contributes to the insurance of the premises for the development of future research, looking to test the reaction of the professional accountants in our country, regarding the phenomenon of creative accounting.

Keywords: accounting information, managers, behaviour, risk assumption, creative accounting, performance , ethics

JEL classification: M41

1. Introduction

Looking back in history we can see and identified a few favourable circumstances of appearances of creative accounting concept; first related to the economical advent of world states then, the need of economic entities to create for themselves a good reputation in an increasingly competitive and tough economic environment. This moment is the first mention, regarding creative accounting practices, and we can't ignore the fact that the first mention belongs to the founder of accounting - Luca Paciolo. Thus, Luca Paciolo was

shaping in his already renowned De Arithmetica, the first accounting manual, practices of creative accounting.

Participating to the creation of a reality, accounting creates an image of the enterprise, being aware of the fact that there are several interpretations. As it is defined by Colasse (1996), it « is not a simple technique of facts recording, in the process of enterprise, the accountants get involved, invest, and bring their own interpretation of reality and their own vision regarding the enterprise. They offer that vision that they appreciate as being in accordance to the defense of their own interests in the context of the relations they have with the other economic and social players».

Starting from a similar study conducted in Bihor county (Balaciu et al.2012) , the main objective of this research is to extend it by analyze the behaviour of managers in Arad companies and their tendency to manipulate the figures in the financial statements. Therefore, we used a descriptive analysis of the answers provided by the sample subjects and we tested several hypotheses. Synthetically, these have in view suppositions like: the managers' inclination to take risks is strongly related to their tendency of accounting manipulation; the managers' motivation towards performance determines the qualitative level of the accounting information; The managers' tendency to manipulate the accounting figures and to distort the true and fair view from the financial statements isinfluenced by their ethical behaviour. The study is divided into 5 parts. The first part is a brief introduction announcing the intentions of our scientific approach followed by a review of the literature on the topic of our research. The design of the research, the methodology followed and the discussion on the results of the study are next exposed and in the end of the study the main findings as well as the limitations of our research are briefly presented.

2.Literature Review

The managers of companies are tempted, depending on their interests, to either smoothen the results or offer a favourable image of these. The subjectivism interferes with the determination of the result, the game of options thus laying the ground for the proliferation of the phenomena of intentional accounting. More than once managers take on a series of risks and turn to the practices and techniques of creative accounting as leverage in the pursuit of offering third parties a favourable image of the entity's financial situation and performances, in the majority of cases a better image than the real one. In the field literature many researchers focus on the definition of the term "creative accounting". Griffith (1986), for example, defines creative accounting from the perspective of journalism, Jameson (1988) from the accountant's perspective, Smith (1992) from the analyst's perspective, Nasser (1993) from the academic perspective. Feleagă and Malciu (2002) opine that the concept of creative accounting "is usually used in order to describe the process through which professional accountants use their knowledge with the purpose of manipulating the accounting figures included in the annual accounts." Naser,K. (1993) and Teller,R. and Turillo,R.B.(1996) investigate a series of factors which may influence managers to turn to the practices of creative accounting. These practices and techniques of creative accounting can represent for managers leverage used to promote and support the company image, but also to select information so that the data offered by the financial situations sustains the interests they are pursuing. In his study Malciu (1999) brings up the motivational complex of managers' developing the techniques and practices of creative accounting. Feleagă,N and Malciu,L. (2002) investigate in their study creative accounting from an ethical perspective. They consider that by having the possibility to manipulate results managers can maximize their own usefulness. As a result, it is reasonable to suppose that those who negotiate the employment contract of managers anticipate a possible opportunistic behaviour on their part and offer them smaller compensations ... Under these circumstances, the managers "accused" of opportunistic

actions are "forced" to turn to these in order to get the advantages for which they have already "paid".

Pfarer et *al* (2008), cited by Hadani et *al* (2011), believe that the manipulation of the results reported in the financial situations represents a current practice encountered within public companies. By misleading the investors, the manipulation of results can lead to an inadequate allocation of temporary assets. Dumitrescu (2013) places creative accounting between art and deceit. In his study he brings up the negative connotation of creative accounting, but does not exclude its positive alternative either. Therefore, the researcher believes that "creative accounting has a negative connotation, if it does not aim to present an image reflection, exactly as required by accounting standards, but is meant to lead to the drafting up of financial situations that serve the managers' wishes regarding the financial position and performance of the company." The positive alternative is, however, not excluded, in the sense of an innovation that leads to engineering capable to answer the question: "How do we handle resources as efficiently as possible in order to build performances?"

In their research Vladu,A. and Cuzdriorean,D. (2013) debated creative accounting limitation through ethical developments, focusing on features as: measurement and behaviour.

The findings of the study indicate that ethics as a solution used for limiting opportunistic behaviour in accounting can have an unlimited potential as a long term solution.

Sayed A.Bala (2013) presents the effective role of Corporate Governance in determining the Quality of Accounting Information and reducing the practice of Creative Accounting. The researcher used a descriptive analytical approach and looked into the theoretical and field relevant studies of authors of Arab and foreign origin with the induction and presentation of the most important results, and the development of what supports the development of Corporate Governance and it is used in increasing the efficiency of company performance and reducing the practice of Creative Accounting, with a field Study on Listed Companies in Khartoum Stock Exchange.

Auditors can play an active role in reducing the effects of creative accounting. Over time it has been observed that there have been o series of companies that have lost important sums of money or went bankrupt as a result of risks taken on by managers by intentionally turning to different practices of creative accounting. Several investors, stockholders, and creditors lost a lot o of money, because their decisions had been made based on information that was subject to different forms of creative accounting practices.

Mohammed Abdullah Al Momani & Mohammed Ibrahim Obeidat (2013) investigated in their study the effect of auditor independency, integrity, objectivity, contingent fees, advertising rights, commission determination, organization form and name on auditor ability to detect the practices of creative accounting.

3.Research Design And Methodology

Our research is an empirical one of the interpretative type, which was conducted during December 2013 and January 2014; the research method used was that of investigation, the research instrument - the questionnaire. In the study that we conducted, we aimed to identify the perception of managers on the usefulness of accounting information and of other factors considered in decision making. Also we aimed to identify a possible tendency of managers to resort to creative accounting techniques in order to generate the best image of the company and a possible correlation between the managers' tendency to manipulate the accounting figures and their use of an ethical behaviour. For this purpose, we proceeded by formulating and testing 3 research hypotheses:

H1: The managers' inclination towards risks is in strong correlation with their tendency to accounting manipulation.

H2: The managers' motivation for performance determines the qualitative level of the accounting information.

H3: The managers' tendency to manipulate the accounting figures and to distort the true and fair view from the financial statements is influenced by their ethical behaviour.

In developing the questionnaire we used the Likert scale with 5 levels of appreciation. For the analysis and confirmation of the feasibility of the questionnaire and of the measurement scale, we used Cronbach Alpha method.

4.Discussions

Further we achieved an analysis of the validity of the research hypotheses on the manager sample group, as well as the generalization of the results to the total manager population.

H1: The managers' inclination to take risks is closely related to their tendency towards accounting manipulation.

The questions on the basis of which we shall test the validity of this research hypothesis are:

II.10. A loss of 20,000 euro affects you more than a gain of 20,000 euros?

II.14. Assuming that you are driving a car, when seeing the yellow traffic light, would you choose to speed up or to slow down?

II. 16. Do you agree to a change in accounting policy that would affect the true image but is favourable to the image of the company?

II. 17. Would you borrow from different lenders in order to ensure future payments?

Înclinaţia managerilor de a-şi asuma riscuri este evaluată pe baza răspunsurilor la întrebările II.10, II.14 şi II.17.

Looking at the obtained figures, we can conclude that managers in the sample have a relatively balanced distribution in terms of propensity for risk. If those who assume the risk of borrowing, to ensure future payments, have a 45,3% weight at the sample level, the percentage of those who do not accept this risk is 35.5%. As for the extent to which managers are affected by a loss or a gain of 20,000 euros, 72,4% of managers believe they are more strongly affected by a loss than by a gain of an equal value. At the same time, 41.1% of respondents would choose to accelerate at the yellow traffic light while the rest would slow down. Question II.16 Do you agree to a change in accounting policy that would affect the true image but is favourable to the image of the company? evaluates the willingness of managers to resort to accounting manipulation. More than half of the managers in the sample are willing to change an accounting policy that could bring image benefits to the company, while 25% would not resort to this method. We proceed to validate hypothesis H1 using method χ^2 – Chi-square.

We shall determine the mean scores for assessing the managers' propensity for risk, granting points, from five - to those with a greater propensity for risk (response Strongly agree) -, to one - to those presenting risk aversion (response Strongly disagree). We also gave 5 points to those who would accelerate at the yellow traffic light and 1 to those who would stop. The table of recalculated frequencies of bidimensional distribution between the scores determined from the responses on the managers' propensity for risk, respectively their availability for accounting manipulation is presented bellow.

Table 1. Table of recalculated frequencies

Variants of answers II.16 Accounting Manipulation ⟍ Average scores II10, II14, II17	1.00	2.00	3.00	4.00	5.00	Total
(1.5-2]	1.93	1.81	1.22	3.70	0.34	9
(2-2,5]	9.03	8.44	5.69	17.27	1.57	42

(2.5-3]	12.25	11.45	7.72	23.44	2.13	57
(3-3.5]	3.65	3.42	2.30	6.99	0.64	17
(3.5-4]	12.47	11.65	7.86	23.85	2.17	58
(4-4.5]	6.02	5.63	3.79	11.51	1.05	28
(4.5-5]	0.64	0.60	0.41	1.23	0.11	3
Total	46	43	29	88	8	214

Source: drawn up by the author based on the answers from the questionnaires

Since the χ^2 calculated = 129,53 and this value is much greater than 0, it can be said that at the level of the sample there is a relationship between the variables analyzed, thus the managers' propensity for risk is correlated with their tendency towards accounting manipulation. To extend our results to the total population - all managers in Arad county - the following assumptions are issued: $H_0 : \chi^2 = 0$, $H_1 : \chi^2 \neq 0$

The calculated value, 129.53, is compared to the table value determined for 4 degrees of freedom and a probability of 95%, which in our case is 36.41%. Since the calculated value is greater than the table value, the null hypothesis is rejected and the hypothesis H1 is accepted as true, so there is a correlation between the managers' propensity to risk and their tendency towards accounting manipulation and, moreover, its intensity is high, as the difference between the two values, the calculated one and the table, critical one, is significant. In conclusion the hypothesis H1: the managers' inclination to take risks is closely related to their tendency towards accounting manipulation is validated both at the sample level and at the total population level.

The field literature takes into account a series of phenomena which encourage the existence and occurrence forms of creative accounting. Among these are: accounting treatments (options) used for the solving of the same case, treatments which have a different effect on the financial position and performances of the company, the freedom degrees allowed by accounting, the owner expectations to obtain more favourable dividends, the wish for fiscal optimization, manager expectations regarding the financial position and performance of the company.

H2: The managers' motivation for performance determines the qualitative level of the accounting information

The questions on the basis of which we shall test the validity of this research hypothesis are:

II.18. Do you think that bigger incentives offered to managers always contribute to the increase of company performance?

II.3. How do you evaluate the importance of the following qualitative characteristics of accounting information - Transparency, Intelligibility, Relevance, Credibility, Comparability, and Opportunity?

Manager motivation towards performance is evaluated based on the answers to question II.18.

Table2. **Manager opinion regarding the relationship between manager motivation and company performance**

Answer options	Absolute frequencies	Relative simple frequencies	Cumulative relative frequencies	Decreasing cumulative relative frequencies
Total disagreement	13	6.1%	6.10%	100 %
Disagreement	41	19.2%	25.30%	93.90%

Indifference	45	21%	46.30%	74.70%
Agreement	101	47.2%	93.50%	53.70%
Total agreement	14	6.5%	100 %	6.50%
Total	214	100 %	-	-

Looking at the table above we can conclude that the managers included in the sample group believe in their majority (53.7%) that manager motivation directly influences its performance, only 25.3 % believe that these do not have any effect on the performance of the managed entity.

According to the answers to question II. 3 *(How do you evaluate the importance of the following qualitative characteristics of accounting information - Transparency, Intelligibility, Relevance, Credibility, Comparability, and Opportunity?), almost half of the managers included in the sample group* believe that the most important characteristic of accounting information is credibility followed by transparency and intelligibility. The least appreciated quality is opportunity.

In order to test the existence of a correlation between the two variables we will use the Pearson Correlation Coefficient. This coefficient is parametric as it can be used only in the case of numerical variables. This is why we assigned importance scores to the different answer categories. Therefore, for the answers to question II.18 we

assigned points from 1 - for total disagreement to 5 – total agreement, also for the answers for question II.3 – points from 1 – for "unimportant" to 5 – "of utmost importance".

The distribution of scores for question II.18 and of average scores for II.3 are presented in the following correlation table:

Table 3. Distribution of scores for question II.18 and of average scores for question II.3

Answers II.3 / Answers ii.18	[3-3.5]	(3.5-4]	(4-4.5]	(4.5-5]	Total
1.00	1	3	3	6	13
2.00	3	14	8	16	41
3.00	9	16	7	13	45
4.00	14	45	26	16	101
500	4	3	2	5	14
Total	31	81	46	56	214

In order to measure the intensity of the connection between the two variables, we will determine the Pearson Correlation Coefficient.

Table 4. The Pearson Correlation Coefficient between the variables that indicate manager motivation and the importance attributed to the quality of accounting information.

		Motivarea managerilor	Importanţa atribuită calităţii informaţiilor contabile
Manager motivation	Pearson Correlation	1.000	-0.157[*]
	Sig. (2-tailed)	-	0.021
	N	214	214
Importance attributed to the quality of accounting information	Pearson Correlation	-0.157	1,000
	Sig. (2-tailed)	0.000	-
	N	214	214
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: drawn up by the author based on the answers to the questions and with the help of SPSS

In our case, we determined the value of this coefficient with the help of the v. 16 SPSS program, this being -0.157. As we can see in table 6.42, for a significance level different from 5% the value is significantly different from 0, which confirms the existence of a relationship between the two variables for both the sample group and the total population. Moreover, as the correlation coefficient is negative, the relationship between manager motivation towards performance and the qualitative level of the accounting information is a reversed one, and these affirmations are guaranteed with a probability of 95%.

In conclusion: The H2 Hypothesis: manager motivation towards performance determines the qualitative level of the accounting information is validated for both the sample group and the total population.

Recent research has begun to regard the value of having a board of directors or some very competent managers, or at least managers with ethics. Due to the crisis of credibility connected with the problems encountered by the companies Enron, WorldCom etc. and the responsibility that was enforced upon the boards of directors by the 2002 Sarbanes-Oxley law, more and more papers started to measure the impact on share prices for the companies whose management was rated as average or above average. Although the results cannot be yet empirically demonstrated, the high interest for company management indicates the fact that investors are beginning to be interested in ethics as a non-corporeal asset. The study recommended by Elitzur (2011) establishes that bounded rationality and the ethical compass play an important role in the manager decision. The study aims at answering the question: Why would managers engage in actions that could ruin their lives? One conclusion of the study is related to the fact that accounting manipulation can appear only in a world with managers who subscribe to different definitions of the word "ethics". We tend to agree, in the sense that managers have a greater or lower inclination to intercede with the authenticity of accounting information, also depending on their behaviour and ethical principles and values to which they comply in their private and professional lives.

H3: The managers' tendency to manipulate the accounting figures and to distort the true and fair view from the financial statements is influenced by their ethical behaviour.

As follows we will proceed to validate this hypothesis, starting from the answers given by the managers in our sample group to the questions:

II.16. Do you agree with the changing of the accounting policy which distorts the true image but that is favourable to the company image?

II.24. Does ethics constitute a priority in the process of management decision making?

We will proceed to validate the H2 hypothesis with the help of the χ^2 method. Table 5 presents the bidimensional distribution between the scores determined based on the answers regarding the two variables.

Table 5. Distribution of answers to the questions regarding the variables used in the validation of the H3 hypothesis

Do you agree with the changing of an accounting policy? / Is ethics a priority?	Total disagreement	Disagreement	Indifference	Agreement	Total agreement	Total
Total disagreement	0	2	3	0	1	6
Disagreement	0	1	0	2	0	3
Indifference	2	2	4	10	0	18
Agreement	4	31	18	71	4	128
Total agreement	5	7	12	32	3	59
Total	11	43	37	115	8	214

Source: drawn up by the author based on the answers from the questionnaires

The majority of managers in our sample group (187 out of 214, representing 87.38%) believe that ethics is a priority in decision making. The answers somehow contradict those given to the question regarding the changing of the accounting policy which distorts the true image, but which in favourable to the company image, as the majority of managers agree (57.47%). There should be a reversed correlation between the two variables. In order to be able to confirm this hypothesis we will codify the answers: we assign to the answers values from 1 to 5 – Total disagreement (1 point) to Total Agreement (5 points). The correlation coefficient obtained with the help of SPSS is 0.056, so the hypothesis of a reversed relationship at the sample group level is thus not confirmed. The value does not significantly differ from 0 in the total population either, the value being too close to 0 In conclusion the H3 research hypothesis: Manager tendency towards doctoring the accounting figures and distorting the true image from the financial situations is influenced by their ethical behaviour is not validated.

5.Conclusions

Our empirical research based on a survey among the romanian managers from Arad aimed to analyze their behavior regarding the usefulness of financial accounting information and to interpret the managers' tendency towards manipulation or strategic management of results. The questionnaires were posted on a website but some of them were applied directly in the field to ensure a response rate of at least 30%. Three research hypotheses were formulated in order to identify a possible tendency to resort to creative

accounting techniques to create a better image of the company, from which two were validated and one was rejected. As a result of hypotheses testing has found that for the county of Arad there is an increased interest of the managers to improve the quality of the financial accounting information; it is noticed their inclination to the manipulation of the accounting figures. Another conclusion is that most of the managers from the sample we analyzed believe that using ethics is a priority in taking decisions, even if 57,47% of theese would change an accounting policy that would affect the true image but would be favorable to the image of the company We believe that our research adds value to local specialized literature, considering the few studies that have been written on this area, but to validate the results, this research should be expanded. The reaction of managers concerning to our investigation was a positive one, beeing interested on the study results and on their interpretation. The limits of our approach are given by the size of the selected sample and also by the extension of the results to the level of the total population

As future research we intend to test the reaction of the professional accountants in our country regarding the phenomenon of creative accounting. In this view, we applied a survey to auditors in Arad county. Their answers will be analyzed in accordance to the most frequently encountered type of companies and creative accounting practices.

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FINANCIAL COMMUNICATION AND INTELLECTUAL CAPITAL REPORTING PRACTICES

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Abstract: *In a highly competitive economy, driven by globalization, the abundance of digital information and communication facilities, the investor directs its capital to those companies that promise added value of the invested capital. Even so, companies seek to obtain favorable terms of financing by rendering sensitive the investors. To achieve their goal, they must provide information about their financial and non financial performance with sufficient regularity to meet the information needs of actual or potential capital bidders in decision making. Financial communication through standardized annual statements of financial reporting in the context of corporate governance is no longer sufficient. The organization has more resources than those included in its balance sheet, capable of attracting huge benefits, but which do not meet the criteria for recognition in the financial statements. It requires, therefore, a voluntary disclosure of information on intangible resources, which are key factors in creating future value for both the organization itself and the industry it is part of. The reports of intellectual capital can effectively complement the shortcomings of the traditional model of accounting and financial reporting. In our paper we wanted to analyze financial communication in the context of corporate governance, presented through financial statements, reaching the intellectual capital reporting practices, as a means to improve communication of the organization with the outside. In this sense we presented two examples of good practice of two service companies (consultancy and design) that publish annually intellectual capital reports. To alleviate the negative consequences of non-recognition of intangible assets in the financial statements, we are for the voluntary disclosure of information on intangible assets in the intellectual capital reports, annual reports, those regarding corporate responsibility, or at least in the explanatory notes of the financial statements.*

Keywords: financial communication; corporate governance; stakeholders; intellectual capital reporting; good practices

JEL classification: M14, D83, M41

1. Introduction

The access to information has become, more than ever, extremely easy. Modern means of manipulating the information enable anyone interested in almost any place they are, to collect and store a huge amount of information in any field. *Information* is everywhere in the form of news, a piece of news, a message, a product of intelligent knowledge

(Horomnea, 2008: 150), resulting from any field of knowledge and is likely to bring knowledge.

Today, the need to meet quickly and at the highest level of consumer needs is increasingly obvious, without much effort and with the lowest costs. In this way, information is first "raw material" for the decider and then "wire tie" in the economic process of an entity, being essential in every phase of business management in order to always keep an eye on the conduct of economic processes on which it can and must act effectively (Tabără and Briciu, 2012: 11).

Based on information provided by the economic information system, the decision makers can know the results, the factors acting on their training and can make strategic decisions to correct any weaknesses, and also improvement, adjustment and recovery measures of business activity. The results of the analysis process depend on the quality, quantity, timeliness and accuracy of information used.

Therefore, at the organization level, there are continuously repetitive inputs and outputs of information. The complex process of reception, storage, processing and dissemination generates a continuous flow of knowledge incorporated in the products and services resulted. According to Brătianu (2006) each product is composed of material substance, energy and knowledge, regardless of its utility and nature. Instead, intangible products and services only contain energy and knowledge. There remain, however, knowledge within the organization, among the employees, internal processes, management activity, the relation with the outside and others, which give the company a competitive advantage. The prowess that makes the organization manage these intangible resources and thereby create value for the interested parties, creates the premise of sustainable development into a new knowledge-based economy.

The employee skills, creativity, talent, leadership skills, customer relationships, patents, processes, technologies are intangible elements, unique and difficult to replicate, not recognized in the financial statements, but which can create tremendous value for the organization. With a volatile and difficult to control character, they miss accounting measurement and reporting in a unitary manner. The traditional accounting model fails to cope with the changes in the new economy and that is why the financial reports lose their relevance. Thus, the annual reports rich in non-financial information (besides financial ones), and other specific reports dedicated to the public get increasingly more and more interest.

Therefore, some companies publish reports of intellectual capital, in addition to annual reports, in order to reveal the skills to capture and manipulate these intangible values and to monitor and compare the overall performance in time.

Based on financial communication, this paper aims to show that in terms of corporate governance, financial statements which currently do not include all the items of intellectual capital, should be accompanied by specific intellectual capital reports, thereby the organization showing the transparency and disclosure of relevant information to all the interested parties.

Structured in accordance with the objective set, after the introductory section, the financial communication in the context of corporate governance occupies the next place, followed by financial communication through annual financial reporting statements. The last two sections, except for the one on conclusions, are dedicated to intellectual capital. They include aspects of intellectual capital reporting at two models of good practice in terms of its reporting of two corporations in the field of services: consulting and design.

2. Financial communication in the context of corporate governance

Corporate governance is a new concept and still widely debated in the international economic environment. Infiltrated in most areas of activity, from public, from public

organizations to private ones, of national interest or in the field of trade, the concept is very broad. In short, corporate governance is a system by which a company is managed and controlled (Bogdan et al., 2011: 371).

Governance has emerged among large Western corporations, with subsidiaries worldwide, that have a formed a democratic culture, that focused on creativity, research, innovation, uniqueness. With special attention to the human resource, governance aims to reconcile coherence, unity and diversity, assuming participation, equality of chances, mutual respect, communication, transparency (Tabără and Briciu, 2012: 347-348).

Ghiţă et al. (2009: 15) defines corporate governance as the overall management of the entire organization by accepting all internal components, which operate together, which ultimately will be integrated within the management.

According to the International Federation of Accounts (in Bogdan et al., 2011: 376) corporate governance is a complex of practices of the Board of Directors and executive management, implemented in order to develop strategic directions for action, the achievement of goals, effective management of risk and responsible exploitation of financial resources.

The followers of corporate governance, professors Niculae and Liliana Feleagă (2006) identified five main elements with which it is claimed that the governance system of an enterprise is supported with. These elements are: informing the shareholders on the management structure; the rights and obligations of shareholders; the composition, election and remuneration of the board members; the absence of anti-takeover bids and the remuneration of managers. For the remuneration of managers it is going mainly on the idea of giving them the opportunity to purchase shares in the future at very competitive costs. Therefore, the leaders are encouraged to participate as much as possible in the increase of the value of the entity's shares, this being the main objective of the shareholders.

To stay in competition a business is conditioned, according to the Organisation for Economic Cooperation and Development - OECD (2004), by the possibility of innovation and adaptation of corporate governance practices that lead to the satisfaction at the highest level of demand for new information.

To facilitate financial communication, the Implementation Guide of Corporate Governance Code, published in March 2010 on the site of Bucharest Stock Exchange, stipulates that all companies need to create and develop an appropriate *policy* for promoting *effective communication* with shareholders. This could be achieved by ensuring equitable treatment to all shareholders, by distributing relevant information, by encouraging their participation at general meetings, by providing the right framework in which they can express their views and exercise their right to vote. It is recommended also to communicate with the shareholders by electronic means and in this respect the creation of its own website to ensure the provision of complex data and information useful to shareholders.

Financial communication should be a primary goal for organizations. Under the pressure from various players of economic life, the organizations committed to informing policies to meet the needs of more demanding users. In addition to the financial statements, it appears that annual and interim reports come with an offer increasingly rich in information. The presentation of the main control bodies of the organization, the capital structure, the audit committee, the creation of a report management, along with other information provided in the annual reports, could meet the needs in terms of governance. (Feleagă and Feleagă, 2006)

3. Financial communication through annual statements of financial reporting

Basically, when we talk about financial communication through financial reports we refer to the firm's annual financial statements, which allow a wide range of users to receive and analyze certain information about the company. Some of them, such as managers and some regulatory agencies, are privileged in terms of access to information because they can consult specialized financial reports in their specific areas of interest. For other users, the collection of information and decision making is based on general financial reports, which are published periodically. From this point of view, there is an asymmetric spreading of information that relates to the fact that a part of economic agents in the market have more information than the other part. For example: the chairman of the board knows more about the company's profitability than the shareholders (Rogojeanu, 2003).

The users of accounting information contained in the financial statements, that are interested in the *future ability of the entity to obtain profit* are current and potential investors. For them, information is more effective if it allows them to forecast as accurate as possible the *future dividends and the changes in the market price of the company's stock* (Moscviciov, 2011: 48). The dividends and prices are largely influenced by *profit*, therefore the investors will seek to forecast these results. The profit and loss account only reflects the previous results, but it represents the starting point of the forecast of future earnings.

But here arises a conflict, called *agency conflict* in the literature, a concept approached through the agency theory, one of the *economic theories underlying the financial information disclosure* like the information asymmetry theory. The *agency theory* assumes that the agent, the manager, respectively, acts on behalf of the principal's account, that is the shareholder, the two players not necessarily having the same objectives (Bogdan et al., 2011: 377). For example, the managers have a long-term vision, unlike the shareholders who aim at short-term company performance. With a management mandate from shareholders, the managers would need to be concerned with maximizing their profits, but if they let themselves led by their own interests, their aim will be the maximization of their benefits. The theory seeks to identify the main issues that may arise between the owners of an entity and the managers and demonstrate the need to monitor the managers, the shareholders being willing to incur monitoring costs (agency costs) to be able to control the stakeholders.

The interest in the financial position, the performance and achievement of the organization's objectives is shown by a wide range of users, beyond the managers and shareholders. There are a number of users interested in its status and evolution, which is called stakeholders in the literature. According to Freeman (2010: 46) the stakeholder can be defined as "any group or individual who affects or is affected by the achievement of the organizational objectives." Therefore, companies have the social responsibility to protect the interests of the stakeholders, such as: employees, creditors, suppliers, customers, local community and the public, which is more than the interests of shareholders. The author has also developed the stakeholder theory that the success of the organization depends on the relations that it has with the stakeholders (Bogdan et al., 2011: 383). Viewed from the perspective of corporate governance, this theory leads to the expansion of the organization's accountability from the responsibility manifested to stakeholders to the responsibility to the whole society.

The objective of financial reports and their analyzes is to provide information about the financial position, performance, their changes and possible risks, information that is useful in decision making (see Fig. 1). According to experts in financial accounting, the profit and loss account provides information about the past performance of the company and the balance sheet informs us about the current financial position. Therefore, the results reflect the consequences of previous management decisions.

The less inspired decisions are reflected in financial statements (prepared according to the principle of true image) which give negative news with an unfavorable impact on the share price and on human resources. Therefore, there are sometimes managers who tend to try to avoid the publication of negative results on performance. Brown and Pinello (2007) believe that the publication of financial results, especially of financial performance, performed regularly has a positive impact on the public and especially on the investors. In the context of communication, financial reporting can be addressed schematically as follows:
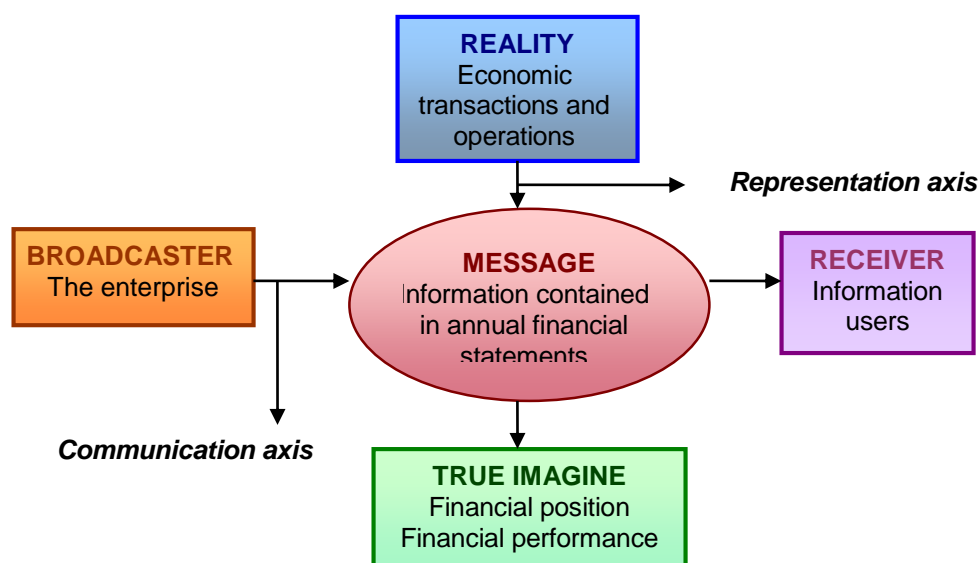
Figure 1: Financial communication approach

Sursa: adapted from Minu, M. (2002) "Contabilitatea ca instrument de putere", Editura Economică, Bucureşti, p. 106

In an environment of growing competition, companies are competing to address communication in a transparent manner. Currently, financial communication is accompanied by a non-financial communication, in order to give all the necessary information to a decision maker. For example, the Danish group Ramboll publishes each year a report on corporate responsibility (which comprised 36 pages in 2013), separate from the annual report, that presents issues concerning commitments, action levers, aspirations, involvement in the community, the projects developed and elements of governance, system management, social and environmental responsibility (employee satisfaction, their distribution by gender, age, number of licensed experts, certificates on environmental management system, CO2 emissions and others). The company has found solutions to calculate various indicators of non-financial nature, tracking their progress from year to year and establishing systematic improvement measures.

4. Intellectual capital reporting practices

Specialists in economics, management, and accounting are much concerned with the definition of intellectual capital, its measurement and reporting. Holt and Holt (2010) consider that intellectual capital comprises four categories of intangible assets: market assets, infrastructure assets, intellectual property assets and human values assets. For Precob (2014) intellectual capital is a complex concept, consisting of intangible assets included in the balance sheet of the company and *other elements* present in the social

reports or the annual ones and which did not meet the criteria for recognition in the financial statements, but bring added value to the company.

Constrained by factors such as cost control and feasible determination of cost, most of the elements of intangible capital do not appear in the financial statements and their measurement is difficult. There is a variety of measurement methods that Sveiby (2001) has grouped into four categories: methods based on asset efficiency, market capitalization-based methods, methods of direct measurement of intellectual capital and Scorecard-based methods, but none has been adopted and implemented in a unified regulatory framework.

In spite of all these, the authors Dumay and Rooney contradict the assertion that "what cannot be measured cannot be managed." They present the case of an international leader in the public sector who gains recognition from the market for its practice of disclosing relevant information on intellectual capital, without a concrete system to measure it, because of the impossibility of developing a set of indicators which could allow it to measure the performance. A qualitative communication of the impact of the intellectual capital makes the reporting possible, even without the existence of the indicators meant to measure it.

In this respect, the authors Tabără and Briciu (2012) find it necessary that the companies develop an extra-financial dashboard to obtain an overall view of its sustainable economic performance. Going into detail, they even suggest a scoreboard on human capital, considering the complete picture of this resource as necessary. Through his empirical study, Burja (2012) demonstrates the close link between the company performance, expressed by the net income and the quality of human capital, synthesized in labor productivity. The human factor is a precious resource that creates value and provides competitiveness.

Other researchers support the importance of intellectual capital in monetary expression, for its good comparison and computation. Pyis (in Morariu in Albu et al. Volume, 2012) suggests a possible form of balance sheet through which the intellectual capital is expressed similarly to financial assets. Yet, he admits its impediment for current accounting is past-oriented, while for accounting the intellectual capital a future-oriented approach is needed. The author also warns on the avoidance of double-entry accounting.

In a very pragmatic view, Morariu in his work "Addressing the concept of capital from the accounting perspective" (2012) anchors the issue of intellectual capital reporting in the federal principle of faithful image and hence that of economic prevalence over legal. The position taken is to recognize and account the intellectual capital in the financial statements, as follows: on the one hand, intellectual capital in asset in return for an unfulfilled reserve at the time of recognition, which will be performed during the consumption of economic benefits.

For the recognition, the solution is that the asset has to meet two criteria: control and feasible measure. Regarding the control, the author invokes the principle of economic over legal, and regarding the measurement, company must use the reasoning behind the determination of the opportunity cost, of the cost benefit ratio, combined with the reasoning behind the decision-making process, when outsourcing or not the departments or the processes.

As suggested in Petty et al. (2009), the lack of a well-established methodology regarding the disclosure of knowledge based assets, the difficulties in effectively capturing their value and the confidence in the knowledge assets components are the main obstacles standing in the way of the organizations wishing to adopt the practice of intellectual capital reporting. The author considers that due to the obstructions like these, it remains questionable to what extent companies will consider reasonable the ratio of the effort to provide data about intellectual capital and the gain obtained from this procedure. The model of Mouritsen et al. (2004) who presented the example of the company's intellectual

capital reporting of Maxon Telecom, in the following we present two examples of good practice in terms of reporting it, to two companies in the field of services: consultancy and design.

5. Good practices on intellectual capital reporting

At the end of this brief conceptual analysis of information communication, we plan to introduce the practice of two international companies with experience in intellectual capital reporting.

According to the official website, Ramboll (the organization mentioned above) is a leading company in engineering, design and consultancy. Founded in 1945 in Denmark, today it has 10,000 experts employed in 200 offices in 21 countries of Northern Europe, India and Middle East.

With an overall view of all resources and processes employed to achieve performance, the company has developed its own holistic model (Holistic Enterprise model) upon which the management, the development, operation and reporting are based.
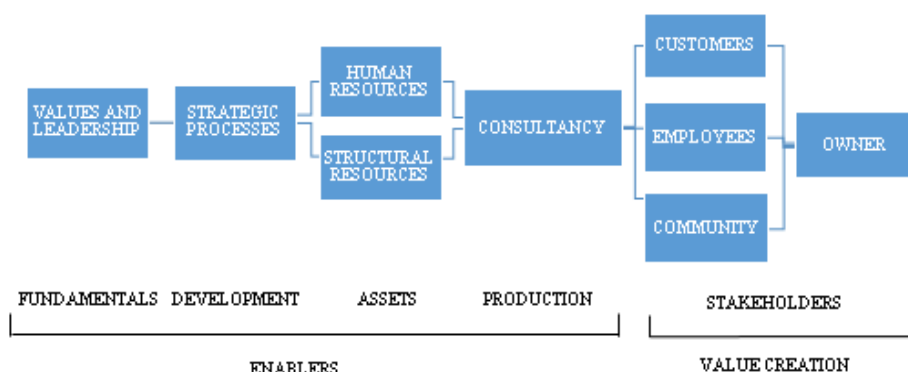
Figura 2: Ramboll's reporting model
Sursa: Ramboll Group "Holistic Enterprise Model", [online], available:

http://www.ramboll.com/about-us/responsible-and-holistic/holisticenterprisemodel,

[28.02.2014]

Similar to Nordic reporting models, the Ramboll model includes 5 spheres of action, essential conditions for obtaining the 4 sets of results. In order to create value for all its stakeholders (customers, employees, the public and owners), as final result of the actions of the organization, it is concerned with the continuous development and anchor in values and leadership skills as fundamental resources. The continuously evolving strategic processes combined with human and structural resources (which, as shown in Fig. 2, in the company's vision are asset elements), are harmoniously combined within the organization to achieve its products – consultancy services. The declared preoccupation of those at Ramboll is to be attractive for the best people who are willing to share their knowledge effectively, in order to provide the best consultancy services to customers.

The Ramboll model is a model that specifically expresses the connection between the intellectual capital, the corporate responsibility towards stakeholders and the overall performance of the organization.

Bewater Studio Ltd. is a Hong Kong-based design studio dedicated in creating fresh and ground-breaking products. Although founded relatively recently (2006), the members of the company were quick to understand the need for information of the stakeholders on management and organizational performance. Thus, the company, in addition to annual reports and periodic reports publish intellectual capital reports with the declared intention to make clear statements about its business skills and create its own assessment and improvement framework. The stakeholders and their expectations, the intellectual capital, the risk analysis and reduction are the main chapters of the first report on the intellectual capital of Bewater Studio Ltd., prepared for 2010-2011.
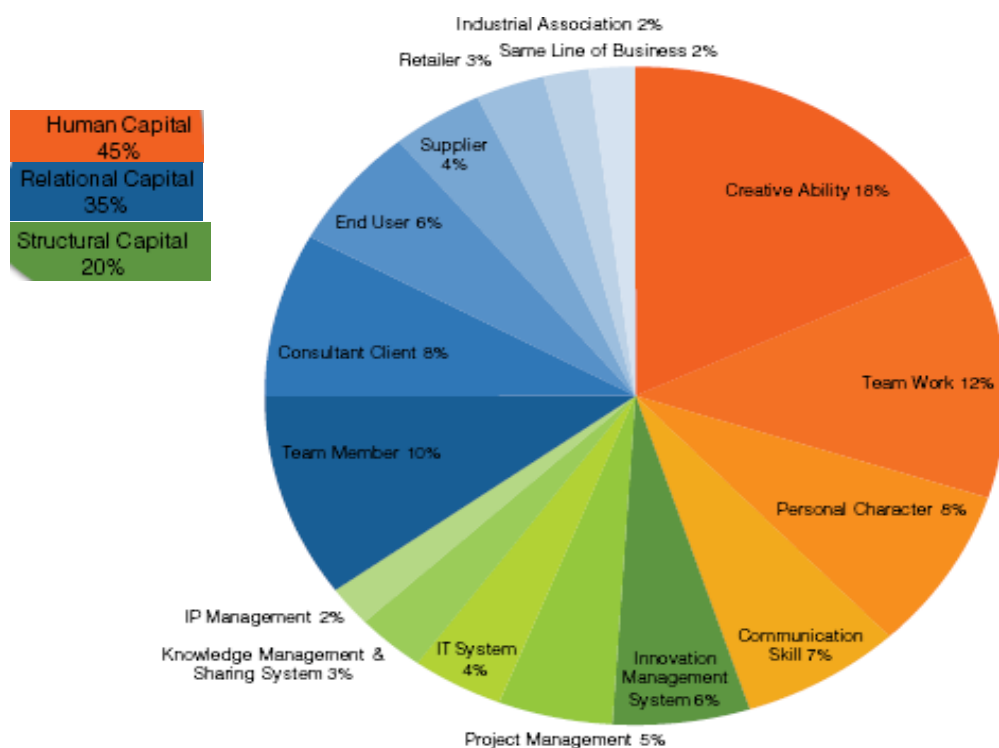
Figure 3: Modul de raportate al companiei Bewater Studio Ltd.
Source: Bewater Studio Ltd. "Intellectual capital report, 2010-2011", [online], available: http://www.ipd.gov.hk/eng/ICM/company2010/Bewater.pdf, [28.02.2014]

Leaning mainly on our intellectual capital components in the report (Fig. 3), we can see that nearly half of the share of intellectual capital of the company belongs to the human capital. Creativity is considered the main human value, combined with personal character, teamwork and communication skills. Within the organization, the leader can be the most experienced member, but the responsibility for all is the same. In the organization, each member has its role, but it can be substituted for another when needed. The communication from the inside, and with the outside, too, is important for members. In

this respect, they say: "We are well prepared to turn ideas into innovative products," and their main character is flexibility (Bewater Studio Ltd.).

With a share of 35% of the whole intellectual capital, the relational capital is assessed by indicators included in the figure above. The specifics of the company (design services) make innovation occur daily. The exchange of ideas at the end of each project is done by brainstorming; in this way the prerequisites for new concepts are ensured. The company has registered its own brand "bewater" and continues to patent some of its products. The brand development is a goal in the future.

As a company with few employees, there is, between them, a relationship of friendship, more than the boss-employee. Some decisions are made with the whole team. The relationship with the consultant customers is as important as the one with the employees, the approach being one based on the individual and with a particular focus on the end user of the products designed. The relational capital represents 20% of the intellectual capital.

Without bringing details of the model used to measure the intellectual capital, the company is not afraid to make publicly available reports in this area.

6. Conclusions, limitations and further research
The reasons for choosing this research theme lies in our interest in the accounting and financial reporting in a knowledge based economy and the discovery of key vulnerabilities and weak points of the classical, traditional accounting and financial reporting.

As we have seen above, some categories of assets are very difficult to capture in accounting, to measure and quantify their contribution to the creation of added value. Therefore, accounting and financial reporting are now facing new challenges regarding the recognizing of accounting and reporting of these asset classes as vulnerable and sensitive to quantify as valuable.

From the analysis of the two companies, we found that the intellectual capital reports often represent for them a way to communicate to the public their knowledge based strategy and an internal management tool.

To alleviate the negative consequences of non-recognition of intangible assets in the financial statements, we are in favour of the voluntary disclosure of information on intangible assets in the intellectual capital reports, annual reports, those on corporate responsibility, or even those on the explanatory notes of the financial statements.

The explanatory notes of the financial statements we consider to be a good opportunity for disclosure of intellectual capital in a qualitative manner, and also quantitatively, through metrics identified, until a unanimous settlement of this issue.

A greater recognition, measurement, reporting and management of intangible assets can lead to significant improvements in performance. This hypothesis will be the subject of our future research.

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TRADITIONAL BUDGETING VERSUS BEYOND BUDGETING: A LITERATURE REVIEW

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Abstract: *Budgets are an important part of the business environment since 1920 and are considered to be the key drivers and evaluators of managerial performance; and the key elements for planning and control. Budgets are the most powerful tool for management control; they can play an essential role in the organization's power politics because it can increase the power and authority of top management and limit the autonomy of lower-level managers. Besides its advantages traditional budgeting presents disadvantages also. In recent years criticism towards traditional budgeting has increased. The basis of this criticism is that traditional budgeting is a relic of the past; it prevents reactions to changes in the market, it cannot keep up with the changes and requirements of today's business world and it isn't useful for business management. In order to eliminate criticism researchers and practitioners have developed more systematic and alternative concepts of budgeting that suits better for the needs of the modern business environment. Beyond budgeting, better budgeting, rolling forecasts, activity-based budgeting are the main alternatives developed in the last years. From the mentioned alternatives this article examines only beyond budgeting. Our paper discusses how budgeting has evolved into its current state, before examining why this universal technique has come under such heavy criticism of late. The paper is a literature analysis, it contributes to the existing managerial accounting literature and it is structured as follows. In the first part the background and evolution of budgeting is presented, followed by the analysis of related theories in traditional budgeting, emphasizing both the advantages and disadvantages of traditional budgeting. The second part of the paper continues with the discussion about alternative budgeting methods highlighting pros and cons of alternative methods, especially beyond budgeting. In the third part conducted surveys and studies are analyzed in order to establish whether traditional or alternative budgeting methods are better and have a positive impact on businesses; or which has more practical usefulness. The final part provides conclusions and discussions for future research.*

Keywords: budgeting, traditional budgeting methods, beyond budgeting.

JEL classification: M41, M19

1. Introduction

Budgets were born in the 1920s in order to help managers control costs and cash flows. By the 1960s, they had become fixed performance contracts between company superiors and subordinates. They were primarily concerned with estimating future income and expenditures and in time became the key drivers and evaluators of managerial performance (CIMA, 2007; Goode and Malik, 2011). Furthermore, budgets are considered

to be key elements for a company's planning and control; and they are used to help implement companies' strategies (Rickards, 2006). Every company has plans and objectives derived from the company's long-term strategy. The purpose of budgeting is to give those targets and plans financial values, making the progress easily measurable and to transform the strategic ideas into understandable operative actions (Hanninen, 2013). In time, drawbacks of traditional budgeting have been identified. Traditional budgeting methods are time consuming and costly; rarely focus on strategy and are often contradictory; add little value; focus on cost reduction rather than value creation; strengthen vertical command and control. Although traditional budgets have evolved over the years it is considered that they couldn't face the changes in the economic and business environment, they must be reshaped; alternative budgeting methods must be created.

Beyond Budgeting has been proposed as an influential idea that will reinvigorate management accounting contribution in business operation and performance (Goode and Malik, 2011). Hope and Fraser (2003) consider that the budgeting system should be eradicated because the environment is now so complex and competitive that budgeting in its existing form is no longer useful for businesses. Dissatisfaction with traditional budgets is growing in the business world and beyond budgeting has been suggested as a method to reinvigorate the managerial contribution of management accounting.

This article discusses how budgeting has evolved into its current state, before examining why this universal technique has come under such heavy criticism of late. The paper is a literature analysis, it contributes to the existing managerial accounting literature and it is structured as follows. In the first part the background and evolution of budgeting is presented, followed by the analysis of related theories in traditional budgeting, emphasizing both the advantages and disadvantages of traditional budgeting. The second part of the paper continues with the discussion about alternative budgeting methods highlighting pros and cons of alternative methods, especially beyond budgeting. In the third part conducted surveys and studies are analyzed in order to establish whether traditional or alternative budgeting methods are better and have a positive impact on businesses; which have more practical usefulness. The final part provides conclusions and discussions for future research.

2. Research methodology

According to Lukka and Mouritsen (2002) in order to create good research in the field of managerial accounting, in order to generate good and relevant knowledge there is a need for theory, testing and rigour. In this article we focus on theory. Our intention is to lecture in the field of managerial accounting, to understand the concept of budgeting, to present both traditional and alternative budgeting methods in order to address further research questions.

This paper is a result of literature analysis, it is a literature review. Researchers (Webster and Watson, 2002; Onwuegbuzie, Leech and Collins, 2012) consider that literature review represents the most important step of the research process in qualitative, quantitative and mixed research studies. Moreover, they consider that a sophisticated literature review is the foundation and inspiration for substantial and useful research. Literature review allows gathering information from a broad range of sources; permits surveying the state of knowledge on a particular topic; examining what has been undertaken and what needs to be undertaken; permits identifying relationships between theories, concepts and practice; identifying the main research methodologies that have been used; identifying strengths and weaknesses of the various research approaches that have been used by other researchers (Onwuegbuzie, Leech and Collins, 2012).

We intend to synthesize the existing literature on budgeting; to pay special attention to traditional and alternative budgeting methods presenting both its advantages and disadvantages; to interpret and connect our findings with their practical usefulness. In this process we use grounded theory and comparative analysis.

3. The background of traditional budgeting

Budgeting is considered to be one of the most important, successful and useful tool or technique used in managerial accounting (Pietrzak, 2013). Nowadays almost every organization relies heavily on budgets and budgetary systems to achieve strategic goals and it can reap handsome rewards if they are properly understood and implemented (Raghunandan, Ramgulam and Raghunandan-Mohammed, 2012).

According to the literature (Campbell, 1985; Horngren, Datar and Rajan, 2012) a traditional budget is a quantitative expression of a proposed plan of action by management for a specified period and an aid to coordinate what needs to be done to complement that plan. Its main purpose is the achievement of objectives and direct managerial effort through planning, coordinating, measuring and rewarding. The budget serves as a financial plan in support of a specified target. Moreover, the process of budgeting implies setting strategic goals and objectives and developing forecasts for revenues, costs, production, cash flows and other important factors. Horvath and Sauter (2004) considers that the corporate budget was designed to serve three main purposes: (1) coordinate the organization's financial activities and picture; (2) communicate financial expectations and (3) motivate managers to act in the company's interest.

In achieving the main objectives and purposes Raghunandan, Ramgulam and Raghunandan-Mohammed (2012) considers that in the budgeting process there are both technical and behavioural aspects that must be taken in consideration. The recognition of both technical and behavioural aspects of budgeting is essential if goals and objectives ate to be achieved. While the technical component of budgeting refers to mathematical calculations of projected costs and expenses, the behavioural component focuses on the ability to achieve the technical aspect of budgeting with the use of people. The behavioural and social aspects of budgeting are an integral part of the budgeting process and should not be separated from the technical side. The management style, culture and attitude towards employees will determine the approach to budgeting within each organization.

In general, the budgeting process is a "back-and-forth movement between top and lower management" (Hanninen, 2013:18). Based on this there are three main approaches (Raghunandan, Ramgulam and Raghunandan-Mohammed, 2012) that can be employed when developing budgets: (1) top-down approach or imposed budget – where top management decides on the budget and lower level management is responsible for the execution; (2) bottom-up approach or participative budget – where the lower level management creates their own budget and all various sub-unit budgets are then consolidated to corporate level; (3) negotiated budget – adopts both the imposed and participative styles of budgeting and creates an environment where everybody is responsible for the prepared budget. While the imposed budget assumes an autocratic style of leadership, the participative budget is supportive of the democratic style of leadership. All in all the approach chosen when budgeting depends on the leadership style and the nature of every organization. Moreover, active participation of managers and employees to the budgeting process is essential, commitment is vital to the effectiveness of the process.

Budgets represents formalized plans of management's objectives, they serve as a guide in the implementation of the established strategies. Usually the approaches of traditional budgeting are numerous especially because there are no regulations stipulating how and which form of the budget should be used or applied. Still, there are some influencing factors that must be taken into account like organizational structure, the nature and

complexity of internal operations, the management philosophy (Hanninen, 2013). The most common budgeting method is to use previous year's figures adjusted to the new year with the management's assumptions and goals. This method suits better for companies whose operations are relatively stable. Nevertheless, this method is considered to be the worst possible method because budget figures are forced to fit the overall objectives of the company (Bunce, Fraser and Woodcock, 1995).

Zero-based budgeting (ZBB) is a better solution for history based budgeting. ZBB does not start from the previous year's budget level; the budgeting process starts from zero. The existing operations and managerial activities are properly identified and evaluated; the operation and activities must be justified on the basis of its usefulness and its need to the company. This budgeting process requires the managers to have an updated view of their plans and consider the most suitable method to achieve their objectives. Usually this process is not an easy one, it requires an in-depth analysis of the company's operation. That is why ZBB is not a very effective budgeting method.

In all cases the connection between budgeting and strategy is essential. If the budget is not linked with the strategy the budgeted objectives may be distorted, the operation might evolve to wrong direction.

The budgeting process, the traditional budgeting methods presents both advantages and disadvantages. The main advantages of traditional budgeting are planning, control and performance management.

According to Hanninen (2013) the budget is the most powerful tool for management control. It can play an essential role in the organization's power politics because it can increase the power and authority of top management and limit the autonomy of lower-level managers. Moreover, management control can't exist without budgetary control. Control starts by following the results closely; then the differences between budget and the actual figures are analysed. The comparison should help managers to understand the current situation and to decide what to do in the future, whether to keep the current direction or try to change the course. Through control managers are kept focus on the key issues of the company's actions and objectives.

Another major advantage of budgeting is that budgets can also be used to support performance management. If the budget has been properly prepared it gives the management detailed information about the next fiscal year; it gives the possibility to set objectives easier; becomes an important tool is the decision making process.

Besides its advantages traditional budgeting presents disadvantages also. In recent years the criticism towards traditional budgeting has increased. The basis of this criticism is that traditional budgeting is a relic of the past (Hanninen, 2013); it prevents reactions to changes in the market, it cannot keep up with the changes and requirements of today's business world and it isn't useful for business management (Neely, Sutcliff and Heyns, 2001; Hansen, Otley and Van Der Stede, 2003; Horvath and Sauter, 2004; Pietrzak, 2013; Zeller and Metzger, 2013).

In 2001 Neely, Sutcliff and Heyns presented the most cited weaknesses of traditional budgeting. They identified the following disadvantages: budgets are time consuming and costly to put together; budgets are rarely strategically focused and often contradictory; they add little value, concentrate on cost reduction and not value creation; they are developed and updated infrequently, usually annually; budgets are based on unsupported assumptions and guess-work; they strengthen vertical command and control; reinforce departmental barriers rather than encourage knowledge sharing and makes people feel under-valued. Similar ideas were found by Higgins (2005) and by Libby and Lindsay (2010). In their research they found out that traditional budgeting is time consuming and costly; it detects problems slowly and quickly becomes out of date; it does not reflect the strategy; leads to unreliable performance evaluation and promotes budget garning.

The presented problems of traditional budgeting were summed up by Hansen (2003) to three categories: time, process and people related. Hansen (2003) considers that the time related issue is the most problematic disadvantage because budgeting is a long and heavy process, usually it takes four or five months to make it, and it takes up to 30% of a managers' time which can be very costly. Considering the used resources it adds only a little value to the company. Moreover, people related aspects can be problematic also. Budgeting creates dysfunctional behaviour, complicates cooperation within the organization when it is used for performance measurement and personal target setting, when objectives and goals are set too low or to high.

To eliminate the criticism and disadvantages of traditional budgeting researchers (Pietrzak, 2013) consider that there is a need for alternative solutions and budgeting methods designed to adapt to the new environmental conditions, market developments, technical progress, growing competition, customer orientation.

4. Alternative budgeting methods – beyond budgeting

Over the years it has claimed that traditional budgeting has lost relevance with the modern business environment and is no longer satisfying the needs of managers (Rickards, 2006; Goode and Malik, 2011). As a response to that researchers and practitioners have developed alternative budgeting methods that suits better for the needs of the modern business world. Beyond budgeting, better budgeting, rolling forecasts, activity-based budgeting are the main alternatives developed in the last few years.

Beyond budgeting (BB) has been proposed an influential idea that will reinvigorate managerial accounting contribution in business operation and performance. The name – beyond budgeting – is misleading. The purpose is not to get rid of budgets. The purpose is to create more agile and human organizations. This requires significant changes in the existing management models; reconsideration of the existing budgeting processes and the budgeting mind set.

The beyond budgeting concept is attributed to Jeremy Hope and Robin Fraser. They are considered to be the parents of both beyond budgeting and the Beyond Budgeting Round Table (BBRT). The BBRT was set up in the late 1997 in response to growing dissatisfaction, indeed frustration, with traditional budgeting. BBRT is a member-based network of organizations focused on improving planning, forecasting and control, and ultimately overall performance. Although the BBRT's origins are in the United Kingdom, members have joined from many countries, such as France, Germany, Belgium, Holland, Norway, South Africa, Sweden, Switzerland and the United States. BBRT helps organizations implement global best practices in planning and control; disseminates front - line implementation experience and identifies the keys to success; continuously improves adaptive planning and control to increase profit.

Beyond budgeting is a set of guiding principles that, if followed, will enable an organization to manage its performance and decentralize its decision making process without the need for traditional budgets. Its purpose is to enable the organization to meet the success factors of the information economy. BB is a specific idea which regards the abolition of the traditional budget process as the trigger for improving management control within organizations by a fundamental re-examination of how they might be managed better (CIMA, 2007).

Hope (2003) considers that compared with the traditional budgeting beyond budgeting has two fundamental differences. First, it is a more adaptive way of managing. In place of fixed annual plans and budgets that tie managers to predetermined actions, targets are reviewed regularly and based on stretch goals linked to performance against world-class benchmarks, peers, competitors and prior periods. Second, BB enables a more decentralized way of managing. In place of the traditional hierarchy and centralized

leadership, it enables decision-making and performance accountability to be devolved to line managers and creates a self-managed working environment and a culture of personal responsibility. This leads to increased motivation, higher productivity and better customer service. Individually these two main features can produce significant benefits, but it is in their combination where its real strength lies.

Hansen (2011) shares similar ideas. He believes that the transition to beyond budgeting is a two-phased process. The first step is to replace traditional budgeting with the beyond budgeting concept. The second step is to decentralize the whole organization and increase the independence of lower level managers.

In order to abolish traditional budgeting changes in the internal processes; various principals for reforming companies planning and control systems are needed. This changes and leadership principles can be summed up to six points (Rickards, 2006; Hanninen, 2013). These points are: target setting; rewarding people; action planning; managing resources; coordinating actions; measuring and controlling performance. In BB targets are no longer set as fixed financial figures; they are based on high level key performance indicators, which usually are both financial and non-financial targets. Goals are set to maximize short and medium term potential, objectives are not annual, they might have different time periods. All this enables the target setting to be much faster. Performance measurement and rewards are major issues in beyond budgeting. In BB rewards are based on relative performance not fixed annual targets, in this way the best performers are recognized and rewarded. Under BB action planning is changing. Managers are not trying to achieve fixed objectives but they are responsible to take actions in order to maximize customer and shareholder value; they can delegate responsibility for strategy review to business units or front line teams. In this way teams can create value, they can respond to changes and can anticipate business threats and opportunities. Moreover, resource management is better; managers could decide which operational resources are needed in the internal processes; they keep control on expenses because the coordination of activities is based on current market demand. Finally, under BB performance management and control supposes a greater focus on trends and forecast. In order to have a better view of the future rolling forecasting is used to give a clear picture of the key indicators used (Hope and Fraser, 2003; CIMA, 2007).

All in all, to a successful implementation there must be a governance framework with clear priorities and boundaries in every organization. Moreover, managers should consider carefully the degree of decentralization; they must give freedom to front line teams to take decisions within agreed parameters. And last but not least, there is a need for trust and openness, collaboration and communication at all levels of the organization (Hope and Fraser, 2003; CIMA, 2007).

As we can see beyond budgeting appears to have many advantages over traditional systems but it is not without criticism of its own. According to CIMA (2007) having no budget creates various problems. A business will have no framework for planning, coordinating and controlling its activities. The business can lose direction without detailed plans of its current position and future goals. Moreover, a drastic culture change can leave employees feeling disillusion and the decentralized structure may be impractical for some organizations (Goode and Malik, 2011).

5. Traditional budgeting versus beyond budgeting: what does the practice say?

Budgeting was an interesting topic among researchers and practitioners. Over the years studies were made in order to decide whether traditional or alternative budgeting methods are better and have a positive impact on businesses.

Although traditional budgeting has met intense criticism it still is universally used, it seems that most companies do not have plans of abandoning it. The literature (Hansen, Otley

and Van Der Stedel, 2003) considers that that the dissatisfaction with budgeting in practice is occurring on two fronts: those that wish to abandon traditional budgeting and those that wish to improve it. Budgets are used for planning, coordination and evaluation of activities, motivation and evaluation of staff performance, for supporting the internal control system of organizations. The percentage of companies that use it is very high, around 90% in developed countries and developing countries (Goode and Malik, 2011; Pietrzak, 2013).

In 2006 Dugdale and Lyne surveyed financial and non-financial managers in 40 UK companies and found out that budgeting is alive and well. The majority of surveyed managers confirmed the importance of budgets, they admitted that budgets are used for planning, control, performance measurement, coordination and communication. Moreover, the managers disagreed that budgets led to dysfunctional behaviour or provides little or no value. Indeed, more than half of the respondents reported some form of change in the past years but these changes didn't decline in importance the traditional budgeting methods; didn't led to beyond budgeting. In fact, respondents reported more sophisticated traditional budgeting and tighter financial controls.

Libby and Lindsay (2010) conducted a study among managers working in medium to large-sized organization, members of CMA Canada and IMA (Institute of Management Accounting) in USA. The majority of responding organizations were from the manufacturing sector, followed by the service sector. But stand-alone companies or divisions of larger companies were both represented in the study. The majority of the respondents (80% of the Canadian and 77% of the US sample) indicated that budgets were used for control purposes in their organizations and they were not planning to abandon the use of traditional budgeting in the near future. Only 5% indicated they were considering abandon and only 1% indicated that there were definitely planning to abandon budgeting in the next two years. As for the changes in the budgeting systems the majority planned to change or adapt their budgeting system. The results suggest that traditional budgeting will not soon be eliminated because they obtain considerable value, they were only planning to improve their existing budgeting systems not abandon them.

As for the use of beyond budgeting model in practice the literature presents a mixed picture. Hope and Fraser (2003) reported that a Skandinavian Bank abolished all forms of traditional budgeting and since then it has grown into the largest bank in Skandinavia. The bank used a decentralized structure to enable each branch to run as an independent profit centre.

Rickards (2006) presents a report about well-known companies in various stages of successfully integrating beyond budgeting into their management processes. Companies like Borealis (a leading European petrochemical manufacturer), Unilever (health and hygiene), Rhodia (a French chemical concern), German Railways, BASF-IT Services (IT services) are the examples of beyond budgeting successful implementation.

Despite these examples beyond budgeting is still in the early stage of development and use (Goode and Malik, 2011). In 2009 the Chartered Institute of Management Accountants (CIMA) conducted a study about current and intended usage of managerial accounting tools, split into operational, managerial and strategic groups. The majority of the survey respondents were from UK (61%), while the rest were from all over the world (rest of Europe, Asia, Africa, Australia, America and Middle East). The manufacturing sector, financial services, professional services, public sector, education, retail and trade, IT and telecommunications and the hospitality industry was represented in the survey.

Survey evidence shows that organizations use a range of budgeting tools. The smallest companies make the least use of budgeting tools, they use less sophisticated budgeting techniques as owners have greater control and oversight of expenditure. As for the used budgeting tools, beyond budgeting seems to be the least popular. While the most popular tools are zero based budgets, rolling forecast, cash forecast and financial year forecast.

Analyzing the presented surveys our conclusion is that the literature shows a mixed picture of budgeting. We can state that budgeting stands at a crossroads. Every organization has unique requirements for their financial planning. It is not a simple choice to choose between traditional or alternative budgeting methods. Beyond budgeting could easily discarded as a management tool and has no chance against traditional budgeting on long term. But if the beyond budgeting concept is examined objectively it could reveal much better practices compared to traditional budgeting methods (Hanninen, 2013).

6. Conclusions

Budgeting is a major management activity, it's major objective is to support management in strategy implementation, in planning and controlling activities. The changes in the economic environment and business processes led to evolutions in budgeting. From the initial cash budgets and future income and expenditures estimation budgets evolved to more modern techniques such as zero based budgeting, activity based budgeting or beyond budgeting. The alternative budgeting methods gained popularity as they proposed solutions to traditional budgeting's perceived problems.

Eventhough several advantages were attributed to beyond budgeting the movement is still in his early stages of development. The concept requires further research, development and practical implementation before a real breakthrough is managerial accounting is achieved.

Although traditional budgeting is often inappropriate for the current environment is still very popular among organizations and will not soon be eliminated. Every organization sets specific targets and objectives and the management style, culture and attitude towards employees will determine the approach of budgeting within each organization. Moreover, management could find it difficult to totally abandon budgeting as it is embedded in his business culture. We consider that traditional budgeting methods require refreshing and revitalizing in the near future. Beyond budgeting calls for a basic change, it supposes fundamentally transforming a company's management model, needs a decentralised way of managing. And in many cases organizations are not ready yet for this kind of changes. We believe that beyond budgeting would reinvigorate management accounting contribution in business operations and performance in the future.

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ASPECTS REGARDING QUALITY INTEGRATION INTO ACCOUNTING AND FINANCING OF HIGHER EDUCATION INSTITUTIONS

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Abstract:
My preoccupations with the complexity of economic activities, particularly in the field of accountancy and financing, have stirred my interest regarding the possibilities of accountancy to reflect the quality of higher education processes. As a result, my scientific approach informs my Ph.D. thesis entitled: *Integration Mechanism of Education Process Quality in the Accountancy and Financing of Higher Education in Romania.* My thesis is structurally organised around the following question: *To what extent and through what mechanisms can the quality of the educational process be integrated into higher education accountancy and financing?* We have resorted to the scientific measurement and examination of the ways in which education and research quality can be integrated into the financing of higher education in our country with a view to establishing the theoretical and methodological concepts regarding accounting's potential to reflect the quality of the higher education process. *I.1- Accountancy is the primary source of information that allows for the measuring of the qualitative aspects of the higher educational process;* Through such accounts plan administration, accountancy may represent the primary source of information that enables quality measuring of higher education processes and their contribution to HE financing in our country. *I.2- Management accounting can represent an operational measurement and control instrument for the quality aspects pertaining to the higher educational process;* For all the above considerations and the arguments presented in the thesis, we consider that, through its field of activity, management accounting can represent an operational measurement and control instrument for the quality aspects pertaining to the higher educational process, given the information it provides. *I.3- Higher education quality measurement makes it possible to pass from statements of principles to materialization of quality efforts;* This differentiation mechanism of funding and stimulating quality efforts gears the academic management to a proactive policy in the field of quality in order to avoid activity reduction and underfunding. This is the argument that validates the working hypothesis set out above. *I.4 - The higher state education financing system represents both the cause and effect of the higher education quality processes.* Firmly embedded in the results of the scientific research we have conducted, the causal link between the quality of higher education and the financing of higher education in our country is presented below.

Keywords: Mecanism, integrare, indicatori, calitate, contabilitate, finanțare.

JEL classification: H00, I00, I20

1. Generally Introduction or Background

My preoccupations with the complexity of economic activities, particularly in the field of accountancy and financing, have stirred my interest regarding the possibilities of accountancy to reflect the quality of higher education processes. As a result, my scientific approach informs my Ph.D. thesis entitled: *Integration Mechanism of Education Process Quality in the Accountancy and Financing of Higher Education in Romania.* My thesis is

structurally organised around the following question: *To what extent and through what mechanisms can the quality of the educational process be integrated into higher education accountancy and financing?*

Our working hypotheses, based on known related facts, have contributed an answer to this question.

We have resorted to the scientific measurement and examination of the ways in which education and research quality can be integrated into the financing of higher education in our country with a view to establishing the theoretical and methodological concepts regarding accounting's potential to reflect the quality of the higher education process. We started from the idea that no methodological and theoretical approach can be made without practical validation. In the above-mentioned context, our scientific approach aims to provide answers to the following hypotheses:

1.1 Accountancy is the primary source of information that allows for the measuring of the qualitative aspects of the higher educational process.
1.2 Management accounting can represent an operational measurement and control instrument for the quality aspects pertaining to the higher educational process.
1.3 Higher education quality measurement makes it possible to pass from statements of principles to materialization of quality efforts.
1.4 The higher state education financing system represents both the cause and effect of the higher education quality processes.

1.1 Accountancy is the primary source of information that allows for the measuring of the qualitative aspects of the higher educational process.

The Economic Information System whose main function is to provide the data necessary for the economic activities conducted within a patrimonial unit includes accountancy, as well. For that purpose, one of accountancy's aims is to provide all the information necessary for the planning of economic programs, drafting of income and expenses budget, processing of patrimony data as well as for the elaboration of synthetic documents and accounting reports.

Likewise, accountancy also provides information about the patrimony's structure and dynamics, financial balance and obtained results necessary for decision-making. In order to obtain operative, relevant and credible information throughout the entire process of economic activities, the continuous improvement of this function becomes imperative.

The qualitative aspects of education and research processes of state higher education institutions can be reflected by applying the quantitative value component of financial resource development.

Along these lines, Romanian state higher education institutions "receive" their financial resources from the state budget through a mechanism determined both by quantitative elements, represented by tuition free students, and qualitative elements, represented by the quantity and quality of scientific research, absorption degree of graduates on the labour market, and so on.

The contribution of each category of elements to the budgetary allocation distribution is established by the Ministry based on the strategic objectives for the development of this field of activity.

The universities' financial resources are retained in Class 7 synthetic accounts; Group 70, Symbol 751.01.00.33.10.05 (*Order of Delegate Minister for Budget nr.2021/2013 regarding amendment and completion of the Methodological Norms on Organising and management of public institutions accounting. Accounts Plan for public institutions and instructions for their use approved by Order of Minister of Public Finances nr.1917/2005*) and they do neither reflect accurately nor explicitly the contribution of the

qualitative component of institutional financing, in what regards core funding and supplementary funding 2.

For a better indication of some education processes qualitative aspects in state HE institutions' accountancy, it is, in our view, useful and relevant to introduce several income accounts in the General Accounts Plan in which budgetary allocations are registered with the destination of core funding and supplementary funding 2 as per qualitative elements. Thus, all incomes obtained from each income source can be separately accounted, representing a good information source for future decision-making in academic management with a view to increasing the contribution of the qualitative component to financial resources development. Through such accounts plan administration, accountancy may represent the primary source of information that enables quality measuring of higher education processes and their contribution to HE financing in our country.

1.2. Management accounting can represent an operational measurement and control instrument for the quality aspects pertaining to the higher educational process.

Management accounting provides analytic, detailed information regarding the efficient use of all operational factors in state higher education institutions. Based on this accounting, all product, work and service costs as well as their analytic results may be determined, including costs determined as per responsibility centers and/or various functions.

Management accounting administration allows higher education institutions to obtain information regarding higher education organization and performance, particularly regarding the resource allocations as per responsibility centers and services, in our case, educational and research services, as well as the obtained results.

For all the above considerations and the arguments presented in the thesis, we consider that, through its field of activity, management accounting can represent an operational measurement and control instrument for the quality aspects pertaining to the higher educational process, given the information it provides.

I.3- Higher education quality measurement makes it possible to pass from statements of principles to materialization of quality efforts.

The qualitative aspects of the higher education process examined from the perspective of financing education through its qualitative component intended for core funding and supplementary funding2 represents a permanent challenge for academic management. Thus, quality indicators (used to determine the level of allocations from public funds intended for core and supplementary 2 funding), also known as the qualitative component, are calculated by the Ministry of National Education (M.E.N.) and the National Council for Higher Education Financing (C.N.F.I.S.) (C.N.F.I.S.) based on information, data, figures submitted by the universities at the beginning of each academic year with regard to the quantitative and qualitative aspects of higher education.

Based on data provided by state higher education institutions of our country with regard to the quantitative and qualitative aspects of the educational and research process of the allocation mechanism of budgetary funds, the Government allocates to each state university the core and supplementary funding[12], differentiated in relation to the quantity, particularly qualitative, aspects taken into account. This differentiation mechanism of funding and stimulating quality efforts gears the academic management to a proactive

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[12]*Law on National Education nr.1/2011 and the Official Monitor nr.18/10.01.2011*

policy in the field of quality in order to avoid activity reduction and underfunding. This is the argument that validates the working hypothesis set out above.

1.4 *The higher state education financing system represents both the cause and effect of the higher education quality processes.*

The financing mechanism for higher education in Romania has demonstrated the importance of reaching the minimum standards of quality indicators which determine the allocation of resources from public funds intended as core and supplementary funding[13] through its qualitative component. Based on our data and information analysis, we can state that the financing mechanism of higher education represents the cause and effect for higher education quality. Firmly embedded in the results of the scientific research we have conducted, the causal link between the quality of higher education and the financing of higher education in our country is presented below.

FINANCING SYSTEM AND QUALITY
OF HIGHER EDUCATION

FINANCING SYSTEM

■ Quantitative component (no. of students)
■ Quality component (as per IC criteria)

30%

70%

CAUSE → EDUCATIONAL PROCESS → EFFECT

EDUCATION QUALITY

Non-achieved indicators	→	Diminished quality	→	Under-financing
Achieved indicators	→	Standard quality	→	Standard financing
Increased indicators	→	High quality	→	Supplementary financing

ACCOUNTING SYSTEM

F1 ↔ F2 ↔ F3 ↔ F4 ↔ F5

Quality assurance

FINANCING SYSTEM
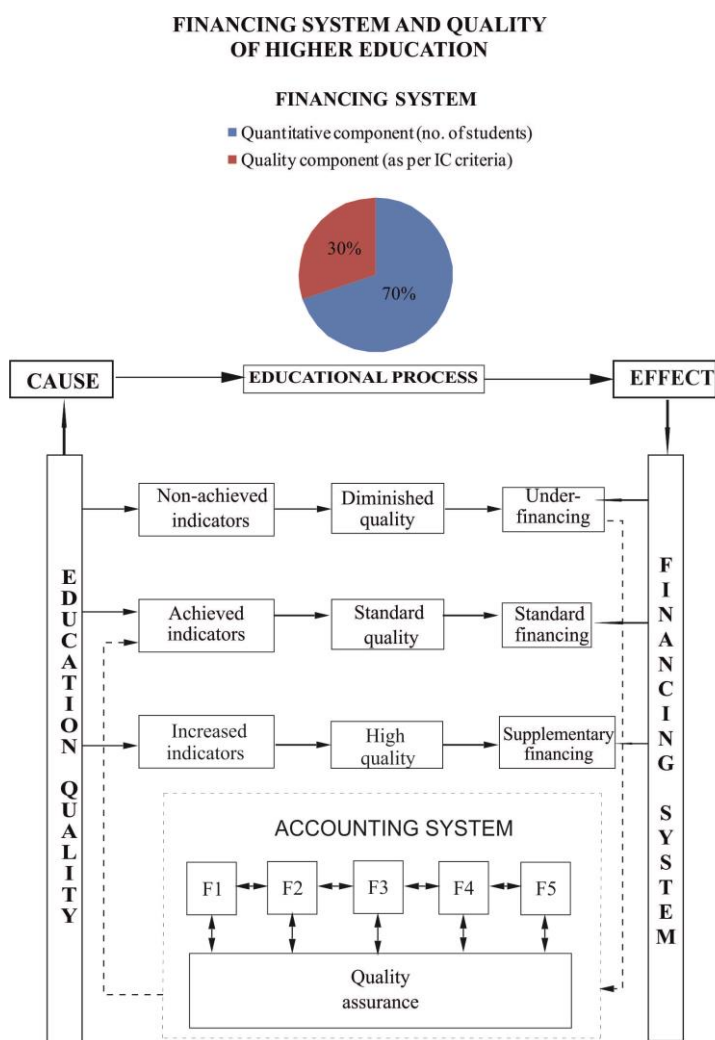
14

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[13]*Law on National Education nr.1/2011 and the Official Monitor nr.18/10.01.2011*

[14]*Personal contribution*

where:
F1 –data registration and processing function
F2 – information function
F3 – management control function
F4 – legal function
F5 – planning function

The quality of the educational process represents an essential requirement for the organisation, functioning and development of higher education institutions' education and research activities.

For the stimulation and development of a pro-quality academic culture, the identification of the mechanisms and tools to ensure the integration of quality in the accounting and financing of these educational institutions is necessary. In this context, the integration mechanism of quality into funding must include a set of indicators that are both apt to measure the quality of education, development and research and to provide the basis for the differentiated financing of higher education from public funds, according to the performance and excellence achieved by each institution. In addition to this set of indicators, we consider it necessary to also assign weightings to each indicator so that, by aggregation, the percentage share related to the core funding allocated on the basis of indicators can be attained.

Moreover, for stimulating and rewarding universities that achieve outstanding results in the field of quality, we propose that the funds allocated on the basis of quality indicators should be distributed only to universities that have achieved quality indicators above the national average. Those universities that have not reached these standards are not to benefit from the public funds allocated for this purpose.

As far as the integration of quality into accounting organization and management is concerned, the implementation mechanism consists in organizing and managing the accounting through the use of income accounts that reflect the value generated by the quality aspects of the educational process.

Our scientific research is not intended to be exhaustive and analytical in treating any assumptions; however, I have pursued the presentation of a vision, way of thinking, positive attitude and possible solutions, all necessary in the current budgetary context of our country.

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2. Law on National Education nr.1/2011 and the Official Monitor nr.18/10.01.2011
3. Personal contribution

SWOT ANALYSIS ON SAMPLING METHOD

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Abstract: *Audit sampling involves the application of audit procedures to less than 100% of items within an account balance or class of transactions. Our article aims to study audit sampling in audit of financial statements. As an audit technique largely used, in both its statistical and nonstatistical form, the method is very important for auditors. It should be applied correctly for a fair view of financial statements, to satisfy the needs of all financial users. In order to be applied correctly the method must be understood by all its users and mainly by auditors. Otherwise the risk of not applying it correctly would cause loose of reputation and discredit, litigations and even prison. Since there is not a unitary practice and methodology for applying the technique, the risk of incorrectly applying it is pretty high. The SWOT analysis is a technique used that shows the advantages, disadvantages, threats and opportunities. We applied SWOT analysis in studying the sampling method, from the perspective of three players: the audit company, the audited entity and users of financial statements. The study shows that by applying the sampling method the audit company and the audited entity both save time, effort and money. The disadvantages of the method are difficulty in applying and understanding its insight. Being largely used as an audit method and being a factor of a correct audit opinion, the sampling method's advantages, disadvantages, threats and opportunities must be understood by auditors.*

Keywords: sampling; audit; SWOT analysis.

JEL classification: M 40, M 42.

1. Introduction
In auditing financial statements, the auditors use sampling methods in order to provide a reasonable opinion that financial statements are free of material misstatements.
Randall et al (2013) say that applying sampling depends on each auditor way of judgement, influenced by factors as competitors, culture, legal regulations and risk of litigation.
Hall et al (2002) study informs readers that less than 10% of the auditors received training regarding the sampling methods, while majority said that reliance is put on the employer's audit guides.
Since there is not at this date a unitary methodology in applying sampling method in audit, the professional judgement influences the use of the method, the risk of error being high. Studying the sampling method practices, its advantages, disadvantages, strengths, threats and opportunities become mandatory.
The SWOT analysis, developed by the Standard Research Institute in 1960-1970, is a method which helps mainly analysts and management to form a view of the business positions, taking into consideration impact of internal and external factors. Nowadays this method also helps teachers, trainers being used as a strategic tool.
According Hems and Nexon (2008) the SWOT analysis is simple to use, practical for management, but its results must be combined with other analysis tools in order to obtain a complete view.

In their article, *Making SWOT analysis work*, Piercy and Giles (1989) say that the SWOT analysis suffered from "familiarity breeding contempt" and even if it is largely used is not always well.

2. Case study

In this study we aim to develop a SWOT analysis of the sampling technique, showing its strengths, weaknesses, threats and opportunities from the perspective of the audit firm, the audited company and users of accounting information.

In general entities work with large data populations and auditors need data, usually for a financial year. Exhaustive testing requires auditing all of the components of the populations within transaction accounts, account balances or documents, but this becomes impossible in our time. Entities in the third millennium have sophisticated embedded operating systems with large data bases. These entities are often subsidiaries of multinational companies with market shares outside the country of residence or listed companies.

Using sampling saves time for auditors and for the employees of audited companies. The auditors have less work and the company's employees have to provide fewer explanations and less information to auditors.

In financial year, an entity that is required by current regulations to be audited has, in most cases, large populations of data. If the audit would require testing all elements of the population, it would mean more work, effort and a longer period for the audit engagement.

Sampling manages to reduce audit costs for both the auditors and the company. With decreasing levels of work for auditors, the costs of the audit engagement decreases.

Without applying the technique of sampling the company would pay more to auditors, in some cases much more than it would pay normally.

Besides labor efficiency, audit sampling provides feedback to users of accounting information in a shorter time than by auditing using exhaustive tests. Thus users can make decisions in a timely manner, giving themselves a chance to maximize economic benefits in the shortest time.

It is difficult in some cases for the audit team to choose a representative sample using sampling due to factors related to the risk inherent in the business, various characteristics of populations, or detailed tests or tests of controls applied to sensitive areas where the risk of fraud is large, such as income area of an entity.

One difficulty faced by the audit firms is the correct application of statistical techniques due to little knowledge in the field, lack of experts to be part of trainings required. Audit companies are reluctant to invest in employee training sessions, in the application of statistical technique, balancing the benefits of formal techniques used to select a correct sample and evaluate outcomes, and the high costs in terms of software and employee' skills.

Another weakness of the sampling technique is that it cannot be applied in all areas of auditing financial statements, auditors are reluctant to use it to test management's estimates. Testing of such management reasoning requires the audit of the entire population' estimates, each of this estimate is significant and requires an exhaustive test. In general, management and other employees have limited knowledge in interpreting the results of the auditors applying statistical sampling, even if they receive explanations regarding the audit plan.

There are situations where auditors face conservatism of people in management in the application of statistical sampling technique, using computer programs. This would be the case of a large entity with many complex transactions containing high significant value, for which auditors use statistical sampling and default software that calculates the median of the sample and selects the sample test items. If management is conservative and does not trust the new technology, auditors work will be hampered.

The vast majority of business users have limited knowledge regarding the application of the technique by the auditors, being unable to challenge the conclusions they reached.

Another weak point of using the sampling method, from the point of view of the tax authorities, is the non-identification of issues such as VAT, contributions and other duties payable to the state.

Among the opportunities offered by this technique, from the perspective of the audit firm, the technique enjoys a good reputation, with a certain methodological stability auditors using it with confidence, being encouraged by the high interest of researchers for this technique and the possibility of discovering new ways to streamline the work.

The vast majority of audited operators are interested in supporting and understanding the audit process, having access to information on the internet, from published rules and auditing standards.

However, there is willingness on the part of local authorities and professional bodies, to support the development of technology and quality of the audit, and from the part of practitioners to attend conferences in order to exchange experience with researchers.

There are other audit techniques appropriate in certain situations, being more efficient than sampling, such as analytical procedures in auditing the accounts as the expenditure accounts, which are characterized by predictability, these expenditures being proportional to certain variables.

Wrong conclusions reflected in an incorrect audit opinion of the financial statements can result in litigations and loss of reputation of the audit firm. The company can lose significant amounts of money at the expense of companies audited, in particular to their associates, dissatisfied with the lack of professionalism and quality of auditors' work.

Failure to identify misstatements - not identified and not corrected significant errors in a timely manner, can lead to economic losses to the audited entity.

There are cases in which the audited entity's management put pressure on auditors. They are forced to provide audit opinions in the shortest time possible, with the risk of non-professionalism in applying audit techniques.

Another reason is the low budget that restricts auditors of the engagement, due to a contract with a small cost to their customers. To obtain lower costs auditors are likely to apply sampling and draw incorrect conclusions, by not investigating sufficiently certain issues and this impacts directly the audited company.

The risk of wrong opinions due to unrepresentative samples affects users of economic information that are placed in an impossible situation to take correct, strategic , long-term decisions in a socio - economically destabilizing environment.

SWOT analysis reveals the strengths and weaknesses of sampling, presenting opportunities and threats misuse of technology, from the point of view of the audit company, audited entity and the different users of accounting information (table 2).

Strengths and weaknesses refer to sampling, the advantages and disadvantages of the method (internal factors). Opportunities and threats analyze the external environment, identifying aspects that favor and threaten the proper application of the technique (table 1).

3. Conclusion

The sampling method is used in the audit of financial statements because it saves time, work and money for all the parties involved.

Users of financial statements should be correctly informed about the financial position and results of the entity, in order to make correct investment decisions. So, prudence and professional judgement are mandatory, in order to give a reasonable assurance that the financial statements present a fair view and do not contain material misstatements.

Auditors risk their own reputation, money in litigation trials or even prison if they emit an incorrect opinion.

Being largely used as an audit method, the sampling method's advantages, disadvantages, threats and opportunities must be known mainly by auditors and all its users.

Table 1: Weaknesses-strengths axis

	STRENGTHS	WEAKNESSES
AUDIT COMPANY	- lower effort for the audit team members; - few time spent by the auditors that performn audit tests; - lower costs for the audit company which has a budget for each engagement; - efficiency in auditor's work.	- difficulty in selecting a representative sampling from a population; - less knowledge in applying statistical sampling method; - high costs in the case of statistical sampling method with the training of the employees; - formal techniques used for determination of sample's size, selecting the sample and for valuation of results, in the case of statistical sampling; - neaplicarea eşantionării în auditarea estimărilor managementului.
AUDITED ENTITY	- few time for the representatives' of the audit company, which are obliged to give explanations, to discuss and offer the auditors support documents; - smaller costs for the audited company, which will pay for the auditors' services.	- limited knowledge in interpreting auditor's resuts in aplying statistical sampling method; - management's conservatorism in aplying sampling method with different software.

USERS OF FINANCIAL DATA	• receipt of audit opinion in a short time, by aplying sampling technique and decision making in a short time.	• limited knowledge in interpreting auditor's resuts and impossibility of challeging the conclusions drawn; • failure to identify fiscal taxable aspects, form the point of view of authorities.

Source: author's projection

Table 2: Opportunities-threats axis

	OPORTUNITIES	THREATS
AUDIT COMPANY	• the technique has a good reputation, characterised by a methodological stability; • the high interest from the researcher's and auditor's part, regarding this method which offers efficiency in their work.	• There are other audit techniques, opportune in some situations; • Wrong conclusions and incorrect audit opinions, can lead to litigations and loose of good reputation.
AUDITED ENTITY	• interest from the part of economics agents to understand and support the audit process; • access to information.	• not identifying some significant misstatements/ errors in due time; • unprofessionalism in applying the technique in the detriment of smaller costs.
USERS OF FINANCIAL DATA	• availability from the authorities' part and professional organisations to support the improvement of the technique and the quality of audit; • availability from the practitioners' behalf to participate at conferences for experience exchange with theorists.	• the risk of a wrong audit opinion caused by unrepresentative samples and misinformation of users; • impossibility to take a correct, strategic decision, on long term; • the socio-economic unstable context.

Source: author's projection

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THE IMPORTANCE OF THE ACCOUNTING INFORMATION FOR THE DECISIONAL PROCESS

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Abstract: The contemporary evolution of accounting led to the elaboration of an information system which connects all the organizational structures of a company, in which the accounting information system is the basic component of the information system. It responds to information requirements of other departments as well as to external factors. This study is meant to show the importance that we have to give to accounting information, addressing it according to the sources where found and its areas of application. The following study reviews the main articles and books that have approached the study of the „accounting information" from a decisional view. Our research is a qualitative approach, by a theoretical point of view. A review of the local and foreign literature has been made. The starting point of this work relates to the fact that that the main source for the informational sistem is accountancy, without it the system could not exist. In the first part of this study, we have reviewed the actual level of knowledge about accountancy presented by a selection of authors that have studied this subject. After presenting the authors, we have reviewed the way in which the national and international regulators have referred to the subject. The informational needs of the internal users depend on a large scale on the size of the entity; as an example, the management of a smaller company will give a high level of importance for any accounting information, while a larger company's informational needs are more diverse and are usually grouped according to the organization chart. Based on the accounting information, you cand realise a measurement system of economic performance. To exemplify the importance that the accounting information requires, we have presented the areas of use required. At the entity's level we have graphically presented possibilities of capitalisation of the accounting information concluding that this represents the key to the development of the company. The accounting information is the raw material for the decisional process. The accounting decisions lead to elaborating all the other types of decisions that help achieving the main goal of the management: continuing the activity. In our oppinion the informational resources of an entity can be part of the asset, the economic information being a precious resource. If used efficiently it can be used to achieve the goals. Any business idea, designing a new concept or tranzaction, have one thing as base: information.

1.   Introduction

The main source of information for the information system is accountancy.
In order to highlight the accountancy's importance to an economical entity is enough to mention that an economical entity cannot function without its own accounting system. It starts to operate at operational level (acquisition, production, sale) from where accountancy selects the data that is about to be processed to obtain information for the final recipients, and it goes up to the decisional levels. Whit accountancy's help most of the manager's questions can be answered: "Is the entity's activity lucrative?" "How much is the profit?" "Does the entity have enough cash?" "What are the costs of producing a specific asset?" "Which one of the alternatives is the most effective?".

2. Actual state of knowledge

The concept of information has fascinated a number of researchers in numerous fields of activity like biology, sociology, psychology, politics and communications, computers, economics, management, and they have different opinions about it, but most of them relate the information to the human mind saying that it is the result of thinking : information in knowledge, communication (Gelepithis, 1997; Callaos and Callaos 2011, Floridi, 2012); Information as a property of knowledge (Belkin, 1978); information as significant data (Mingers, 2003).

The issue of accounting information as a support for the decisional process was analyzed by various authors. (Ionescu, 2003; So and Smith, 2004; Krolick, 2005; Ferrante, 2006; Jianu, 2007; Ivanof , 2007, Schmeisser et al., 2008, Demski , 2008; Walther and Skousen, 2009; Walther, 2010; Walther and Skousen, 2010; Cokins et al., , 2012; Socea , 2012; Briciu et al., 2013).

Society's evolution level has led to an evolution of the economy, that produced an extension of the concept of information, thus perfecting the economic and financial information. From Homgren's perspective, the core of the informational system – accountancy – represents "the perfect window where you can see clearly the impact of economic developments on companies" (Needles, Powers, Mills, Anderson, 2010:19). This "art" is performed by competent people, with the proper training, and the image of the field of accounting operations is "painted" by "employees in sleeves" generally called: accountants. According to the specialists, most of the information forming the economic environment is circulated by accounting through the accounting information. Accounting information is useful to each manager but only if it is carefully analysed and if it respects accounting principles. It can be the manager's best friend, even in times of crisis, a friend that offers a lot without asking much in return (Scorţe, 2009:199).

The role of financial information through financial situations started to be discussed in the '70, IASC mentioning that they have the means ,,to provide an information on the actual state, performance and evolution of the financial situations, that is useful to a wide range of users, when making the economic decisions." According to FASB ,,the goal of financial information is to provide useful information in making investment and credit, that are also understandable for everybody with reasonable knowledge of the company."

The quantity and quality of the financial information provided to the company depends on the source from which they come from, and are directly influenced by the goal that needs to be achieved at the demand of the recipients. In order for an accounting system to be valuable, it needs to generate credible, precise, and most importantly useful information. It is necessary that the user of the economic information has appropriate studies and a high level of knowledge in the economic field in order to be able to evaluate the quality of the received information. Its quality points out the cooperation between a company's departments, it represents support in making decisions for the management team, and for the entrepreneur it represents the base for a fair risk assessment. Numerous technicians support the idea of extending the user area by using a simple, easily accessible vocabulary for all members of the society. From our point of view, this is less likely to be achievable, due to the fact that accounting has a specific terminology, and it can be communicated through a beautiful "business language", and disclaiming it would be the equivalent of forgetting a language formed throughout generations of studies.

The information presented in the financial situations is useful only if it can meet a minimum of qualifying characteristics, which in the opinion of the normalization organism FASB are: intelligibility (as a component of the term "relevance"), reliability, comparability, coherence

and materiality. In addition to the characteristics presented by the FASB, we consider that the information needs to meet the following characteristics:

-caution (precaution), because the accountant is endowed with the power to propose provisioning in the legal limits to the management, he has to present a certain degree of caution in creating them, in order to present a real situation in the financial report, without being over(under)valued by the over(under)evaluation of the incomes/expenses;

-currentness – the ability of the information to present recent events.

According to art.23 from O.M.P.F. 3055/2009, the qualitative characteristics that determine the utility of the information offered by the financial situations are: intelligibility, relevance, credibility and comparability.

The main goal of the financial situations is to provide information which reflects: financial position, performance and cash – flows of a commercial entity. Besides the *informing function,* according to the specific literature, they meet the following two functions:

- centralization and reflection of the annual accounts;
- review and prevision.

According to the IFRS, the financial situations ,,are made to respond to the need of general information required by a large group of users that don't have the ability to request reports made to meet their need of certain information."

Financial situations represent the most popular form of supply of financial information of the commercial entity, and at the same time the least expensive.

According to O.M.P.F.3055/2009, every company that at the date of the balance sheet meets two out of three "size criteria" (total assets:3.650.000 Euros, net turnover: 7.300.000 Euros, average employees: 50) is bound to complete annual financial situations that offer a clear image of the entity and it includes: balance sheet: profit and loss statements; a situation of the changes in the company's equities, cash-flow situations, notes to the annual financial situations.

In the process of profitability analysis, the users of financial situations don't just compare the results in time for the same entities, but also with other entities. This is why, in order to ease the comparison between these, O.M.P.F.3055/2009 elaborated rules of completing the financial situations and in case of changes in a company's accounting policies, they compel the company to mention them in the annexed notes. For example, the depreciation of fixed assets of an entity can influence its final result, a very important aspect in comparing the financial situations between entities. Various authors have presented and are still presenting in their works, propositions meant to perfect the content of financial situations (Feleagă, 1996, Berheci, 2006, Bălescu, 2009). One of Maria Berheci's propositions (2005) shared by other authors specialized in this field, was improving financial situations by preparation of cash – flows that later was implemented by the issue of O.M.P.F. 1752/2005 followed by the issue of O.M.P.F. 3055/2009.

At international level there are a series of differences between the preparation and the presentation of the financial situations, synthesized on two levels:

- between IFRS and European directives;
- between the two dominant accounting systems: IFRS and US GAAP.

By the process of harmonizing the accounting policies at an international level in progress for a few years the quality of financial information is suffering of aggravations. To avoid this, a convergence between the rules and principles of US GAAP and IFRS is in progress. If a common business language regarding American and European accounting will be accepted, the convergence/harmonization of the two will definitely facilitate the communication of information at a global level. ,,In a market economy, harmonization/convergence and accounting normalization have as a common goal organizing the rules of functioning on the market of accounting information, in order to improve financial communication, and it insures:

- comparing information in time and space;

- control and centralization of information;
- thorough argumentation of decisions from the information users;
- increasing confidence between social partners using a standardized and intelligible language" (Sandu, 2011 :143)

Starting from January the 1st, 2012, Romanian credit institutions no longer apply Romanian accounting standards, instead they apply IFRS standards as a base for accounting. Thus, the banking sector is the first Romanian sector completely aligned with the international accounting and financial report principles.

One of the most discussed subjects in the specialized literature is the supplementation of accounting regulations that can be applied by all countries around the world, in order to make possible the comparison between the financial reports, thus aspects related to normalization, harmonization, convergence and internationalization can be treated. In the past two decades, the accounting system of Romania has suffered a series of changes, by „copying" or adopting several accounting systems:

-after 1990- the French accounting system was considered efficient (the use of the two forms of balance sheets: horizontal and vertical);

-after 2000 – the harmonization to the European Directives and International Accountability Standards (O.M.P.F. 94/29.01.2001 – amended by O.M.P.F. 306/26.02.2002 and O.M.P.F. 1752/17.11.2005, imposes a series of regulations regarding the vertical model of the balance sheet, giving a higher importance to net current assets);

-2005 – European Directives and IFRS for companies that prepare consolidated accounts or are listed on the stock market (O.M.P.F. 3055/2009 abrogates O.M.P.F. 1752/2005 and doesn't modify the format of financial situations).

Once the accounting normalization, FASB and IASB elaborated in 2006 a document called ,,Conceptual Frame for Financial Reporting: Goals of Financial Reporting and Qualitative Characteristics of the Information Contained by the Financial Reports Useful in Decision Making" proposing to classify the users of financial – accounting information in the following categories: investors, creditors, suppliers, employees, clients, governmental and regulatory organizations and members of the public.

The need of information of the internal users depends a lot on the size of the entity; for example the management of a small company will consider important any information provided by accounting, while in a big company the informational need is diversified and grouped according to the hierarchy.

The management's efficiency depends on the quality of the received information, on the type of the selection process and identification of the proper solution, and last but not least on the professionalism proved in the taken actions. Morgenstern considered that the success of the decision makers relies in the ability to ,, *run a company means to be certain on it's future; being certain on it's future means knowing to work with the information"* (Morgenstern, 1976:143)

The concept "performance" is intrerpeted in various ways by the receepients of accounting information, according to their interests,, (Bunea, 2011): reaching the objectives, integration and accomodation (Duncan, 1973), Peerformance = rentability; Rentability = Profit (Colasse 1999), reaching organizational goals (performnace in administration) (Bourguignon 1995), performance can be assimilated to efficiency (Cohen 1995) performance involves a sequence of steps: *Economy-Efficiency-Effectiveness (*Bouquin, 2004). Falconer Mitchell plans to publish in 2014 a study based on information generated by the ,,instrument of measuring performance, designed in the last 20 years" -Balanced Scorecard, inviting us to participate with our own contributions to this subject, ,,all types of research methods could be feasible" (Mitchell, 2012)

3. Areas of use of the accounting information

In the managers' attempt to create an ideal image of the entity in the eyes of the investors, collaborators, the market on which they activate or even of the shareholders, they make public favorable financial situations artificially obtained, by applying accounting techniques (immoral in the opinion of some specialists, and creative in our opinion) situated on the edge of legality. This way a commerce with financial information produced by accountants turned into ,,luxury merchants" takes place. At the opposite pole of a high quality accounting information is information that activates as part of the *creative accounting,* which is an instrument of molding the information with techniques situated at the edge of legality, or even considered by some specialists as being beyond legal regulations. By the creative accounting an optimization of the entity's image is being forced, at the limit between fraud and legality, by window dressing of the accounts from the financial situations presented in the accounting policies and principles. ,,Creative accounting is an instrument in the hand of the management used in order to promote and maintain a positive image of the company and to select the proper data, offered to support the pursued interest'' (Munteanu and Zuca, 2011:10)

International Accounting Standard ,,Presentation of Financial Information" (IAS 1) says that every economic entity needs to choose through its management believable accounting policies, in accordance with other standards and of the Permanent Committee of Interpretation. The accounting principles used in Romania are in accordance with the European directives. ,,In the absence of an explicit standard and interpretation, the company's management calls the professional judgment to develop the accounting policy most suitable to provide the useful information for the users of the financial information." (Feleagă, Malciu, 2002 : 17). A user that is not qualified enough or does not have sufficient professional experience is usually incapable of anticipating the impact of accounting options on the economic performance reflected in the financial situations, case in which you can see the creativity of the professional accountant, based on the fiscal and accounting regulations that leave room for interpretations.

Economic, juridical, social pressure as well as the pressure of information users made necessary the innovation in accounting, and based on this the development of creative accounting. We can appreciate that the development of creative accounting was influenced by the flexibility of international accounting regulations.

,,Robert Kaplan claims that the team that creates value for an organization is the team in which the accountants are involved and that they need to participate at the formulation and implementation of the organization's strategies." (Mihalache , 2005). The answer to the question: ,,is there only one true accounting truth?" is absolutely negative, but we can also answer that accounting provides every participant to the social – economic life with the truth they need. (Pop, 2002:15)

The consequences of accounting manipulations on the beneficiaries of the information provided in the financial situations, through voluntary or involuntary acts of deformation of the economic reality, has led to the necessity to certify and verify them by the *financial* audit, that has the main purpose of reestablishing the trust in the financial situations, by presenting some cases of „accounting vagabondage". The internal and external audit's main purpose is to assure credibility of the financial – accounting information, by writing their opinion about its conformity. During an audit mission, a high level of importance is given to risk assessment on providing incorrect information of an informational system. Applying specific methods to the external auditory activity, information regarding the efficiency of the internal control can be provided. Audit missions can also target the accounting system used by an entity, so that the data processing can take place according to the needs and demands of the user. To realize the importance of audit in verifying the transmission and elaboration of quality accounting information, we mention the scandal with Enron, followed by the collapse of two major businesses: Enron and Andersen.

Lately, a series of problems regarding environmental protection have occurred, trying to find solutions in every possible way. The first element of ,,*green accounting*" or ,,environmental accounting" appeared in 1971 – 1987, and in Romania this type of accounting started to gain interest only after 2002, trying to combine the economics with the environmental protection. Applying it, incomes and expenses with the environmental protection are presented in "satellite environmental accounts", next to the old accounts. Thus, according to O.M.P.F. 3055/2009, in the chart of accounts we can find a new account, 652 ,,Expenses with environmental protection". Most companies don't give much importance to the use this account in their financial reports.

Environmental accounting at corporation level provides information for decision making at company level (also known as management of environmental accounting) on one hand, and on the other hand provides information for external trustees regarding the financial state of the company, in order to prepare the financial reports for investors and other interested parties, known as environmental financial accounting. (Voineagu, 2010).

,,*Management accounting* has the main role of providing reliable information that can be a base for the studies and the reasoning that allow decision making regarding the company's future." (Scorţe, 2010:338). The concept of accounting reasonability is based on management accounting, and it "allows knowing the way that the goals have been achieved and corrective actions have been started, if needed" (Briciu, 2012:258)

The capitalization of the information in the decisional process is made by the management team, forced to take the best decisions in the shortest period of time, based on information known to be precise, provided by the accounting system.

,,From the economical theory's point of view, an entity's performance is defined by comparing the results to the production factors that have contributed to obtaining the results, or by comparing previsions to results. According to the same approach, an entity's performance can be defined through global productivity. [...] A lightly nuanced approach on performance from the economic point of view can be obtained by approaching performance from management's point of view". (Ştefănescu, 2010:227). Specialized literature consideres that the trinomial of the three „e": economics – effectiveness - efficiency, represent the basic element for a performance management. Murray and Frenk (Murray and Frenk, 2000,717-731), think that performance takes place in a process of comparing already obtained results with those that can be obtained, while claims that the performance of an entity depends on the expectations of different parts involved in the company's activity: shareholders, customers, employees, state etc. (Glăvan, E.M , 2009:10) In order to satisfy the needs of its users, the accounting information has to reflect a clear, complete and periodic image on the status of the economical – financial situation of the entity.

Iulia Jianu concludes in one of his works " performance is completely a company's product" (Jianu, 2007:13)

,,The main panel is meant to point out *alert areas* of the company, the direction of its evolution in relation with the goals, and to help improve it's performance. This panel builds *an indispensable instrument for the operative management of the company, an instrument conceived as an information centralizer presented in a systematic, synoptic way, referring to the state and evolution of the economic phenomena that characterize its fields of activity*. It is the instrument that provides the management with a "synthesis" that is absolutely necessary in order to know and to perform, in a minimal period of time, a full analysis on the way the activities are progressing, where the evaluation of the level achieved is made precisely, based on true data, obtained systematically and with relevance" (Tabără, Briciu, 2012:248). Developing a budget ,,does not guarantee success, but most certainly helps avoid collapse" and this represents ,,a realistic and detailed financial plan that enhances the expectations and future actions referring to acquiring and using the resources". (Walther, 2009:10). ,,The relation between Budget

and Balanced Scorecard works in both ways. In the budget the resources are allocated for the execution of the strategy, especially for financing the strategic initiative portfolio. At its turn, the budget needs strategically aligned criterion for being able to substantiate and prioritize the changes at each review or construction of the budget, while BSC provides this type of criteria." (Ionescu, 2011). The term ,,balanced scorecard" was ,,initiated almost 20 years ago, by Robert Kaplan and David Norton (further being developed by their Palladium Group). Balanced Scorecard was adopted by thousands of companies around the world that successfully use it to accelerate the operational optimization of their activity, achieving what Kaplan and Norton call "The Execution Premium"."
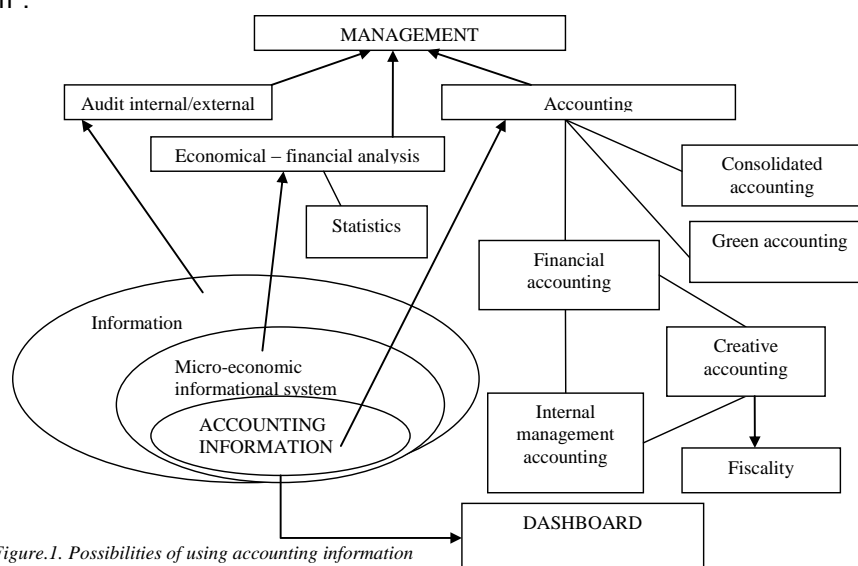
*Figure.1. Possibilities of using accounting information
inside an economic entity
Source: personal projection*

4. Conclusions:

Taking into considerations the information presented in this article, we can conclude the following:
- Accounting represents the core of the informational system, providing most of the information circulating in the economic informational system, and the accountants are the main authors, providing quality information that represent the base for the processing and analysis of information;
- The users of these information have different interests and they create plans or can make decisions after interpreting accounting information;
- Performance analysis of the entity is important in the SWOT analysis;
- Elaborating correct decisions in an optimal period of time is possible only with managers from every hierarchical level, and with access to quality information;
- An entity's performance depends on the teams that work within it, a professional management that is recommended to be continuously perfected;
- Manipulating the user of accounting information by providing data that reflect an image desired by the managers can be achieved in legal limits, without breaking accounting rules and regulations;
- The necessity of elaborating a unique language for transmission of the accounting information through a normalization – harmonization – convergence – standardization at a global level, reducing the differences between Anglo-Saxon accounting and the accounting applied in the United States;

- The necessity to reduce the differences between Anglo-Saxon accounting and continental accounting;
- The necessity to perfect Romanian accounting regulations to encourage foreign investments;
- The necessity to formulate "concepts, principles and accounting regulations based on a precise terminology and their application in order to insure comparability through time and space, its relevance and credibility" (Ristea, Dumitru, 2003:11);
- The necessity to homogenize the "provided information, analysis in time and space of the accounting information, [...] but also a guarantee of other users regarding the coherence and strictness of the accounting" (Ristea, 1995:22);
- The most decisions of the management team but also others (ex. The investment decisions) are based on an analysis of the capital markets and accounting information;
- Producers of accounting information need an informative environment to make sure that the data processed in the accounting program is the most similar to the company's activity, needs and demands.

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ACCOUNTING SYSTEMS AND THEIR CONVERGENCES NOWADAYS

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Abstract:
The expansion of opportunities and the disappearance of country borders make the answering the question increasingly urgent that which country's or region's acts and customs as precedents the accounting created for measuring the economic performance should use in the future. The fact makes this question especially interesting that these acts and customs often differ from each other significantly even within a region. The objective of the study is to introduce the major accounting systems (US GAAP, EU directives, IFRS) and their supporting institutional background in a conception way with a special regard on compiling financial statements on the basis of IFRS. The accounts should include not only validity but the preciseness expected by both the owners and the creditors focusing on consistency, the usefulness, transparency and unambiguousness of the contained pieces of information. All these are especially important when a given enterprise or an enterprise-group represents itself in several countries or continents. The actuality of the topic is strengthened by the fact that more and more entities being interested even in abroad require to use a system based on internationally accepted standards as a basis when compiling annual accounts and consolidation for the sake of comparability.

Today the majority of companies carry out their activities in several countries, in this way they have to meet different requirements in cases. The following question arises: which country's regulation should the different entities of enterprises (branch, site, corporate seat) meet? Stakeholders are interested in the fact that what economic performance the whole company has reached together and what its capital, profit and financial conditions are. If the certain entities follow regulations of different legal authorities when compiling the accounts, the statements may be compared in a difficult way. Nowadays regarding the globalization the need for comparing statements has become increasingly urgent, which requires the harmonization of the regulations at different levels.

Systems of accounting striving for commonality and being outstanding from the aspects of their relevance and utilizations are the followings:

1. United States Generally Accepted Accounting Principles (US GAAP)
2. EU directives accepted by the member states of the European Union
3. Standards published by the International Accounting Standards Board (IASB), the so-called International Financial Reporting Standards (IFRS)

United States Generally Accepted Accounting Principles (US GAAP)

The US GAAP system though it is still of a great significance in the world shows a decreasing role regarding the tendency of the past years, but its system may be considered as the first prevailing, global sized accounting system used mainly in the USA. Independent experts worked it out for capital investors and owners without any state

intervention. Its use is only compulsory for listed companies of New York Stock Exchange. It is an extremely regulated and strict system, which is taken as a precedent just like the legal system of the USA, which means that court decisions and judgments are determent (dr. Boros, 2013). Almost 10 years ago the systems of IFRS and the US GAAP fought spectacularly regarding the fact that the American Securities and Exchange Commission (SEC) did not accept IFRS as the replacing system of the US GAAP. They would have liked to think of it as a possible alternative. Their argument was legitimate from the aspect that the total capitalization of the two biggest European stock exchanges such as the Financial Times and Stock Exchange (FTSE) in London and the Deutscher Aktien IndeX (DAX) in Frankfurt do not exceed even the half of the capitalization of the New York Stock Exchange, on which basis the adaptation to the extremely significant volume even all over world was expected. The European counter-argument was naturally the fact that the reliability of the European accounting system is higher than that of the USA, on which basis an Enron-case would have never happened (Auditor Professional Extension Training, 2003).

EU directives accepted by the member states of the European Union

The accounting systems of the certain EU member states developed due to the EU law harmonization processes started in the 1970-ies. The following directives affected their national accounting acts:

- Directive 4th on Annual accounts of companies
- Directive 7th on Consolidated accounts
- Directive 8th on Qualifications of persons responsible for carrying out the statutory audits of the accounting documents

The Fourth Directive was accepted in 1978 with the aim of improving the comparability; furthermore, it was the first directive where the "real image" conception appeared. The objective of the Seventh Directive was the harmonization of making accounts in case of companies, as well as the fact that the company should reflect the financial and profit condition by the given calculation methods and exemption criteria as if it was a single enterprise. With its acceptance in 1983 it brought a relevant change to the certain member states as it made the construction of consolidated accounts compulsory everywhere. The Eighth Directive gave guidelines for the position, person, conflicts of interest, independency and qualification of the auditor by its acceptance in 1984 (Dr. Pál, 2010).

The essence of the concern account is the introduction of the joint capital, financial and profit conditions of enterprises of being independent from the legal aspect but affecting each other from the economic aspect, as if they operated as a single enterprise.

Table 1 shows the difficulties and the eventful journey of the law harmonization often lasting for decades. It means that the certain states joining the European Union could adapt the directives decided by the European Economic Community only after decades.

Table 1: Adaptation of Accounting Directives by the Member States of the European Union

Accession countries	Year of EU accession	Adapting 4th Directive	Adapting 7th Directive
Belgium	1957	1983	1990
The Netherlands	1957	1983	1988
France	1957	1983	1986
Germany	1957	1985	1985

Italy	1957	1991	1991
Denmark	1973	1981	1990
United Kingdom	1973	1981	1989
Ireland	1973	1986	1992
Greece	1981	1986	1990
Portugal	1986	1989	1991
Spain	1986	1989	1989
Finland	1995	1998	1998
Sweden	1995	1995	1995
Austria	1995	1996	1996

Source: Own editing on the basis of Pál, 2010

Though the directives provided the opportunity for the commonality, certain EU member states realized that there were still giant differences in the methods of compiling accounts, thus they aimed at approaching the international standards altogether with the countries where accession negotiations had already been under way. (Szabó, 2013)

Act C of 2000 on Accounting in harmony with the directives of the European Union was one of the most important steps of Hungary in the past in its pathway towards the international accounting standards.

This act was born four years before Hungary's EU accession, which was modified for several times, but at the time of the accession, it did not change significantly, though it was expected. (Ladó et al, 2013)

The Act determines accounting rules which are in harmony with the directives of the European Union regarding this legal field, and take the international accounting principles into consideration, as well as it refers to the official issue of the European Union and the 1606/2002/EC regulation (Act C of 2000).

The aim of the Regulation of the European Parliament and the Council of July 19 in 2002 is to accept and utilize the International Accounting Standards in the European Union, to unify the financial information of companies in order that the accounts should become transparent and comparable (1616/2002 EC Regulation). Though since 2005 it has been compulsory for every listed company to compile its account according to the IFRS, the certain member states may allow the use of the system.

Standards by the IASB, the System of IFRS

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). It is interesting that contrary the fact that the great rival, the US GAAP registered as an accounting standard had been formed since the beginning of the 20th century, there were countries from the American continent among the IFRS founders such as the USA, Canada and Mexico altogether with 101 other countries of the world. The basic standards were developed and supervised by 1998, which were called IAS then IFRS since 2001. The EU accepted these standards and made a proposal for their utilization since 2005. As a result every listed company has to compile its aggregate annual account in harmony with the IAS. Mainly capital markets strived for the unification. The foundation of the IFRS has information on 173 countries where their standards are used in case of listed and over-the-counter companies.

Table 2: Relations of Certain Countries to the System of the IFRS

IFRS in relation to the given country	In case of listed companies	In case of over-the- counter companies
Licensed	24	32
Unlicensed	25	45
Compulsory for certain companies	10	34
Compulsory for every company	94	27
There is no stock exchange	*20*	*X*
No information available	*X*	*35*
Total	**173**	**173**

Source: Own editing on the basis of IASPlus.com, 2013

The following aspects were focused on when the IFRS were compiled:
- Developing a standard package which is acknowledged and used all over the world, easy to understand, based on clear frame principles and shows high standard
- Taking needs of ambitious companies as well as small and medium-sized enterprises into consideration
- Advertizing IFRS as the standards and the interpretations of IASB and establishing the opportunity to take them over
- Taking more economic logic and different firm sizes into consideration

The Framework of IFRS is similar to the accounting principles set in the Hungarian Accounting Act; however, this Framework does not reflect such a strict regulation than the Hungarian regulation.

The Framework contains guidelines of conceptual type just like the certain recommendations, reports and institutional guidelines of the EU in the law harmonization processes. The aim in every case is that it should help in the work of legislative bodies of member states and in interpreting for the users of the standards. It is worth mentioning that the American Securities Exchange Commission accepts the aggregated (consolidated) accounts from companies listed in the USA compiled according to the IFRS instead of the US GAAP; furthermore, the American auditors may audit accounts compiled according to IFRS (Dr. Pál, 2010). The main difference between the two systems is the fact that while IFRS prefers the interests of creditor; the US GAAP concentrates on the interests of owners and capital investors. IFRS uses theoretical approaches and lets experts decide and make judges, the US GAAP concentrates on cases and focuses on details. The common point of the systems is the fact that according to the founders of the standards their own system is better (MKVK, 2003).

Characteristics of the Anglo-Saxon and the Continental Accounting Systems

The diversification of the accounting systems in our present world is represented in the following Table.

Table 3: Differences Between Accounting Systems

Anglo-Saxon model	Continental European model
Financing: capital market	Financing: bank credits
Unwritten law	Written law
Strong capital market	Weak capital market
Strong trade organizations of great independence	Weak trade organizations of smaller independence
Investor view	Creditor view
Transparency	Discretion, secrecy
The financial account and tax regulations differ	The financial account and tax regulations are harmonized
True and fair	Legal and fair
Principle of faithfulness	Principle of conservatism
Depreciation during useful life	Depreciation on the basis of tax rules
No legal creation of provisions	Legal creation of provisions
Narrower provision	Greater provision
No hidden reserves	There are hidden reserves
Opportunity for capitalization of development costs	Accounting for development costs as costs
Percentage of completion method of long term contracts	Completeness method of long term contracts

Source: Own editing, 2014

A Few Fields of the Harmonization of Accounting Statements on the Basis of IFRS

The aim of the harmonization of certain accounting systems is to provide useful information for stakeholders, to compile general statements which may be interpreted in the same way. The next figure illustrates its elements.
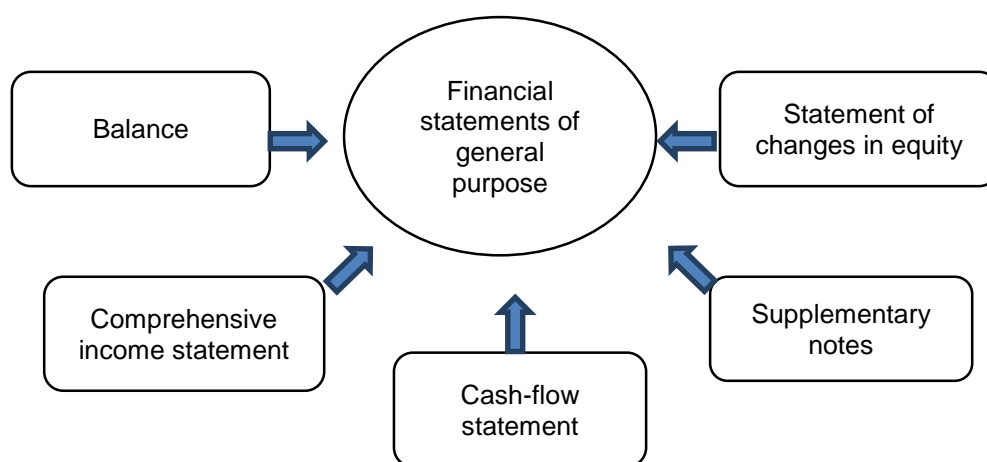
Figure 1: The Elements of Financial Statements of General Purposes
Source: Lakatos et al., 2013

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The statement above is the results of compiling a financial statement of general purposes. Besides financial statements entities report accounting information of general purposes, such as overviews. On the basis of the Framework the financial statements of general purposes compiled for external users are just subsets of the accounting. The standard creators take the capital insurers to be the stakeholders to whom the financial statements are compiled, at the same time they have to be compiled from the aspect of the entity. The Framework gives a broader interpretation on the capital insurers: they include owners and creditors interpreted in a broader way (lenders, suppliers, potential investors in the future etc.)

It is doubtless that further data requirements and stakeholders may be interpreted; however, the statements compiled for primary users may be useful for these groups as well. For example the data requirement of the management may be satisfied by the statements of general purposes; however, any important pieces of information relating to the entity are available for this group thus it is not necessary to help them through regulation.

When compiling the IFRS the financial statements of general purposes of profit-oriented enterprises were concentrated.
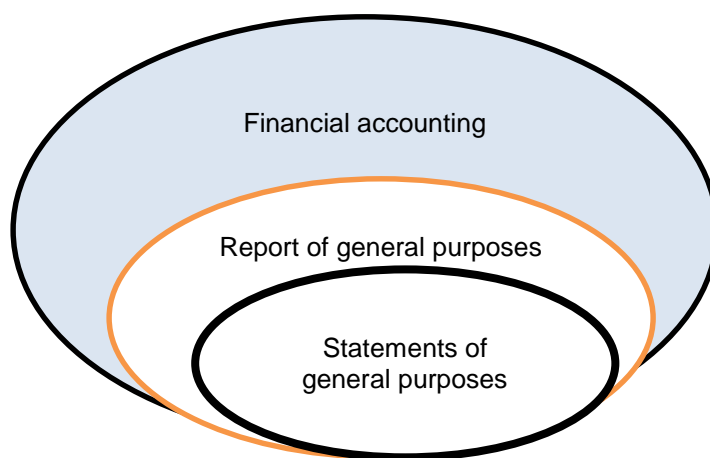
Figure 2: The Border of the Framework in the Set of the Accounting
Source:Lakatos et al, 2013…

Conclusions
In harmonizing with the accounting regulation Hungary has walked a long way in order that it should meet the requirements and regulations of both the national and international stakeholders. The technical development has brought the opportunity of the acceleration of accounting and making it more precise. The continuous calculation of time value of money and other assets, evaluating it to valid values, making estimates were unimaginable earlier in enterprises without computer techniques and other achievements of the modern age. (Molnár, 2013)
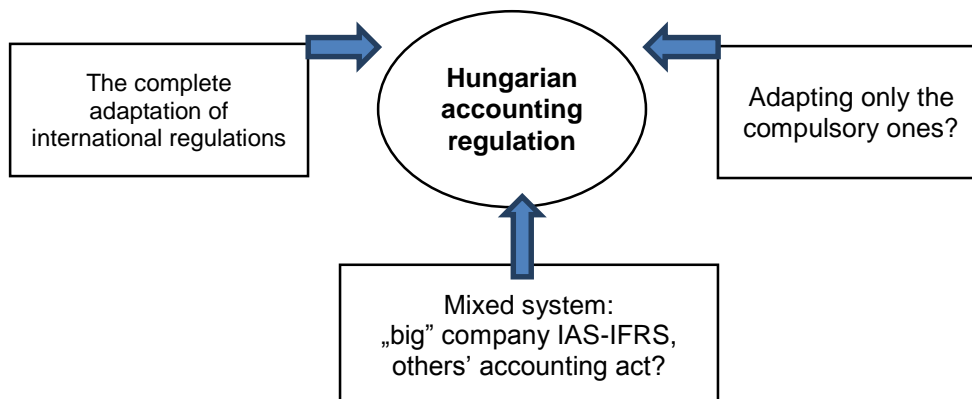
Figure 3: The Possible Future of the National Standards
Source: Own editing on the basis of Mészáros, 2013; Molnár 2013.

Figure 3 demonstrates the opportunities that what ways a national regulation being similar to the Hungarian one may choose during its own development. Those who are for fully harmonization say that this model is the most suitable one for ensuring the comparability; furthermore surplus costs will not occur for international enterprises during the consolidation. It is doubtful, however, that to what rate this model is suitable for expanding it for smaller, national enterprises, as they are interested in allowing the release of the detailed account. Only the national regulation is not a sustainable way in the world of the globalization naturally, which problem may be solved by introducing the national standards as trading principles ensuring a middle way. The question is that what weight and internal ratio the certain types of regulations should represent in the case of the different views.

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CASE STUDY: THE IMPACT OF INNOVATION PROCESS ON TURNOVER OF GEO – TOPO COMPANY

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This paper presents a case study of the impact of innovation process on the turnover of the GEO - TOPO company in order to highlight the existence of less convenient situations where innovation costs are not included in income madeby the company. Thru this study the paperwork highlights the importance of company's turnover despite the fact that this indicator is one that presents past performances. Most of the existing literature presents positive aspects of the innovation process, and for the future decisions recommends economic forecast. There are studies showing the risks of the innovation process, including the possibility of bankruptcy of the company due to the failure of the innovation process, but this work represents a practical reality, a point of arrival for the past research and a starting point for the future theories. Bibliographic documentation and research of the enterprises documents were the basis of confirmation for theories regarding the risks of innovation process and an anchor for issuing statements about the negative impact of innovation process on turnover. The results obtained in this study show the importance of turnover in future decisions of the enterprise in order to support an possible and immediate failure. This study has its limitation, because it refers to the result of a service provider SME that has introduced a process of organizational innovation. The results are accurate, this work is part of a broader research regarding the impact of innovation process on companies economic and financial performance. This research supports the entrepreneur in decisions making, comes as a backup plan to avoid bankruptcy, and proposes a closer connection between the marketing department and the accounting in an enterprise. In businesses that have outsourced accounting services, this study provides contractor necessary information for a correct decision without the need for a detailed explanation of the accounts and positions balance sheet.

Introduction
The innovation process represent a very important subject in a world which is under constant change. Productivity and the performance of the innovative activity of the European countries has been left beefing its global competitors in the last decades. (Hashi and Stojčić 2012: 353 - 360). Hashi and Stojčić (2012) through their work represent one of the first attempts at comparing determining factors of the innovative process in the mature economical markets of the Western European countries and of the transition economies of the Central and Eastern Europe that have joined the EU as the last.
Entrepreneurial orientation can be considered a set of processes, practices, philosophies and decision making activities that lead societies towards innovation (Madhoushi, Sadati, Mahdivand and Mihandost, 2011: 313-315). The literatures states that entrepreneurial activities have a direct effect on the process of innovation.
The chosen field of study represents an interesting subject both for entrepreneurs and for researchers, because this topic represents and applicative research on the process of innovation and shows the risk of failure with which the entrepreneurs can come in contact.

This works analyses the economic and financial implications of the introduction in the GEO – TOPO S.R.L. company of the whose object is represented by the implementation and certification of the quality management and of environment, according to SR EN ISO 9001:2008 şi SR EN ISO 14001:2005. Through the economic and financial analysis performed for this work identifies the effect of the innovation process had on the performance of the company, shows the existence of a perfect moment and a bad moment for innovation, which need to be taken into consideration by the entrepreneurs when making a decision. Through rational, logical and scientific explanations this work brings an idea, but without making false expectations, that by selecting innovation you can succeed even though sometimes you need to perform extra work.

Literature review:
The literature from this field presents a series of variables from which the entrepreneurial orientation depends: the entrepreneurial performance, strategic planning, control over personnel, management of human resources, providing adequate opportunities for the creativity of the employees and their motivation, level of education, organizational position, age and professional experience, psychological characteristics and managerial abilities, social capital, politics and national culture. (Maatofi şi Tajeddini, 2011:22).
The orientation towards innovation represents and ensemble of beliefs and understandings that lead to a large spectra of action of the company and resulting in competences that activate innovation in the company. (Siguaw, Simpson şi Enz 2006: 561)
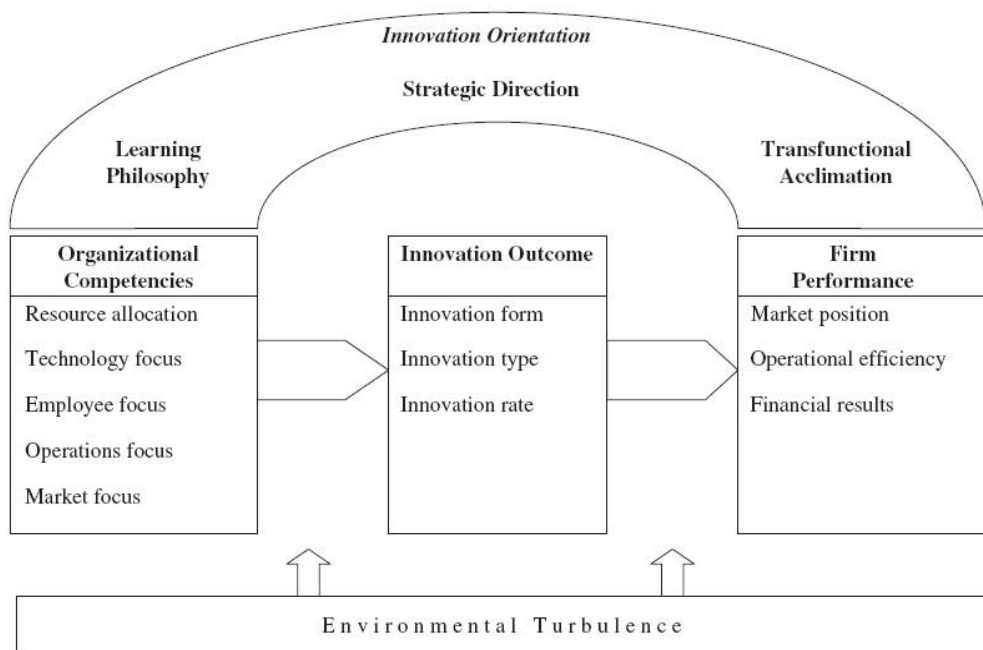
Figure 1: The model of orientation towards innovation.
Source: Siguaw Judy A., Simpson Penny M., Enz Cathy A., (2006), "Conceptualizing Innovation Orientation: A Framework for Study and Integration of Innovation Research" in The Journal of Product Innovation Management, nr. 23, page 561

The learning philosophy defined as an universal ensemble of organizational understandings on knowledge, rationale, assimilation, transfer and the use of knowledge

in the company (Siguaw, Simpson și Enz 2006:561) can be extended up to the acceptance of possible results and of the possible renewal of the wasted resources.

The strategic direction represents the concepts of business of companies that are oriented to innovation, positioned to the future and captured in strategic beliefs that define who is the company and how are the activities corroborated in it to ensure that innovation happens under the time and form of the strategic direction. (Siguaw, Simpson și Enz 2006:561). The existing researches in the field support the idea that the strategic direction as a part of the orientation towards innovation completes the entrepreneurial orientation and that both encourage strategies that lead to the creation of new ideas and facilitate the proactive positioning and competitively aggressive.

The trans-functional acclimatization represents an unique ensemble of structures and principles that determine activities and behaviors and are integrated in every functional part of the company (Siguaw, Simpson și Enz, 2006:561).

The improvement of the company performance represents the scope of the economic activities performed by the entrepreneur and the innovation process represents the meant through which this scope is achieved, but, it is not possible to discuss the performance of the company and its evaluation without defining the term of efficiency and effectiveness. The presentation of efficiency as the report between the achieved result and the effort through meant and used resources and the use of the term „traditional" and „modern" is increasingly comment in literature with specifying the financial indicators are the traditional ones and the nonfinancial indicators are the modern ones (Radu și Țaicu 2009: 132 -134). Gruian (2010: 245) to explain the term efficiency of a company uses in his work terms like productivity, effectiveness , that offer the company the attribute „competitive" and ensures this its presence on the market. In these conditions, defines performance as a „special result that comes from the field of managements, economic, commercial etc., which implies effectiveness and competitiveness of companies and the process and structural behaviors".

Iyer, Srivastava, Rawwas (2014:56) consider that the performance of the company need to be analyzed on the operational level, because the first impact is shown on this level. The value and dynamics of the actives represents and advantage. The conclusion of the three researchers on the improvement of the operational performance of the company refers mostly on the improvement of the capacity for cooperation of the company with the exterior.

3 orientations of the term performance can be distinguished based on the level of realization of its strategic objectives, creation of value and productivity and effectiveness of the company and sustain the subjective feeling of the term performance of the company materialized when the objectives are reached, despite the major objective of the maximization of the property of the investors (Stancu, Stancu, Oproiu 2013:25).

Research Methodology

At elaborating this paper was used documentary research, applicative research and the developmental research . In the documentary research was used the bibliographic research from online scientific databases. Were investigated and analyzes accounting documents provided by the company such as the annual financial statements, the balance sheet and the project to of access funds in order to implement innovation. Applied research, based on information from documentary research was conducted on the financial statements of the company in financial exercises subsequent years : 2009, 2010, 2011 . It was chosen this period of three years, because it is a short-term study of the effects of innovation process on the main economic and financial indicators of GEO - TOPO company. As base period was chosen in 2009 , the year preceding the year in which the innovation process has been completed. As a final research year was elected 2011, the year following the year in which the innovation process has been completed.

As a result of research – documentation and applied research , has raised the question whether there is an opportune time to make the decision to innovate in terms of financial performance of the company leaving room for further research on forecasting the ideal time for innovation.

The research results

Company's turnover is the most stable operating indicator. Literature presents the financial indicators as easily manipulated by the chosen policies and thus can easily reach an incorrect assessment of reality. So, the way how chosen accounting policies and accounting treatments of various economic situations are depend on the design and calculation of the main targets (Cheng 2012: 155). Turnover represents the value of sold goods value of provided services and a distortion of this indicator means tax evasion and in this case here stops the economic processes and enters in application the criminal law. The GEO – TOPO company and the Ministry of Small and Medium sized Enterprises, Commerce and Business Environment has signed an financing contract for project from European Fund for Regional Development trough Operational Sectorial Program "Increase of Economic Competitiveness" – Priority Axis 1 - „Innovative and eco-efficient production system", from the field of 1.1 „Productive investments and the preparation for the market competition, especially in SME's". Total value of project is 51.170,00 lei. The object of the project is the implementation and certification of quality and environment management system according to EN ISO 9001:2008 and EN ISO 14001:2005. The investment in organizational innovation was performed in order to increase profits. Although profit growth can be achieved both due to lower costs and to the reduction in income or combined, the optimal solution chosen by the enterprise chosen was to increase revenue and decreasing the costs, because the company has hired.

Analysis of turnover dynamics

No	Indicators	2009	2010	2011	$\overline{R}$(%)
1	Current turnover (lei)	423.586	506.848	445.747	+7,6
2	Prices index (services) (%)	-	111	107	-
3	Corrected turnover through deflating (lei)	423.586	456.619,82	375.302,69	-5,00
4	Corrected turnover through inflating (lei)	503.093,09	562.601,28	445.747	-4,47

Form data presented in the upper table it can be seen, that in current values the turnover has made an insignificant grow of 7,6%. Over the past three years the price increase due to inflation affects the real growth of turnover. By correcting turnover in order to eliminate the effect of inflation (by deflating or inflating) it can be observed that the real growth in turnover is negative, which affected all economic indicators - financial of the enterprise. Thus, it can be seen that in the following year in which the innovation was made, objective of the implemented process has not been achieved.

Critical turnover (lei)		
2009	2010	2011
351.023,49	411.900,43	433.324,75

Through the analysis of turnover and critical turnover, in 2011critical har the closest value to realized turnover.

At first glance it is seen that the effect of innovation process on turnover is not the one that has been expected, so that in 2011, when the enterprise should supposed to be fully

enjoying the benefits of introduced innovation, its business turnover decreases. From a detailed analysis of the internal processes of the company, the introduction of an enterprise's organizational innovations requires also the adaptation of existing staff to new work processes and procedures and new organizing. The discussions with the owner of the enterprise, having as a basis the model of orientation towards innovation presented above it can be concluded that to reduce shock waves produced by the organizational change trough the introduction of organizational innovation, the optimum time to innovate it's the time in which, the turnover and profits can suffer setbacks, but without affecting the existence of the company. In this enterprise organizational innovation process was implemented when the turnover has achieved a high value and business and could afford to support its decline. In a service companies, in which the human factor is the main mode to achieve revenue and in which occurs organizational changes thru introducing organizational innovations, the failure or the success depends heavily on the staff resilience and the customers and external collaborators capacity to receptivity to new.

Conclusions

Thru this study is intended to bring closer the accountant to the manager in order to act for the best interest of the entrepreneur. This study presents the least enjoyable part of the innovation process, namely the fact in which the amounts of invested money in the implementation of the innovation process are not to be found in the company's performance, i.e. expenditures are not generating revenue in the near future. Choosing the optimal moment in taking decision to innovate is a very important factor that can make the difference between business continuity and bankruptcy. Because performance indicators are indicators of past enterprise performance, in choosing the optimal moment for innovation should take into account the past situation , and be born the question: " How long can the past to support a less productive future? " This study contributes to the increasing of importance of enterprises past in actions of present and future without trying to minimize the value that economic forecasts has in decision-making process or to dramatize the risk of failure of the innovation process. This study has its limitations because the applied research has been performed on a SME in the service sector, where human capital cannot be controlled and reprogrammed in order to bring immediate benefit to the company.

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GREEN BANKING IN ROMANIA

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Abstract: *The paper investigates the green banking in Romania, a new approach of conducting the banking business through considering the corporate social responsibility and environmental aspects. Nowadays, it is difficult to face the globalization and competition in order to asssure the implementation of the green banking practices. The aim of the present study is to identify corporations that have sustainability concerns. To achieve this objective, we set some hypothesis and after this we showed that the corporations are more likely to be included in the list of top banks in the world. Our study is relevant for future research in this area, because of the importance of such aspects in corporations nowadays.The conclusions of our study is that green banking practices in Romania is in an incipient stage.*

Keywords: *green banking, corporate social responsibility, sustainability, Romania*
JEL Classification: G21, G39

Introduction

In our demarche we start with a brief literature review regarding the corporate economic, social, environmental responsibility aspects, followed by the description of the research methodology. After these, we presented the results and some discussions, accompanied by conclusions and future research.

Banking industry plays an important role in all economies. Green banking means a bank that has internal activities that are environmentaly friendly and social responsible, such as reducing the electricity use (for air conditioners, lights, computers, printers, atms), reducing the paper use (communication letters, statements, reports, documentations, letters) and external activities, such as those related to customers, society and other stakeholders. A green bank will encourage online transfer/ account opening / checking, reduce paper /energy consumption of clients, mobile banking, video conference, green house loans, eco friendly car loans, green credit for business that have eco friendly measures, green cards, green education loan, green transprt.

There are some benefits for green banks:
- they increase their image, the goodwill, reputation;
- attract capital, partners;
- gaining or retaining customers, partners;
- reduce costs;
- increase the environment friendly loans;
- increase competitiveness;
- environment friendly use of resources;

Obstacles in implementation are:

-insufficient knowledge of the relationship with performance;

-the perception concerning costs;

-the lack of time or other resources;

-the lack of know how;

-it is a slow process,

-the voluntary nature.

Michael Porter and Mark Kramer (2002), noted that "in the long run…social and economic goals are not inherently conflicting but integrally connected" (p. 5). They see a symbiosis between economic / social investments / returns, more exactly organizations must focus on that actions that bring benefits both for them and for society.

Regarding the regulation there are The Global Reporting Initiative (GRI) and sustainability guidelines on triple bottom line reporting (economic, ecological and social performance).

1. Literature Review

All over the globe various studies have been conducted which have found that there is a positive relationship existing between the firms profitability and its environmental initiatives (Hart and Ahuja, 1994; Hart and Ahuja, 1996, Klassen and McLaughlin, 1996; Russo and Fouts, 1997;). Chang and Fong (2010) examine through a survey the purchase of green products. There are some relevant studies on corporate economical, social, environmental responsibility and sustainability issues. Some authors like Ratanajongkol et al. (2006), Deegan and Gordon (1996) highlights that these indicators are undisclosed. The notion of corporate sustainability performance measurement has been discussed, among others, by Atkinson (2000) Beloff et all (2004), Schwarz et al. (2002), Szekely and Knirsch (2005), Tanzil and Beloff (2006). The social and environmental aspects can have an influence on economic performance and therefore should be a dialogue with stakeholders to be in constant interaction with the way they develop their activity.

There is a very fine line between corporate governance, corporate social responsibility and sustainability **(Table 1)**. All are extremely important for a company and should not be viewed separately. Responsibility for society is a strong differentiating factor for companies, with implications on sustainable development of society. The general criteria for sustainability are economic, social and environmental (ecological), each with more overtones. The notion of sustainability is about ensuring a balanced scale related to the social, environmental and economic aspects (Figge and Hahn, 2004).

Table 1. The General Sustainability Criteria

DIMENSSIONS	CRITERIA
ECONOMICAL	CORUPTION CORPORATE GOVERNANCE THE CUSTOMERS' RELATIONSHIP MANAGEMENT RELATIONSHIP WITH INVESTORS RISK AND CRISIS MANAGEMENT CORPORATE CITYZENSHIP
SOCIAL	DIALOG WITH STAKEHOLDERS INDICATORS OF PRACTICES IN EMPLOYEE FIELD HUMAN CAPITAL DEVELOPMENT SOCIAL REPORTING THE WORK FORCE QUALITY ENVIRONMENTAL POLITICS

DIMENSSIONS	CRITERIA
ECOLOGICAL	ECOEFICIENCY ENVIRONMENTAL REPORTING

Source**:** www.sustainability-index.com – Corporate Sustainability Assessment

An organization whose activity is considering aspects of sustainable development will act in this sense on long term. Sustainability was first mentioned by the World Commission on Environment and Development (1987). Taking responsibility for its impact on society means, first, that an organization accounts for its actions. Social accountability (Brennan and Solomon 2008), a concept that describes the communication of the social and the environmental effects of the actions of an organization by its stakeholders, is an important element of social responsibility. Many companies publish externally audited Annual Reports covering sustainable development issues, reports which vary widely in format, style and methodology of evaluation, even within the same industry. Some authors propose distinctions between corporate social responsibility and corporate sustainability (Lo and Sheu, 2007, Lopez et all, 2007). Efforts to implement sustainability at the corporate level are further complicated by the fact that sustainability initiatives must be tailored to suit local circumstances (Searcy 2009, Steurer et al. 2005, vanMarrewijk 2003). The notion of corporate sustainability performance measurement has been discussed, among others, by Atkinson (2000) Beloff et al. (2004), Schwarz et al. (2002), Szekely and Knirsch (2005), Tanzil and Beloff (2006), Artiach, Lee, Nelson and Walker (2010). The social or environmental issues can have an influence on economic performance and therefore should be a dialogue with stakeholders to be in constant interaction with the way they develop their activity. A number of studies have focused specifically on the balanced scorecard approach to performance measurement (Hubbard 2009, Schaltegger and Wagner 2006, Dias-Sardinha and Reijnders, 2005; Figge et al. 2002). Corporate social responsibility and sustainability issues are more and more present in day by day activity of the organizations.

So, we can see the companies give importance to this issue and elaborate reports in this regard, like guidelines, because of their voluntary nature. Organizations take into account the most representative ones, the Global Reporting Initiative (GRI, 2006). It contains indicators grouped in economical, environmental, performance, social (labour practices, human rights, society, and product responsibility) indicators (GRI, 2006).

2. The methodology of the study

We choosed the banking companies which develop their activity in our country (Figure 1). We identified and analyzed in content their reports. **The criteria which were taken into account in the sample selection were to choose an industry sector and we turned our attention on banking sector. The argument for our choice is to ensure the homogeneity of the sample selected. We used the tool provided by the National Bank of Romania (www.bnr.ro).** We considered the last reports which were published on their websites. The purpose of this paper is to see the situation regarding sustainability. For this we use a qualitative research, a content analysis of these reports an**d also a quantitative** research. The objective of the study is to analyze the green banking practices in Romania and to provide some suggestions in this regards.

Figure 1. Bank Institutions from Romania
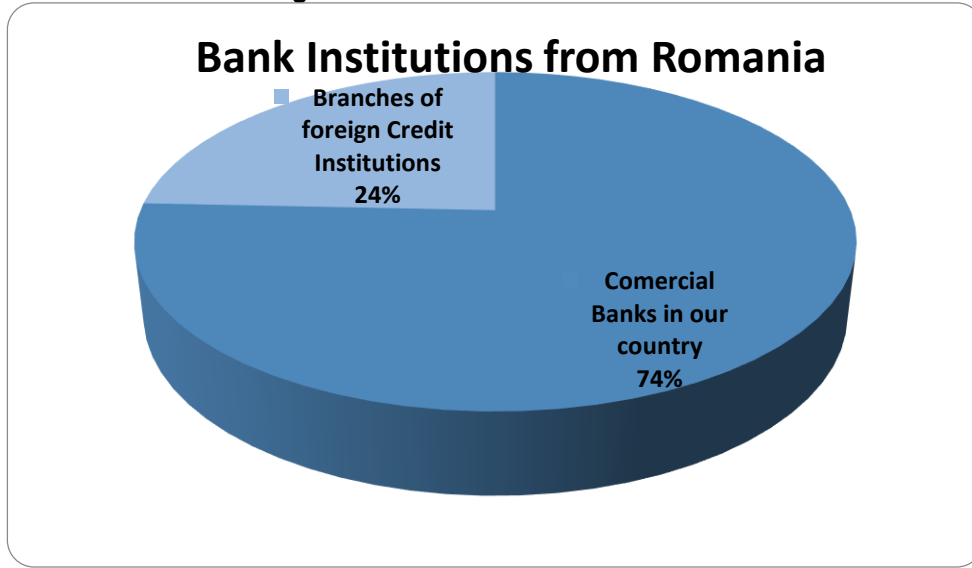
Source: The authors' own projection, based on the empirical research

4.Results and Discussions

In Romania, the implementation of the corporate social responsibility practices by the private sector has been strengthened after European Union accession and was driven mainly by the involvement of the multinational companies that have transferred the practices from the headquarters to local organizations. In our country initiatives related to sustainable development are in its early stages. This behavior was evaluated initially in Romania, based on image considerations, not in terms of sustainable development and stakeholders' needs. In the last years we have seen an increase in implementation of the responsible practices, which are associated with long-term success. There are given incentives to companies investing in environmental protection, renewable energy sources, to help create "green jobs". A broader legislation was implemented also to ensure health and safety at work and to ensure the employees professional development, to reduce discrimination and promote equal opportunities, access to employment and social inclusion of people with disabilities. In 2011, when drafting the National Strategy for Promotion of Corporate Social Responsibility, the public authorities have recognised the importance of the increasing awareness and support the development of social responsibility in Romania, identifying and setting targets in line with the European Union. The results of the research highlights the corporate sustainability practices and can be a basis for further research in this respect, which can be continued with some in depth questionnaire interview to explain how were selected, how are implemented, how they evolved etc. The main conclusion of this study is that the information disclosed are very diverse. This study can also be developed by future research, which can take into account other industry sectors, which can be compared, to show the similarities and the differences which occurs. In our demarche, we looked up on the reports of the companies from our sample. There are different names and also their length varies **(Table 2).** This variety denotes the lack of agreement on disclosure of this information.

Table 2. Types and length of reports from the sample

No	Type of report	Maximum length (pages)	Minimum length (pages)	Mean length (pages)
1	Citizenship Report	86	86	86
2	Corporate Social Responsibility Report	180	38	109
3	Sustainability Report	92	92	92
4	Summary	7	5	6

(Source: the authors, based on the empirical study)

Like we can easly observe from the graphic **(Figure 1),** there are 28 bank institutions in our country (comercial banks), which represent a percent of 74% from total and 9 branches of foreign credit institutions, which represent a percent of 24% from total.

**Figure 2. The Presence of the Corporate Sustainability Officer
in Banking Institutions from Romania**
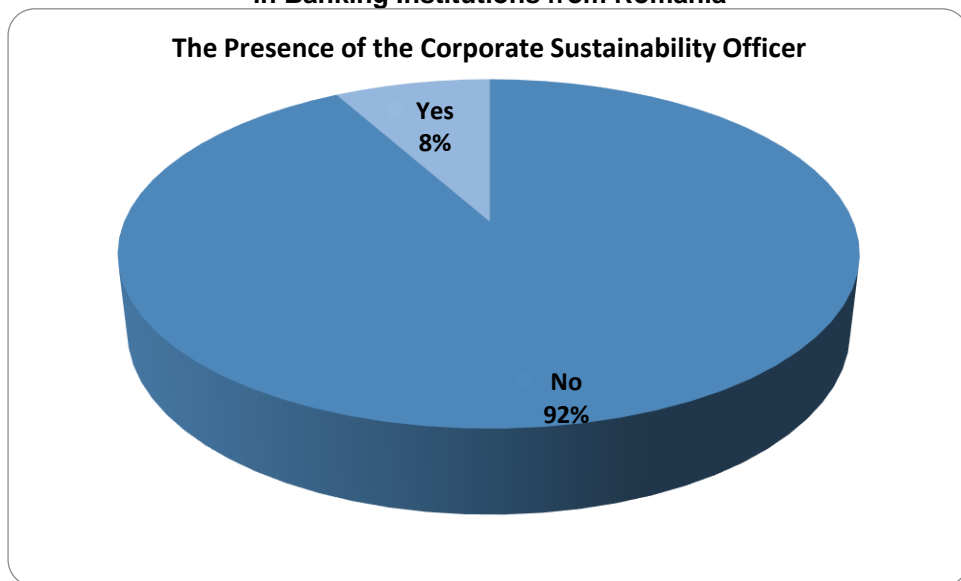
Source: The authors' own projection, based on the empirical research

Regarding the presence of the Corporate Sustainability Officer, like we can easly observe from the graphic below **(Figure 2),** there are only 3 bank institutions in our country (2 comercial banks and one branch of foreign credit institutions in our country), which have such a position, more exactly Piraeus Bank, BRD Groupe Societe Generale and

ING Group, which represent a percent of 8% from total and 34 banks that do not have such a position, which represent a percent of 92% from total. Regarding the presence of the corporate sustainability position in different departments, such as comunication department corporate governance and human resources department, and so on, there are only 5 bank institutions in our country (4 comercial banks and one branch of foreign credit institutions in our country), which have such a position, more exactly BRD Groupe Societe Generale, BCR Erste Group, Intesa Sao Paolo, Piraeus Bank, and ING Group, which represent a percent of 14% from total and 32 banks that do not have such a position, which represent a percent of 86% from total.

Third, we showed that the corporations with positions of chief officers of corporate sustainability officer are more likely to be included in the list of top banks in the world. These bank rankings are compiled from the consolidated balance sheet information available at this date. http://www.accuity.com/useful-links/bank-rankings/

Measures that we found in the sustainability reports:
- employees should be properly trained in terms of green banking loans;
- it should exist a lower interest rate for green fund portfolio for the environmentally friendly projects;
- use of papers on both sides or electronic files ;
- use of online/video/audio communications;
- use natural light;
- use energy saving.

Specific Findings:
- there are banks that have formulated policy for green banking (such as BRD, Raiffeisen, OTP, Unicredit);
- there are banks that have formed a Green Banking Unit (such as Piraeus Bank,).

5. Conclusions

Through the present study we found that the results obtained, which ilustrate the existing situation, are not so ecouraging. The reasons could be: the lack of transparency, the lack of regulation, the lack of infrastructure, the unavailability of natural resources, the low interest or consciousity regarding sustainability, the reticency of stakeholders to use of green products, some managers still consider that these initiatives reduce profit. The companies that are part of our sample are not transparent and does not accord to much importance to sustainability issues. The approached subject is vast and therefore there are some limitations, since it can not be covered in its exhaustivity. This leaves open questions that can be improved and disseminated in future research, such as in depht interviews.

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http://www.accuity.com/useful-links/bank-rankings/

www.bnr.ro
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EUROPEAN ACCOUNTING REGULATION – HISTORY AND PERSPECTIVES

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Abstract: *The first directive regarding the financial reporting at the level of European Union is published in 1978 (The Fourth Directive) and whereas its content does not refer to the group companies, this directive was supplemented by another directive (The Seventh Directive) published in 1983. The two directives regulate in parallel the issues concerning the preparing of the annual financial statements of individual companies, respectively of the group companies. Since 2008 have begun to take shape the point of views regarding the need of the development and publication of some regulations to simplify and to reduce the administrative burdens of the companies, including on the issue of financial reporting. The steps in the direction of simplification of the regulation in accounting area have resulted in June 2013 in The 34th Directive regarding the annual financial statements, the consolidated financial statements and the related reports of certain types of companies. As a member of the European Union, Romania must take into account the implementation of the European legislation in all areas, including in the field of accounting. In this respect, The Fourth Directive regarding the annual accounts of certain types of companies and The Seventh Directive regarding the consolidated accounts have been transposed into Romanian legislation since 2006 through OMFP 1752/2005 when the Romanian accounting regulations have become in accordance to the European directives and not only harmonized with these, and OMFP 3055/2009 brings additional information concerning the rules relating to the consolidation of accounts.*

Keywords: directives, annual accounts, consolidated accounts, financial statements

JEL Classification: M41

Introduction
The status of The Member State of the European Union brings with it the obligation to implement the European legislation in all areas, including the areas of accounting.
As a legal act, o directive sets the objective that need to be reached by all states which are members, the freedom to decide the ways of achieving the objective set remains at the discretion of each Member State.
On the issue of accounting, The Fourth Directive regarding the annual accounts of certain types of companies and The Seventh Directive regarding the consolidated accounts have been transposed into Romanian legislation since 1999 when it was approved the Order 403 of 22 April 1999 regarding the approving of accounting regulations *harmonized* with The Fourth Directive of European Economic Communities and with International Accounting Standards, then through OMFP 1752/2005 regarding the approval of the accounting regulations *in accordance* with the European directives (the order has been applicable from of 01.01.2006), both Directives being transposed into a single Romanian regulation.

Because the purpose of the financial statements is to provide information about the financial position, financial performance (Feleagă, 2007: 201) and the transactions which are run by the economic entity during a given fiscal year, in a same way the consolidated financial statements present the financial situation and the results of a number of private companies, in the form of a single company (Bogdan and others., 2011: 297).

In the years that have followed, at the level of European Union it have been outlined a series of point of views on the simplification and unification of the financial reporting regulations materialized in 2013 in the publication in the Official Journal of the European Union No. L182 in 29.06.2013, of The Directive 2013/34/EU of the European Parliament and of the Council from 26 June 2013 regarding the annual financial statements, the consolidated financial statements and related reports of certain types of companies, of the modification of the Directive 2006/43/EC of the European Parliament and Council and of the repealing of the Directive 78/660/EEC and 83/349/EEC of the Council. The Directive has as term of transposition into national regulations of the Member States the date of July 20, 2015.

1. The History of Elaboration and Amending of the European Directives Regarding the Accounting

The first directive on the issue of financial reporting is The Fourth Directive of the Council of 25 July 1978 regarding the annual accounts of certain types of companies (The Directive 78/660/EEC), published in the Official Journal of European Union   L 222/11/14.8.1978.

Because its content did not made reference to the group companies (the consolidated accounts), the Directive was complemented by another directive, The Seventh Directive of the Council from 13 June 1983 regarding the consolidated accounts (83/349/EEC), published in the Official Journal L 193, 18.7.1983.

The two directives regulate in parallel the issues concerning the financial reporting of the companies, respectively of the group companies. Each of them has been subjected to a series of additions and modifications, as seen in **Figure 1.**
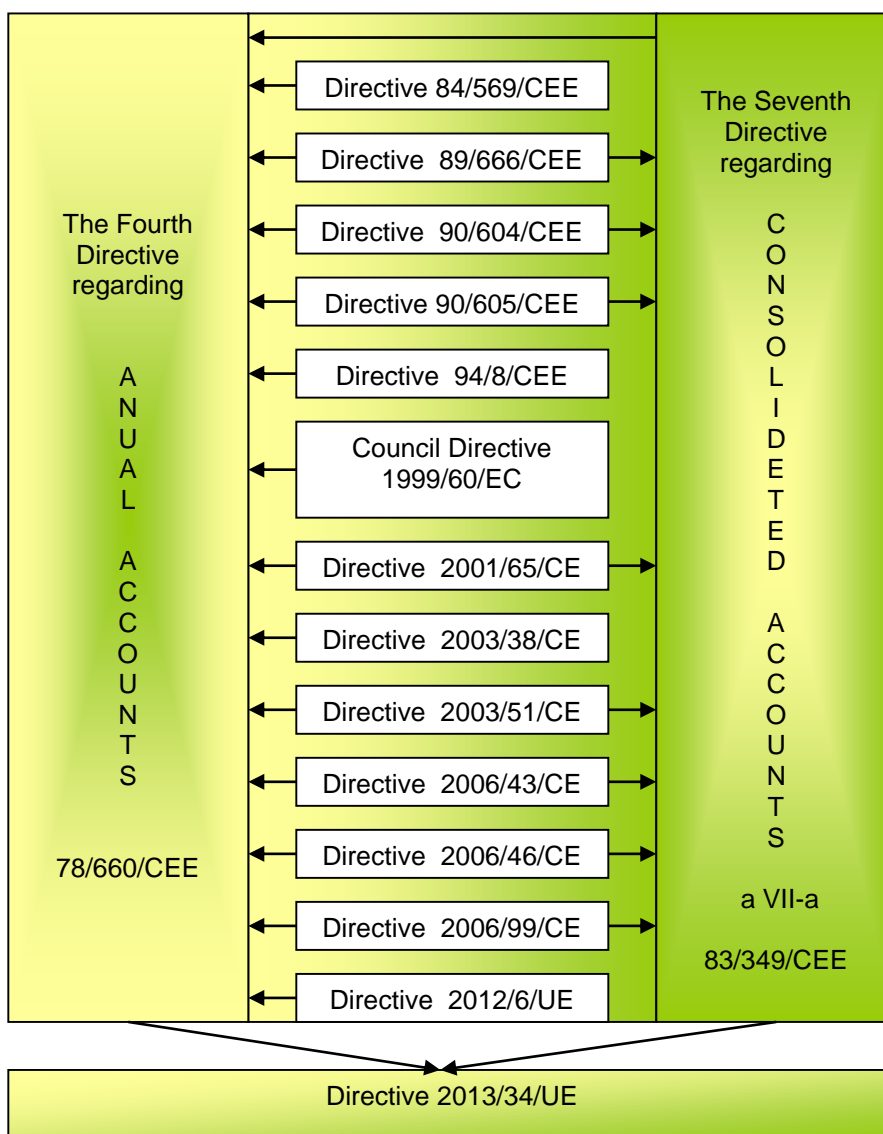
Figure 1. Evolution of the accounting regulations in the European Union
Source: own processing according to http://EUR-Lex.Europa.eu

Since 2008 have begun to take shape opinions that bring into question the need for the origination and development of some regulations which need to track the balance between the administrative tasks and the benefits that these tasks bring, including on the issue of financial reporting. (Communication of the Commission COM/2010/543 the Intelligent Regulation in European Union).
In the same vein, the Communication of the Commission "think small first - a "Small Business Act" for Europe", adopted in June 2008 brings to the foreground the role of the small and medium enterprises in the economies of the Member States and at the global level of European Union and to focus on the principle of "a thinking at a small scale" starting with the process of drafting the rules. (The Communication of the Commission COM/2008/394)

As a result, in December 2008, the European Parliament adopted a resolution in which is highlighted the burdensome nature of the requirements in accounting for IMMs and the need to establish a balance between the interests of users of financial statements and the company's effort to develop these statements so that the reporting requirements do not be overly burdensome, proposing in this matter to the Commission to intensify the effort of reviewing the accounting directives.

In March 2011, the European Council made also proposals for measures regarding the removing of bureaucracy and decreasing of global regulation burden, the improving of the legal framework for IMMs which lead into the final at the increasing of the productivity, improving the business environment and internationalization of the IMMs.

The steps towards the simplification of the regulation in accounting area are continuing and are materialized in April 2011 in "The Single Market Act" which proposed the simplification of the accounting Directives IV and VII with regard to the administrative tasks and financial reporting obligations (The Communication of Commission COM/2011/2006) All of these steps and others which have followed, have resulted in 2013 in The 34th Directive regarding the annual financial statements, consolidated financial statements and related reports of certain types of companies.

2. The Consolidation of European Accounting Regulations into a Single Directive

If until 2013 the accounting regulation at European Union was functioning on two parallel levels, that of the individual annual accounts, respectively of the consolidated accounts, in June of 2013 is adopted The 34th Directive concerning the annual financial statements, the consolidated financial statements and the related reports of certain types of companies which repeals The Fourth Directive (78/660/EEC) for the annual individual statements and a The Seventh Directive (83/349/EEC) for the consolidated financial statements.

The objectives of this Directive are: "to facilitate cross-border investments, improving the comparability of financial statements and reports throughout the European Union, strengthening the public confidence in these documents by including specific information of better quality and with a coherent content"(paragraph 55)

The main recommendations of the directive concerns also:

-the inclusion in the area of applicability only of a certain types of companies with limited liability

- the minimum legal provisions at European Union level with regard to minimum volume of information which need to be presented by the competing companies

-the requirement of publishing the financial statements

- introduction of an accounting system at fair value which could provide the comparative financial information at the level of European Union more relevant than those based on the acquisition cost or the cost of production

-common framework at European Union level for the recognition, assessment and presentation of the information in the financial statements

-the simplification of the reporting system for small enterprises

-exemption of the small groups from the requirement of preparation of the consolidated financial statements

-the audit of financial statements

3. Harmonization and Adaptation of Romanian Regulation to European Directive

The Romanian accounting directives related to European directives already knew two time periods: the pre-accession and post-accession to the European Union. In the period in which Romania was the candidate to the European Union, the accounting regulations, since 1999, have been *harmonized* with the Fourth Directive concerning annual accounts, and since 2005, when it was signed the Treaty of Accession of Romania to the European

Union the accounting regulation are *in accordance* with the two European directives regarding the annual accounts and the consolidated financial statements, the evolution of these regulation being presented in **Figure 2.**
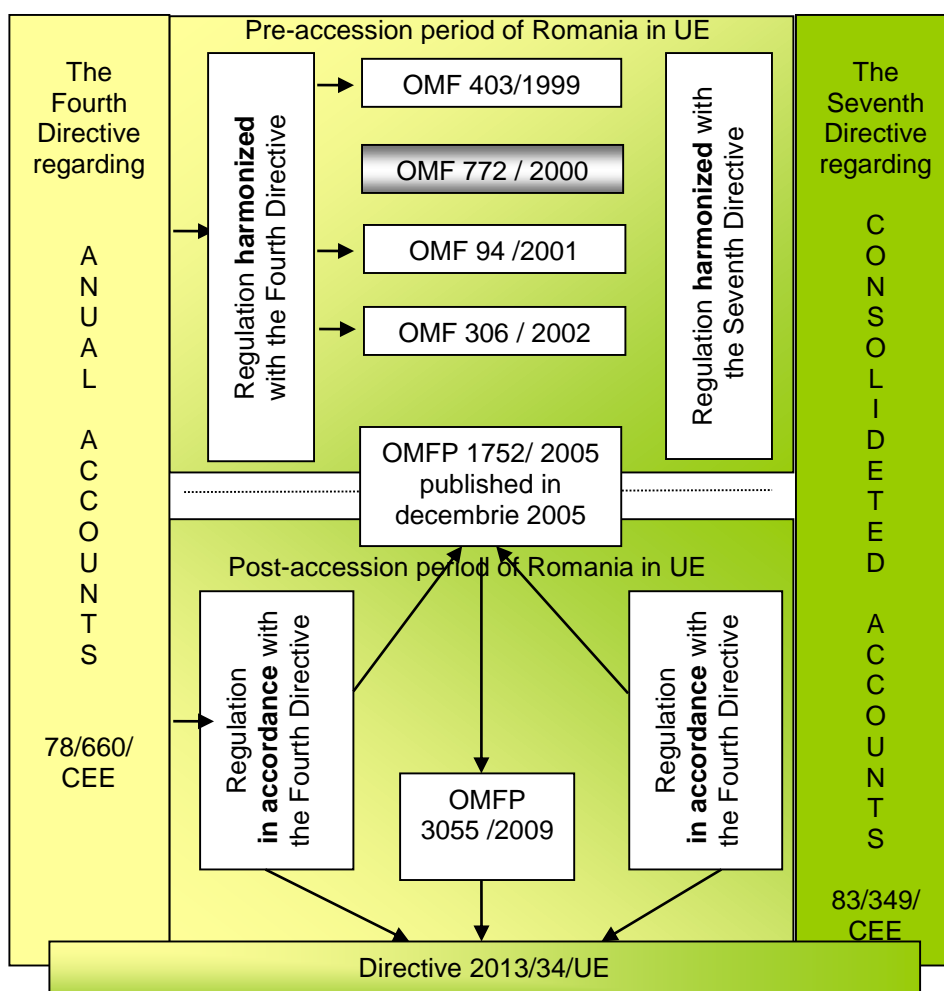
Figure No. 2. The Evolution of the transposition in Romania of the european accounting regulations
Source: own processing

The first step made by Romania towards the harmonization of the accounting with the european directives it was one in 1999 through the Order of the Minister of Finance No. 403/1999 for the approval of Accounting Regulations harmonized with the Fourth Directive of the European Economic Communities and with International Accounting Standards, published in the Official Gazette of Romania, part I, no. 480 of 4 October 1999, when the Romanian accounting was influenced by a greater interest from users of the information internationally comparable, relevant, and credible in terms of the economic reform in progress. (Muller: 90)
In terms of preparing the consolidated financial statements, the first Romanian regulation is OMF 772/2000 implementing the rules regarding the consolidation of the accounts, as

a combination of the international accounting regulations with the European ones (Săcărin, 2001) as a result of which, experimental, for a sample of the groups, it was made the first step.

In 2004-2005, the Romanian legislator, noticing the huge difficulties in the application in Romanian accounting of the international accounting standards, through OMFP 907/2005 provides the implementation starting 2006 of the regulations in accordance with the European directives.

The completion of the harmonization process and the approval of the regulations in accordance with the European directives occur when it was adopted the OMFP 1752/2005 which through its content, in two parts, transpose the content of The Fourth Directive regarding the annual financial statements and of The Seventh Directive regarding the consolidated accounts.

In 2009, this regulation is replaced by OMFP 3055/2009 which does not bring significant changes in regards of preparing the annual financial statements. Instead, it makes additions to the rules of a consolidation of accounts in reference to related entities, evaluation methods, explanatory notes and the administrators' reports.

Conclusions:

The concern of European Union about the usefulness of the financial statements led to the unified development of the accounting directives, for the first time in 1978 for the individual accounts (the Fourth Directive) and then in 1983 on consolidated accounts (The Seventh Directive). These Directives contained the minimum legal provisions at European Union level with regard to the minimum volume of information that need to be presented by the competing companies for the financial information to be compared at European Union level.

As the result of taking position in order to simplify the reporting system for small enterprises in 2013 was adopted The 34th Directive regarding the annual financial statements, consolidated financial statements and related reports of certain types of companies, the Directive that repealed the previous regulations.

In the same direction, Romania, as a Member State of the European Union did include in the national regulation the provisions included in the European directives regarding the accounting, prior to accession only harmonized, and after the signing of the Treaty of Accession, in accordance with these directives.

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OMFP 3055/2009 pentru aprobarea Reglementărilor contabile conforme cu directivele europene publicat în Monitorul Oficial nr.766 bis din 10 noiembrie 2009

Directiva 78/660/CEE – Directiva IV-a a Consiliului din 25 iulie 1978, privind conturile anuale ale anumitor forme de societăţi comerciale, publicată în Junalul Oficial al uniunii Europene L 222/11/14.8.1978

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Directiva 2013/34/UE a Parlamentului European şi a Consiliului din 26 iunie 2013 privind situaţiile financiare anuale, situaţiile financiare consolidate şi rapoartele conexe ale anumitor tipuri de întreprinderi, de modificare a Directivei 2006/43/CE a Parlamentului European și a Consiliului și de abrogare a Directivelor 78/660/CEE şi 83/349/CEE ale Consiliului publicată în Jurnalul Oficial al Uniunii Europene nr. L182 din 29.6.2013

http://eur-lex.europa.eu

ASPECTS CONCERNING THE DETERMINATION OF BANKRUPTCY RISK BY SOLVENCY AND LIQUIDITY RATIOS IN THE COMPANIES LISTED ON THE BUCHAREST STOCK EXCHANGE

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Abstract: *This paper presents issues related to determining the bankruptcy risk for 64 companies listed on the Bucharest Stock Exchange.The purpose of this paper is to determine the percentage of companies falling within the normal range. In the introduction, we set the goal, the research methodology, and the novelty value of this work. Hereinafter, we presented different views of risk concepts, bankruptcy, solvency and liquidity. After that, based on theoretical presentations, a case study was conducted to determine the solvency and liquidity ratios. In the end, on the basis of the above considerations, the conclusions were established and some proposals were listed.*

Keywords: bankruptcy risk, solvency, liquidity, Bucharest Stock Exchange

JEL classification: G12, G31, G32, M41.

1. Introduction

This paper proposes an analysis starting from Paulo Coelho's quote, "*You have to take risks, we will only understand the miracle of life fully when we allow the unexpected to happen*." The objective pursued by this challenge is to statically analyze the bankruptcy risk with the solvency and liquidity ratios. The methodology for the elaboration of the paper involved choosing the theme, documentation, data collection, observation and financial analysis. The chosen theme - *Aspects concerning the determination of bankruptcy risk by solvency and liquidity ratios in the companies listed on the Bucharest Stock Exchange* - is based on the importance of eliminating bankruptcy.

Theme setting was followed by documentation, which was divided into theoretical documentation, taken from specific studies and documentary practice, performed on the 64 companies listed on the Bucharest Stock Exchange. With documentation, we collected the necessary data which were observed and analyzed to determine if companies are within normal limits. The references listed at the end of the study, made it possible to present the state of current knowledge.

The novelty of the study is provided by the analysis of a large number of companies in determining the risk of bankruptcy, which currently is an increasingly debated problem.

2. General approach to bankruptcy risk

"The diagnosis of bankruptcy risk is to assess the company's ability to meet commitments to third parties, so in the evolution of solvency and liquidity of the company. The analysis of bankruptcy risk is done in a static manner by studying financial equilibrium of the balance." (Ion Stancu, 2007: 776)

For "an enterprise to withstand market conditions, it should be solvable, which means to have the ability to cope with the bonds maturing at a time." Professor TeodorHada(1999: 197) also states that "a company is forced to work in balance. Any disturbance of this will inevitably lead to difficulties in conducting business and, ultimately, to bankruptcy."

In what follows, we will address the bankruptcy risk because to prevent a company from bankruptcy is important both for the economy of a country and for the economic agent.

2.1 The concept of risk viewed in financial terms

The risk, according to Pierre Conso, (1985) is "the inability of a company to adapt to time, the lowest cost andenvironmental changes." In "La faisabilite the projet" (Wilson O'Shaughnessy, 1983) the risk is "the possibility that a fact with unintended consequences to occur."

Other authors link the concept of risk to an uncertain, unclear event, so it is,in Mark Dorfman'sview (2007) "variability of the possible result depending on an uncertain, unclear event ". All these definitions were taken over by CristianPăun and Laura Păun in a paper talking about risk (1999: 18 - 19).

Risk structure, according to Professor Monica VioletaAchim(2012:369): "economic risk, financial risk, market risk, tax risk, interest rate risk, marginal risk, specific risk, currency risk and bankruptcy risk."

2.2 Insolvency proceedings of companies

Government Emergency Ordinance 91/2013 defines insolvency as "the state of the debtor's assets that is characterized by shortage of funds available for the payment of certain, liquid and due debts".

Top ten causes of bankruptcy, considered the new cases arising under CNME study, are: customers' bankruptcy, which has a frequency of 21%; very important stocks 11%; suspension of banking competitions 11%; very high staff expenses 10%; death or disease of the manager 10%; poor accounting; ignorance of budgeted costs 9%; unfair maneuvers8%; expropriation; transfer 8%;conjecturaldecrease in turnover 8%; poor business organization6%. These data were taken by Petre Brezeanu (2008: 407) and SterePopescu, FloricaOprişan (1998: 61) from CNME (1977). In 2013, in Romania, the phenomenon of bankruptcy increased, from a total of over 600,000 active enterprises in 2013, registered with the Trade Registry, which are not insolvent, 19,800 have a decisive role in the economy, thesehaving assets greater than one million euro. In the past four years, out of over 120,000 companies which entered into insolvency proceedings, only 2,200 were considered impact companies. The analysis showed that the number of companies in distress or imminent insolvency is much higher than that of healthy companies, this information being provided by Mediafax.

The determination of bankruptcy risk has been based on a number of 64 companies, listed on the Bucharest Stock Exchange, according to top 100 issuers after capitalization. Data processing was conducted in the annual financial statements, expressed in lei for 2011, being published on Bucharest Stock Exchangewebsite.

3. Static methods of analysis of bankruptcy risk

In specialized literature, various studies show that bankruptcy risk can be determined with solvency ratios and liquidity ratios, which are static methods or by the scores, including Altman model, Conan-Holder model, Holder, Loeb and Portiermodel, Central Bank of France model and other not listed scoring methods.

3.1 Solvency analysis

Solvency appears defined in the dictionary of economics (NiţaDobrotă 1995: 440) as "the ability of the company to meet long-term bonds, resulting either from prior contracted commitments, or current operations, or compulsory levies, and property uses, as minimum threshold, a rate of 33% of net assets of the total liabilities."

In an enterprise approach, the American authors estimated that "solvency is the risk associated with the volatility of revenue streams, often described as business risk resulting from the volatility associated with operating income, sales and business indebtedness related to operating activity and financial risk resulting from the impact of debt use on capital profitability, measured by indicators of debt and cash flow coverage."(Hennie van Greuning, 2011: 65)

Ion Stancu (2007: 777) established the indicators used to determine solvency. They are:

- Liability ratio calculated as a proportion in which the total assets are financed from sources other than their own, such as loans, suppliers, state debts.

$$\text{Liability ratio} = \frac{\text{Long-term debt}}{\text{Long-term debt} + \text{Equity}} \times 100$$

- Financial Leverage is the ratio of financial liabilities and equity, reflecting the ability of financial managers to attract external resources to boost equity efficiency.

$$\text{Leverage} = \frac{\text{Long-term debt}}{\text{Equity}} \times 100$$

In the context of limited material liability of shareholders, in the capital, very good solvency is assessed for an indebtedness ratio of less than 50% and a leverage of less than 100%. Further, we determined solvency ratios for the 64 companies which are the subject for our case study, the results of which are presented in Annex 1 "Determination of solvency ratios." For example, liability ratio for Condmag S.A. (Ltd) (COMI) was calculated as follows: {12.546.041/(12.546.041+133.194.377)}×100=8,61%. This indicator is within normal limits as it is less than 50%. Of all companies, 58 recorded normal value. The leverage for the company ElectroputereS.A. (Ltd) (EPT) was determined as follows: (278.383.786/ 20.898.016)×100=1.332,11%, this value does not fall within the normal limits, being greater than 100%. Of all the 64 companies analyzed, 59 are within normal limits.

3.2. Liquidity analysis

Liquidity is "the ability of an economic unit to meet the deadline for the ratio between payment means and the dueliabilities, with the financial resources that depend on its payment obligations"(Gheorghe Bistriceanu, 2006: 436).

International Financial Reporting Standards (2011, Conceptual Framework) statethat liquidity refers to "the availability of cash in the near future, after taking into account financial liabilities related to this period."

The indicators for expressing liquidity ratios (Ion Stancu, 2007: 777-778) are:

- The current ratio compares all potential liquidity associated to the assets under one year with all maturing liabilities under one year.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \times 100$$

Current assets include circulating assets and prepaid expenses, and current liabilities include debts or amounts to be paid within a period of up to one year and deferred income.Normally, this rate must be greater than 100%, which means the existence of a revolving fund. Accounting regulations in force (Order no. 3055/2009) call the ratio "Current liquidity indicator" or "Current capital indicator."

- Quick ratio or Acid test, according to professors Monica VioletaAchim and SorinNicolaeBorlea (2012: 232), highlights the ability of current assets with high and average liquidity to face the current liabilities of the entity.

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}} \times 100$$

Banks require often a minimum limit of this rate of 80%.

- Immediate ratio or cash ratio providesthe interface ofliquid asset elements with short-term liabilities.

$$\text{Cash ratio} = \frac{\text{Cash and cash equivalents} + \text{Short}-\text{term financial investments}}{\text{Current liabilities}} \times 100$$

Average value of this indicator is between 20% and 30%.These ratios express quantitatively different liquidity degrees of active assembly, without analyzing the quality of their liquidity, and therefore they should be interpreted with caution.

In Annex 2 - "Determination of liquidity ratios" –we have presented the results of the indicators specific to liquidity, determined for the 64 companies listed on the Bucharest Stock Exchange.

Current ratio for the company Dafora S.A. (Ltd) (DAFR) was determined as follows: {(138.826.875+106.043)/(113.120.356+291.586)}×100=122,82%. This example falls within the normal range, as well as 49 other company, according to the results published in Annex 2, fall within the normal limit that means they have a result of over 100%. Quick ratio for the companySocepS.A. (Ltd) (SOCP) was calculated as follows: {[(50.304.631+39.720)+1.518.066]/(3.771.610+183.600)×100=1.234,48%. This company exceeds the minimum value of 80%, therefore it falls within the normal limit and, of all the companies analyzed, a total of 40 companies have normal values. Cash ratio for MjMaillisRomânia S.A. (Ltd) (MJM) was determined as follows: {(1.229.957+0)/(42.277.382+160.996)}×100= 2,90%. The value obtained is below the normal limit, set between 20% and 30%, and only five companies analyzed fall within this.

4. Conclusions

With the survey, we found that the risk of bankruptcy during the recessionis a factor of maximum stress for business, especially for small and midsize business.

Of the many definitions given by various authors, or published in special legislation, it appears that the risk of bankruptcy or insolvency, as it is called, expresses the possibility of occurrence of failure tofulfill all due obligations, as a result of closure of the previous and uncoveredyears with losses that have fully exhaustedthe equity. In a famous quote given by Ray Bradbury it is said that *Risk means to jump off a cliff and build your wings on the way down.* After establishing the general aspects of bankruptcy risk, liquidity and solvency ratios were determined for the 64 companies listed on the Bucharest Stock Exchange Value. Following the calculations performed in the two annexes, companies fall within normal values, in a rate of: liability ratio 90,63%, leverage 92,19%, current ratio 76,56%, quick ratio 62,5%, cash ratio 7,81%.

Therefore, based on what we have mentioned above and on the calculations one can say that bankruptcy risk, calculated by solvency and liquidity, is low because most companies considered fall within normal values.

A proposal for companies to reduce bankruptcy in Romania, appeared in 2013, is trying to sell as many products, timely collection of receivables, correct management of liquidity, proper budgeting of customers.

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Annex 1: Determination of solvency ratios

-lei-

Company Name (Trading symbol)	Debts: The amounts to be paid over a period greater than one year	Equity	Debt rate	Leverage
ALR	572.823.176	1.553.478.084	26,94	36,87
ALT	2.601.708	108.817.664	2,34	2,39
ALU	0	67.317.750	0	0
AMO	0	65.085.786	0	0
APC	0	61.770.689	0	0
ARM	21.598.500	174.910	99,20	12.348,35
ARS	0	102.543.403	0	0
ART	303.629.332	428.779.733	41,46	70,81
ARTE	33.936	78.885.933	0,04	0,04
ATB	0	287.058.407	0	0
BCM	0	41.188.707	0	0
BIO	402.687	153.957.996	0,26	0,26
BRM	0	23.061.192	0	0
CAOR	11.402.695	68.265.291	14,31	16,70
CBC	158.376	64.750.678	0,24	0,24
CEON	74.935.959	28.556.970	72,41	262,41
CGC	0	-6.250.349	0	0
CMCM	6.443.536	262.717.089	2,39	2,45
CMF	0	31.673.038	0	0
CMP	76.947.904	292.562.890	20,82	26,30
CNTE	14.849	10.353.981	0,14	0,14
COMI	12.546.041	133.194.377	8,61	9,42

COS	990.135	-92.021.529	-1,09	-1,08
COTE	0	540.817.576	0	0
COTR	30.302.669	129.964.290	18,91	23,32
DAFR	167.042.255	157.590.102	51,46	106,00
ECT	0	11.698.064	0	0
EFO	1.137.324	232.964.488	0,49	0,49
ELGS	0	26.260.086	0	0
ELJ	868.085	25.631.133	3,28	3,39
ELMA	1.558.086	269.148.045	0,58	0,58
ENP	3.507.294	9.936.674	26,09	35,30
EPT	278.383.786	20.898.016	93,02	1.332,11
IMP	64.696.047	296.828.111	17,90	21,80
MECF	0	42.913.158	0	0
MEF	1.506.630	34.928.783	4,14	4,31
MJM	0	-8.607.446	0	0
OIL	4.263.066	345.226.806	1,22	1,23
OLT	986.004.655	-826.884.427	619,66	-119,24
PEI	22.910.779	13.013.030	63,78	176,06
PPL	0	47.572.517	0	0
PREH	25.605.300	202.531.399	11,22	12,64
PTR	0	128.436.335	0	0
RMAH	537.635	39.835.319	1,33	1,35
ROCE	27.393.645	133.187.047	17,06	20,57
RPH	5.061.758	91.212.485	5,26	5,55
RRC	0	-134.091.000	0	0,00
RTRA	1.404.554	23.037.153	5,75	6,10
SCD	0	256.395.838	0	0
SNO	0	88.410.039	0	0
SNP	2.255.228.600	18.890.892.162	10,66	11,94
SOCP	2.299.916	99.800.086	2,25	2,30
SPCU	11.047.413	128.786.567	7,90	8,58
SRT	5.035.956	13.152.686	27,69	38,29
STIB	7.199.501	260.042.571	2,69	2,77
STZ	4.967.730	167.543.309	2,88	2,97
TBM	23.500.980	67.520.493	25,82	34,81
TEL	943.492.527	2.468.483.557	27,65	38,22
TGN	75.147.643	3.262.877.964	2,25	2,30
TRP	35.999.810	130.073.871	21,68	27,68
TUFE	17.119.011	173.052.703	9,00	9,89
UAM	7.310.786	46.546.752	13,57	15,71
VESY	153.352	18.597.132	0,82	0,82
VNC	62.321.559	88.234.850	41,39	70,63

Source: www.bvb.ro, Authors' processing

Annex 2: Determination of liquidity ratios

-lei-

Company Name (Trading symbol)	Current assets	Inventories	Current liabilities	Cash and bank accounts	Short-term investments	Current ratio	Quick ratio	Cash ratio
ALR	931.837.290	447.520.845	245.819.828	254.511.559	0	379,07	197,02	103,54
ALT	59.075.202	20.546.081	64.800.322	376.896	341.760	91,16	59,46	1,11
ALU	61.662.978	14.592.025	15.821.444	19.109.137	0	389,74	297,51	120,78
AMO	32.751.343	12.078.850	19.772.384	19.052	0	165,64	104,55	0,10
APC	54.037.475	20.506.976	18.260.393	18.127.800	0	295,93	183,62	99,27
ARM	13.633.976	12.078.850	6.246.013	228.389	1.221.728	218,28	24,90	23,22
ARS	85.100.086	15.474.466	21.792.580	439.799	37.113.524	390,50	319,49	172,32
ART	427.981.211	215.065.774	164.111.746	9.535.257	1.099.825	260,79	129,74	6,48
ARTE	89.792.940	48.218.297	72.795.812	3.539.505	14.397	123,35	57,11	4,88
ATB	273.949.313	41.932.333	147.660.127	5.339.857	0	185,53	157,13	3,62
BCM	14.260.861	180.829	492.398	2.234.049	11.178.978	2.896,21	2.859,48	2.724,02
BIO	116.257.902	15.231.010	26.547.462	736.337	73.492.034	437,92	380,55	279,61
BRM	13.284.196	11.655.151	6.259.537	29.847	0	212,22	26,03	0,48
CAOR	11.783.174	131.627	8.797.100	9.606.415	0	133,94	132,45	109,20
CBC	18.416.135	10.266.594	8.779.072	362.388	18.720	209,77	92,83	4,34
CEON	11.289.316	7.610.260	55.375.589	1.631.892	0	20,39	6,64	2,95
CGC	13.103.349	8.663.546	63.623.314	371.813	0	20,60	6,98	0,58
CMCM	12.790.287	1.376.300	7.493.163	1.482.873	0	170,69	152,33	19,79
CMF	54.222.451	22.996.245	50.963.383	4.061.680	0	106,39	61,27	7,97
CMP	164.784.778	55.605.002	123.195.195	3.488.210	0	133,76	88,62	2,83
CNTE	8.254.737	1.894.090	1.415.788	4.369.684	0	583,05	449,27	308,64
COMI	83.894.762	14.780.100	42.147.476	15.031.391	0	199,05	163,98	35,66
COS	296.674.042	160.842.006	589.348.406	41.317.864	345.889	50,34	23,05	7,07
COTE	250.499.814	19.509.879	67.904.538	1.328.900	200.335.428	368,90	340,17	296,98
COTR	37.136.854	26.836.115	20.628.933	4.374.801	0	180,02	49,93	21,21
DAFR	138.932.918	51.454.914	113.120.356	4.374.801	0	122,82	77,33	3,87

ECT	7.672.353	2.778.599	3.079.133	644.376	0	249,17	158,93	20,93
EFO	21.494.893	2.708.150	17.589.256	7.934.697	654.496	122,20	106,81	48,83
ELGS	37.696.726	17.691.551	20.136.122	3.720.512	8.885.193	187,21	99,35	62,60
ELJ	17.905.559	10.350.588	2.794.715	1.942.714	4.802	640,69	270,33	69,69
ELMA	89.878.043	21.518.630	51.866.006	12.302.452	179.983	173,29	131,80	24,07
ENP	26.296.479	7.715.933	17.831.316	158.227	0	147,47	104,20	0,89
EPT	128.014.614	18.464.606	127.323.860	5.208.461	1.818	100,54	86,04	4,09
IMP	317.541.504	258.299.960	44.418.653	8.915.228	0	714,88	133,37	20,07
MECF	25.426.598	7.747.394	6.981.407	10.358.837	528.832	364,20	253,23	155,95
MEF	24.991.134	13.464.910	4.229.947	6.197.363	0	590,81	272,49	146,51
MJM	11.173.121	2.876.496	42.438.378	1.229.957	0	26,33	19,55	2,90
OIL	16.477.888	2.876.496	26.578.205	1.066.463	0	62,00	51,17	4,01
OLT	322.309.460	101.313.664	2.009.452.066	3.326.508	2.420	16,04	11,00	0,17
PEI	57.875.920	52.918.968	26.921.671	1.506.155	0	214,98	18,41	5,59
PPL	41.076.810	4.992.598	2.790.052	1.033.561	24.217.981	1.472,26	1.293,32	905,06
PREH	63.934.415	12.381.839	33.989.364	14.699.915	0	188,10	151,67	43,25
PTR	82.689.222	5.822.873	11.738.025	16.709.881	0	704,46	654,85	142,36
RMAH	126.639.012	24.358.494	120.614.152	15.082.162	0	105,00	84,80	12,50
ROCE	39.587.745	11.017.892	74.275.264	8.672.653	0	53,30	38,46	11,68
RPH	318.325.730	44.273.210	292.018.475	25.404.405	0	109,01	93,85	8,70
RRC	2.262.802.500	906.137.452	6.617.973.868	43.062.148	0	34,19	20,50	0,65
RTRA	26.076.947	9.873.752	23.421.356	280.157	0	111,34	69,18	1,20
SCD	261.932.403	25.474.665	78.500.876	10.227.387	0	333,67	301,22	13,03
SNO	54.989.153	32.684.422	7.767.081	1.743.302	14.428.783	707,98	287,17	208,21
SNP	5.251.216.086	1.695.805.503	4.710.750.374	567.026.496	0	111,47	75,47	12,04
SOCP	50.344.351	1.518.066	3.955.210	2.673.494	36.019.601	1.272,86	1.234,48	978,28
SPCU	34.810.466	10.809.772	18.756.749	5.695.384	0	185,59	127,96	30,36
SRT	17.081.605	3.442.061	13.052.804	881.031	1.005.093	130,87	104,50	14,45
STIB	153.079.474	46.457.765	112.055.012	2.535.990	13.351.564	136,61	95,15	14,18
STZ	8.080.611	3.081.180	6.614.479	605.733	0	122,17	75,58	9,16
TBM	40.396.433	31.462.798	67.714.785	1.463.811	0	59,66	13,19	2,16
TEL	1.547.821.435	41.723.456	1.755.883.953	178.684.658	126.078.719	88,15	85,77	17,36

TGN	686.250.255	43.247.769	708.584.237	19.154.501	255.607.046	96,85	90,74	38,78
TRP	79.856.837	30.013.441	66.806.132	2.501.319	0	119,54	74,61	3,74
TUFE	15.835.710	909.212	3.931.462	13.222.585	100	402,79	379,67	336,33
UAM	46.193.959	22.968.122	42.993.393	1.787.067	0	107,44	54,02	4,16
VESY	23.099.179	9.717.323	24.611.734	1.157.131	0	93,85	54,37	4,70
VNC	63.242.222	22.546.777	74.129.826	870.784	145	85,31	54,90	1,17

Source:www.bvb.ro, Authors' processing

EVALUATION OF THE CHARACTERISTICS OF GOODWILL IN IFRS

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Abstract: *Assessment is one of the most debated areas in accountancy, since the choice of valuation procedures, methods directly influence an entity's financial situation, alterations and performance. The applications of International Financial Reporting Standards are mandatory for quoted companies in the EU since 2005. In my study/paper I deal with a specifically treated area of accountancy, the regulation of goodwill'sevaluationin the IFRS system. Since this area is jointly regulated by several standards, my goal is to provide a comprehensive view of standards regarding the evaluation of goodwill, their consistency paying particular attention to the hypothetical approaches and evaluation philosophy of IAS 36 Impairment of Assets standard. Since goodwill acquired in a business combination does not represent independent cash flow from other asset and group of asset, therefore its valuation requires specific accounting treatment. Standards determine the concept, the criteria for recognizing, the rules applied in initial measurement of goodwill, and later the limits of the impairment to be recognised derived from the subsequent period'sprice reduction of the goodwill and the related tax effects. My thesis detailsa specific set of concepts, which is connected to the determination of thegoodwill's value. Itincludesthe concepts of cash generating unit, recoverable amount, value in use and fair value less costs to sell. I give full details about impairment test, as a particular evaluation procedure, I introduce the internal and external source of information, which show evidence that the asset may be impaired, I also consider deferred tax effects resulted from the evaluation of goodwill and the identification of effects influencing the performance of the entity. Subsequently, I introduce the specific regulation of the goodwill's evaluation with the help of corporate examples. Having analysed the IFRS reportsof three multinational companies, with different businessactivities, quoted in Budapest Stock Exchange I describe the corporate regulation in connection with the goodwill'sevaluation, the effects of the factors applied in the impairment test and the scenario analysis made by enterprises. Due to the characteristics of goodwill'sevaluation, it is a complex and complicated accounting procedure, which is considerably based on the estimations of the management, which comprises considerable uncertainty. Having used the financial data of the selected entities operating in different areas, I demonstrate what kind of specific indicators are used to determine the value of their cash generating units and which risks are being considered during the estimations.*

Keywords: IFRS; IAS 36; goodwill; cash-generating unit (CGU); impairment test

JEL classification: M41

Introduction

Several high accounting standard systems run in parallel with national regulation in countries worldwide. IFRS is a principle-based standard system based on framework which is designed to regulate the single reporting obligation in companies under IFRS assuring the comparability of corporate performance. In the thesis my goal is to introduce the characteristics of specification and features of the valuation-related standards of goodwill. The objective of IAS 36 Impairment of Assets is to prescribe the procedures that an enterprise applies to ensure that its assets are carried at no more than their recoverable amount (Veress, 2006). According to the specification the assets under standard must be pointed out in accounting estimates.

Literature review and research methodology

In terms of the evaluation goodwill is particularly a long-term managed asset of the enterprise since goodwill is a residual like tangible asset which cannot be valued separately from the enterprise because the acquiring company expects the prevalence over the prospective economic profit precisely from synergy and the efficiency derived from the business combination (Mackenzie et al., 2011).

According to other wording goodwill acquired in a business combination represents a payment made by the acquirer in anticipation of future economic benefits from assets that are not capable of being individually identified and separately recognized (Lakatos et al., 2013). According to Nobes and Norton (1996) the value of recognized goodwill at the company may develop from 2 main sources: on the one hand from buying assets, share acquisition, on the other hand from internal value established by the company oneself. Recognition of goodwill acquired in a business combination consequently deriving from internal values is allowable in every accounting system; however, it is not possible to detect internal goodwill in most systems (IAS 36).

International Financial Reporting Standards includes a comprehensive regulation in connection with the presentation and valuation of goodwill. In the course of goodwill acquired in the business combination does not establish a cash flow unrelated to other assets or asset groups, thus, valuation of goodwill requires specific accounting treatment. Goodwill arising in a business combination is measured as the excess of the cost of the combination over the acquirer's interest in the net fair value of the acquirer's identifiable assets, liabilities and contingent liabilities (IAS 36).

In IFRS regulatory environment goodwill is included in intangible asset assessed as having an indefinite useful life. Intangible asset with an indefinite useful life is cannot be identified clearly, therefore amortization is not possible. Although, their values need to be reviewed if necessary, impairment loss must be recognized.

Fair values of the identifiable assets and liabilities are determined as at the date of each significant step and goodwill is recognized from the date of acquisition. IFRSs as in the Anglo-Saxon legal systems are determined by the margin of the purchase price of the acquired assets and shares and the market value of the buying in net property while the cost of goodwill contrary to the national rules of the continental type of country is determined by the difference between the purchase price of acquirer's assets and shares and the carrying amount of acquirer's net assets (Matukovics 2004). After initial recognition, the acquirer shall measure goodwill acquired in a business combination at cost less any accumulated impairment losses. The estimation of the necessity of impairment is performed by impairment test. The first step of it is to find signals in-company and outside and that the asset may be impaired. If no indication of a potential impairment loss is present, this standard does not require an enterprise to make a formal

estimate of recoverable amount. If, its recoverable amount is less than its carrying amount, the recognition of an impairment loss is needed as the third step (Veress, 2006). Impairment test is performed to determine the value of goodwill is specifically interpreted. It was clearly underlined that goodwill does not generate cash flows independently from other assets or groups of assets and, therefore, the recoverable amount of goodwill as an individual asset cannot be determined. For the purpose of impairment testing, goodwill acquired in a business combination shall, from the acquisition date, be allocated to each of the acquirer's cash-generating units, or groups of cash-generating units, that is expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquire are assigned to those units or groups of units. Impairment testing is performed in case of cash-generating units that were assigned togoodwill arising on acquisition. Impairment test shall be carried out at least yearly, or more often.

A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets (IAS 36). The unit shall be tested for impairment by the entity, whenever there is an indication that the unit may be impaired, by comparing the unit's carrying amount, excluding any goodwill, with its recoverable amount. Testing for impairment involves comparing the recoverable amount of a cash-generating unit with the carrying amount of the cash-generating unit.

Indications that an asset may be impaired derive from the source of information within or outside the entity.

The source of information outside the entity may be:
- evidence is available of obsolescence or physical damage of an asset;
- significant changes with an adverse effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, an asset is used or is expected to be used;
- evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected

The source of information within the entity may be:
- during the period, an asset's market value has declined significantly more than would be expected as a result of the passage of time or normal use;
- market interest rates or other market rates of return on investments have increased during the period, and those increases are likely to affect the discount rate used in calculating an asset's value in use and decrease the asset's recoverable amount materially;
- significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated;
- The carrying amount of the net assets of the entity is more than its market capitalization (Lakatos et al., 2013).

The recoverable amount of a cash-generating unit is the higher of its fair value less costs to sell and its value in use. Fair value less costs to sell is the amount obtainable from the sale of cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal. Value in use is the present value of the future cash flows expected to be derived from cash-generating unit (IAS 36). If there is no reason to believe that an asset's value in use materially exceeds its fair value less costs to sell, the asset's fair value less costs to sell may be used as its recoverable amount. It may be possible to determine fair value less costs to sell, even if an asset is not traded in an active market.

IFRS 13 Fair value standard contains a recommendation to determine the real value of a cash-generating unit. Relying upon this finding, first level inputs in fair value hierarchy are quoted market prices in an active market of equivalent assets or obligations to which the entity can access at the measurement date.

In a cash-generating unit real value almost never can be applicable directly and available without any corrections. The second level of hierarchy input is in connection with CGU-related complex valuation indicator which can be deduced from market data in which operating, financial and non-financial effects are also taken into consideration. For example lead valuation index which is observed prices in affairs concerning a comparing business activity. In the absence of, the tertiary level input in the course of the valuation of cash-generating units. Failing that, the tertiary level input generates a financial forecast in the course of the valuation of fair value in cash-generating units with the help of the own data of it. For example the cash flows of cash-generating units or the financial report made about its results (IFRS 13).

As a result of impairment test, as much as an impairment loss should be recognized for a cash-generating unit if, and only if, its recoverable amount is less than its carrying amount, the allocation of impairment loss is performed in a specific sequence. First, to reduce the carrying amount of any goodwill allocated to the cash-generating unit (group of units) and then if it is necessary the carrying amount of the cash-generating unit must be scaled down. An impairment loss recognized for an asset in prior years should be reversed if, and only if, there has been a change in the estimates used to determine the asset. If this is the case, the carrying amount of the asset shall, except -as described in paragraph −, be increased to its recoverable amount, if there is an indication that an impairment loss recognized for an asset other than goodwill may no longer exist or may have decreased. If fair value decreased by the cost of disposal is determined by the method of discounted cash flow projections, the entity shall disclose the information regarding with the cash flows, the growth rate used to extrapolate cash flow projections beyond the period covered by the most recent budgets/forecasts and discount rate applied to cash flow projections predicted by the management. Entities can put to use every company specific indicators and information in the course of testing cash-generating units with goodwill for impairment leading to more secure estimations based on management's discretion.If we examine the impact of evaluation on corporate performance, the impairment loss of goodwill should be recognized as an expense in the same way as in the dissimilar financial systems resulting lowering effect. However, IFRSs include particular regulation in the aspects of tax purposes (Lakatos et al., 2013).

Many taxation authorities do not allow reductions in the carrying amount of goodwill as a deductible expense in determining taxable profit. In such jurisdictions, goodwill has a tax base of nil. Any difference between the carrying amount of goodwill and its tax base of nil is a taxable temporary difference. A deferred tax liability shall be recognized for all taxable temporary differences of goodwill because it is measured as a residual and the recognition of the deferred tax liability would increase the carrying amount of goodwill (IAS 12).

Practical appliance

I have chosen 3 multinational companies quoted in Budapest Stock Exchange to examine the valuation of goodwill realized in corporate business and due to its dissimilar fields they apply different practices.

Firstly, I introduce the philosophy in connection with the valuation of goodwill at a telecommunication company (Magyar Telekom Plc.). For this company, goodwill acquired in a business combination shall, from the acquisition date is ordered to cash-generating units (CGUs), which identify the cash-generating units at the levels of the enterprise operating segments. Goodwill impairment testing is performed every year. The operating

segment as separated cash-generating units determines the recoverable amount at the fair value decreased by the selling cost of the operating system. Using information analysing discounted cash flow and option selling model derived from market transaction recently is considered such method where the function of market factor maximum while business specific factors are considered as little as possible. In impairment test the corporate uses the Weighted Average Cost of Capital (WACC) and the perpetual growth rate (PGR) depending on where and what features of market it operates. WACC is determined by the model of capital rate using the average beta indicator of firms in industries, the 10-year-old zero coupon, and the debt ratio. The debt ratio is in accordance with the average indebtedness of quoted telecommunication companies while the perpetual growth rate is consistent with the long-term growth rate in the given telecommunication sector. The group performs the impairment test by the 10-year-old future cash flow projections which valuations are based on the market players of the management and the best valuation of industry event. As a result of the impairment test, Magyar Telekom Plc. determined 31 390 million Forints to be impaired of Macedonian cash-generating unit. The main reason of the impairment is that because of the unfavourable economic environment and in the stronger-than-expected mobile market competition, the earnings plan conducted in 2011 had to be decreased by 7-19 % considering the previous term. All these have caused a significant price reduction and substantially higher handset subsidies. The management used the results of the impairment test to counterbalance the loss deriving from cash inflow deficit. Nevertheless, it was unable to counterbalance the foreseeable reduction of revenues by the reduction of operating costs and the cut of investments.

Magyar Telekom Plc. is making a sensitivity analysis in parallel with the impairment loss, in whichrelating to goodwill allocated to cash-generating units it points out how much impairment and further impairments should be determined in so far as the sensitivity parameters are changed in the impairment test.

The first chart shows the scenario analysis in which it can be clearly seen hat level of impairment may be generated in goodwill in the case of a 2% increase in WACC and a 5 % decrease in growth rate.

Table 1: Sensitivity analysis in 2011

CGU	WACC			PGR		
	Applied rate	*Modified rate (+2%)*	*Possible impairment loss (million Ft)*	*Applied rate*	*Modified rate (-5%)*	*Possible impairment loss (million Ft)*
Telekom Hungary	12,99%	14,99%	33969	1,00%	-4,00%	15771
T-systems	13,27%	15,27%	0	1,50%	-3,50%	0
Macedonia	12,11%	14,11%	9170	0,50%	-4,50%	7240
Montenegro	10,54%	12,54%	0	0,00%	-5,00%	0

Source: Own compilation based on the financial statements of Magyar Telekom Plc.

It can be seen that in case of a 2 % points increase for capital cost, an additional 9,17 million Forint would need to be determined to impair supposing CGU in Macedonia.. The recoverable amount of cash-generating units is determined at fair value less costs to sell; calculation of value in use is not carried out. Namely, the value in use method involves a valuation without any future investments, therefore, neither the further capital investments (CAPEX), nor the future income or profit connected to the previous can be considered. In the telecommunications sector long-term insurance of future incomes considerably depends on the future investments. In the case of the group, 80 % of the capital

investments is new investments, thus, application of the method of use-value on a long run would lead to a significant reduction in future cash flows, so it would be distorting effect of accounting estimates.

Secondly financial information of Danubius Hotel and Spa Plc. is presented to introduce the goodwill assessment. In the case of the company cash-generating units are allocated asacquisition, goodwill arising in that business combination which arose in connection with the acquisition of. In the case of the group the recoverable amount in the course of the regular usage of cash-generating units will be determined by the discounting of the expected cash flows. The future cash flows will be determined by the actual operating profit and the five-year-old business plan assuming a 3 % growing rhythm. Evolving the discount rate on the risk-free interest rate, market risk premium, industry beta and the company's indebtedness will be taken into account.

During the analysed period the group did not recognize an impairment loss in respect of goodwill, however, the management also identified a number of key parameters that would be required in case of recognition impairment. Sensitivity analysis conducted by Danubius Hotel Plc. differs from the Telekom's that projected cash-generating units are the key assumptions determined by the value of the recoverable amount and the carrying of the unit to show a match between changes. Table 2 shows how the main assumptions should change to the proportion of that value and the recoverable amount carrying amount of the same place.

Table 2: The necessary changes of Danubius Plc. to harmonize with the required value and the recoverable amount,

Cash-generating unit	Key assumptions	2010	2011	2012
LécebnéLáznéa.s.	Post tax discount rate	67,0%	44,0%	94,0%
	EBITDA	-8,1%	-6,2%	-9,0%
Gundel Ltd.	Pre tax discount rate	29,0%	34,0%	47,0%
	Revenue	-2,2%	-2,7%	-3,1%
Egészségsziget Ltd.	Market value of land	-12,5%	-12,5%	14,8%
Preventiv-Security Plc.	Post tax discount rate	60,0%	46,0%	26,0%
	EBITDA	-4,8%	-8,3%	-28,0%

Source: Own compilation based on the financial statements of Danubius Plc.

Gundel Ltd. for the cash-generating unit is the pro-tax discount rate and the change in income is taken into account in the estimates. For LécebnéLáznéa.s. and the Preventive Security Ltd. after-tax discount rate and EBITDA change, whereas in the case of Egészségsziget Ltd.: factors applied to the market value of the land changes in the estimates, which changes are most vulnerable to future cash flows changes. For larger-scale change in the impairment factors would be necessary. In the third case, the Mol financial statements prepared in accordance with IFRS Plc are analyzed. MOL Group has a number of cash-generating units; the study in terms of the selection of a CGU took place.The allocation of goodwill in terms of operating is largely Austrian market Roth Group's wholesale activities independently form a cash-generating unit.

Table 3: Factors used in the impairment test of Roth Group

Roth Group	2006	2007	2008	2009	2010	2011	2012
Period	3 years	3 years	1year	1 year	1year	1year	1year
Rate of growth	3%	2%	2%	2%	1%	1%	1%
Discountrate	8-9%	7-8%	7-8%	7-9%	8-9%	8-9%	8-9%

Source: Own compilation based on the financial statements of MOL Plc.

It can be clearly seen from the chart that up to 2007 cash flows from the cash-generating unit is taken based on an estimate of flows projected three-year financial plans, compared to the 2008 period decreased from one year. The assumed growth rate also shows a steady decline, in 2006 3%, 2% from 2007 to 2009, while after 2010 only a 1% growth rate is assumed in the estimates. The discount rates used ranged from an average of 7-9% in the period under review. There are changes of key assumptions, which result the equality in the carrying amount of the cash-generating unit and its recoverable amount. In the case of CGU, no impairment loss has been recognized in the period under review. The first line of Table 4 shows the values by which the recoverable amount exceeds the carrying amount. The second and third row includes a sensitivity analysis in which the value and the recoverable amount, the carrying amount of the same result if the parameters used in the estimates would modify the value in the table.I case of a greater change of these valuesthe recoverable amount falls below the carrying amount, so impairment is need to be recorded. The discount rate is determined by the estimates of current and expected risk-free interest rate and the risks specific to the cash-generating unit.

Table 4: Factors used in the sensitivity test of Roth Group

	2006	2007	2008	2009	2010	2011	2012
Differences in the carrying amount of the cash-generating unit and its recoverable amount (mFt)	2 767	586	6 338	476	1 487	1 789	267
Growth in discount rate	2,3%	0,5%	5,0%	1,1%	1,3%	1,2%	0,1%
The difference between the selling price and direct costs	-4,0%	-5,2%	-12,3%	-4,5%	-	-	-

Source: Own compilation based on the financial statements of MOL Plc.

Management has reviewed the differences between the selling prices and direct costs lower than the dissimilarity to 2009 that because of increased competition and as a result may be that the group is unable to pass on higher direct costs for its customers. It could be seen in these theanalysed company that the cash-generating units are determined by different aspectsto which the goodwill is allocated.This fact alone shows the goodwill, as the difficulty of evaluating assets together. All companies have highlighted uncertainties and risks associated with estimates, but special attention was paid to filter these uncertainties. Simulations attempt to quantify the impact of changes occur in the assumptions applied in the estimations.

Conclusions

My aim in this study was a special assessment area, the presentation of the evaluation of the regulatory environment of goodwill with the International Financial Reporting Standards. The corporate practice of valuing a tangible asset is based on uncertain estimates, making it particularly difficult task for an intangible asset. Because the goodwill acquired in the business combination does not generate cash flows independently of other device, so self-assessment is not possible.The most commonly used in the discounted cash flow method in this case, determining the value of the cash-generating units to which goodwill was allocated to the acquisition date. However, the companies serving different factors emphasis that should be taken into account when estimating the recoverable amount is determined by management.Looking at the example of three multinational

companies found that a number of factors and these factors affect the amount of goodwill. However, these factors reflect estimates of management concerning the future; thus, they carry a high degree of uncertainty. As we have seen for some factors, small changes in the factors can have a significant effect on the recorded value of assets and likely to affect the financial position of the enterprise and income-generating capacity.

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ROLE AND SIGNIFICANCE OF STATEMENT OF OTHER COMPREHENSIVE INCOME– IN RESPECT OF REPORTING COMPANIES' PERFORMANCE

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Abstract: *A commonly accepted rule-system, which name was International Financial Reporting Standards (IFRS) created the framework for represent the financial performace, and other facts related to the company's health. In the system of IFRS profit is not equal to income less expenses, this deviation led to the other comprehensive income, OCI term. IFRS have created the term of other comprehensive income, but knowledge and using of it is not widespread. In this paper I tend to present the meaning and essence of this income category, and to reveal how it is work in corporate practice. As basis of the research, definitions and formats related to the statement of comprehensive income will be presented in the paper first. In order to get a clear picture about the differences between the income statements, I make a comparison of the IFRS and the Hungarian Accounting Act in the field of performance's representation. As a result of my comparison I've stated that the EU accepted the international financial reporting standards to present the financial performance of publicly traded companies, and as EU member state it is obligatory for the Hungarian companies as well. This is the reason why Hungary's present task is taking over the IFRS mentality. After the comparative analysis I've examined the Statement of other comprehensive income in the practice of 11 listed companies in the Budapest Stock Exchange. The Premium category includes those companies' series of liquid shares, which has got broader investor base. The aim of this examination was to reveal if the most significant listed companies calculate other comprehensive income and what kind of items do they present in the statement of OCI. As a result of the research we can state that statement of other comprehensive income is part of the statement of total comprehensive income in general, and not an individual statement. Main items of the other comprehensive income of the examined companies are the following: gains and losses on remeasuring available-for-sale financial assets, gains/losses on hedging instruments in a cash flow hedge, or in an investment hedge, and gains/losses arising from translating the financial statements of foreign operations. In Hungary the IFRS consolidated report is obligatory for the listed companies at Budapest Stock Exchange, and most of these companies present other comprehensive income, but the significance and aim of this kind of income– is not commonly known yet.*

Keywords: reporting, corporate performance, income, other comprehensive income, OCI, income statement, international financial reporting standards, IFRS

JEL classification: M41

Introduction

Frameworks create the conceptual basis for IFRS, it (I1):
  ➢ a cohesive understanding of IFRSs (Framework facilitates consistent and logical formulation of IFRSs),
  ➢ a basis for judgement in applying IFRSs (Framework established the concepts that underlie the estimates, judgements and models on which IFRS financial statements are based),
  ➢ a basis for continuously updating IFRS knowledge and IFRS competencies.

In the Framework we can find definitions of the elements directly related to performance (income statement), such as (I2):
  ➢ *Income*: Income is increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants.
  ➢ *Expense*: Expenses are decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or incurrences of liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

The definition of income encompasses both revenue and gains. "*Revenue* arises in the course of the ordinary activities of an entity and is referred to by a variety of different names including sales, fees, interest, dividends, royalties and rent. *Gains* represent other items that meet the definition of income and may, or may not, arise in the course of the ordinary activities of an entity. Gains represent increases in economic benefits and as such are no different in nature from revenue. Hence, they are not regarded as constituting a separate element in the IFRS Framework." (I2)

The definition of expenses encompasses losses as well as ordinary activities related expenses. "Expenses that arise in the course of the ordinary activities of the entity include, for example, cost of sales, wages and depreciation. They usually take the form of an outflow or depletion of assets such as cash and cash equivalents, inventory, property, plant and equipment. *Losses* represent other items that meet the definition of expenses and may, or may not, arise in the course of the ordinary activities of the entity. Losses represent decreases in economic benefits and as such they are no different in nature from other expenses. Hence, they are not regarded as a separate element in this Framework." (I2)

Profit, however, is not explicitly defined in the Framework. "The Framework does not define profit or loss, and nor does it provide criteria for distinguishing the characteristics of items that should be included in profit or loss from those items that should be excluded from profit or loss." (I3) From our study we know that profit is equal income less expenses, so income increases it, expense reduces it. It curious, but we can say that profit is not equal to income less expenses as defined in the Framework (this deviation led to the *other comprehensive income, OCI* term later, but it doesn't have definition in the Framework).

IFRS have created the term of other comprehensive income, but knowledge and using of it is not widespread. In this paper I tend to present the meaning and essence of this income category, and to reveal how it is work in corporate practice.

Statement of Comprehensive Income

IAS 1 Presentation of Financial Statements sets out the overall requirements for financial statements, (structure, minimum requirements for content, overriding concepts, etc). The standard requires a complete set of financial statements to comprise a statement of financial position, a statement of profit or loss and other comprehensive income, a statement of changes in equity and a statement of cash flows. (I4)

IAS 1 defines **profit or loss** as the total of income less expenses, excluding the components of OCI, and prescribes line-items for profit or loss (I7). Curiosity of this profit or loss statement: no extraordinary items in it. Expenses may be classified by nature (NOE) or by function (FOE).

Income statement is a financial statement that summarizes the various transactions of a business during a specified period, showing the net profit or loss. Income statement/ profit or loss statement measures a company's financial performance over a specific accounting period, indicates how the revenue (money received from the sale of products and services) is transformed into net income (the result after all expenses and taxes).

International Financial Reporting Standards do not prescribe the exact format of the income statement but we can get a better picture from IFRS Taxonomy. IFRS tend to use the statement of comprehensive income instead of the income statement. Statement of comprehensive income aggregates income statement and other comprehensive income which is not reflected in profits and losses.

IAS 1 permits the statement of comprehensive income to be presented as a choice of the entity (I4):
  - ➤ in a single **statement of comprehensive income** (similar to general income statement in that it calculates a subtotal for net income and then has a section for other comprehensive income (OCI))
  - ➤ in two statements: **a statement of profit or loss** (separate income statement displaying components of profit or loss) and **a statement of other comprehensive income** (that begins with profit or loss, the bottom line of the income statement) and displays components of other comprehensive income).

The demand for the presentation of total income has led to the introduction of total comprehensive income, which includes profit or loss for a period plus other comprehensive income recognised in that period. (I7) "**Total comprehensive income** is the change in equity during a period resulting from transactions and other events, other than those changes resulting from transactions with owners in their capacity as owners" (I4), from transactions and other events and circumstances from non-owner sources. The statement of comprehensive income illustrates the financial performance and results of operations of a particular company or entity for a period of time. Financial performance is presented in the form of the statement of profit or loss and other comprehensive income. **Other comprehensive income, OCI** includes items of income or expense, that are not recognized in profit or loss as required or permitted by other IFRS.

The components of other comprehensive income include (I4):
  - ➤ changes in revaluation surplus (IAS 16 Property, Plant and Equipment and IAS 38 Intangible assets)
  - ➤ actuarial gains and losses on defined benefit plans recognised in accordance with IAS 19 (employee benefits)

- gains and losses arising from translating the financial statements of a foreign operation (IAS 21 The effects of changes in foreign exchange rates)
- gains and losses on remeasuring available-for-sale financial assets (IAS 39 Financial Instruments: Recognition and Measurement)
- the effective portion of gains and losses on hedging instruments in a cash flow hedge (IAS 39Financial Instruments: Recognition and Measurement).

As we can see in the 1. table in the IFRS column, the statement of comprehensive income should include the following minimum items (I4):
(income statement part)
- revenue,
- finance costs,
- share of the profit or loss of associates and joint ventures accounted for using the equity method,
- tax expense,
- 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,
- profit or loss,
(+ statement of other comprehensive income part)
- each component of other comprehensive income classified by nature,
- share of the other comprehensive income of associates and joint ventures accounted for using the equity method,
- total comprehensive income.

The following items must also be disclosed in the statement of comprehensive income as allocations for the period (I4):
- profit or loss for the period attributable to non-controlling interests and owners of the parent,
- total comprehensive income attributable to non-controlling interests and owners of the parent

Additional line items may be needed to fairly present the entity's results of operations, widen the format is permitted to the entities.

The category of extraordinary profit/loss doesn't exist in the statement of comprehensive income, no items may be presented in this statement (or in the income statement, if separately presented) nor in the notes as extraordinary items.

Certain items must be disclosed separately either in the statement of comprehensive income or in the notes, including (I4):
- write-downs of inventories to net realisable value or of property, plant and equipment to recoverable amount, as well as reversals of such write-downs,
- restructurings of the activities of an entity and reversals of any provisions for the costs of restructuring,
- disposals of items of property, plant and equipment,
- disposals of investments,
- discontinuing operations,
- litigation settlements,
- other reversals of provisions.

Comparison of income statement regulated by IFRS/IAS and the Hungarian Accounting Act

In order to get a clear picture about the differences between the reports, and the income statements in particular, I've made a comparison of the IFRS and the Hungarian Accounting Act in the field of performance's representation. I've summarized my results in the Table 1.

As a result of my comparison I've stated that the EU accepted the international financial reporting standards to present the financial performance of publicly traded companies, and as EU member state it is obligatory for the Hungarian companies as well. This is the reason why Hungary's present task is taking over the IFRS mentality.

The methods of presenting the income in the above mentioned statements are the same in the IFRS, and in the Hungarian Accounting Act (Hungarian Accounting Act, 2000. C. Act). (1. Figure) Expenses recognised in profit or loss should be analysed either by nature (raw materials, staff costs, depreciation, etc.) or by function (cost of sales, administrative expenses, etc). If an entity categorises by function, then additional information on the nature of expenses – at a minimum depreciation, amortisation and employee benefits expense – must be disclosed.

1. **table: Comparison of Income statements regulated by IFRS/IAS and the Hungarian Accounting Act**

	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.
Components of financial statements	➢ A statement of financial position (balance sheet) ➢ a statement of comprehensive income for the period (or an income statement and a statement of other comprehensive income) ➢ a statement of changes in equity for the period ➢ a statement of cash flows for the period ➢ notes, comprising a summary of accounting policies and other explanatory note	➢ the balance sheet ➢ the profit and loss account ➢ 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	No strict regulation, or scemes, just recommendation for the format of income statement.	Obligatory sequence of the items, optional format
Other comprehensive income	Companies have to present their all comprehensive income for a period: - in a single statement (all items of income/expense) - in two statements (an income statement and a statement of other comprehensive income)	No separate statement
Methods of income statement	By nature and by function of expenses (NOE or FOE)	By nature and by function of expenses
Main lines/categories in income statement	As a minimum, a company shall include in the statement of (comprehensive) income the following lines (1. IAS): ➢ Revenue ➢ Finance costs ➢ Share of the profit or loss of investment in associates and jointly controlled entities (accounted for using equity method)	Main (obligatory) categories in the income statement:: ➢ Operatnig profit or loss ➢ Result on financial ttransactions ➢ Profit/loss on ordinary activities ➢ Extraordinary profit ➢ Profit before tax ➢ Tax liability ➢ Profit after tax

		➤ Use of retained earnings for dividends ➤ Approved dividends ➤ Profit or loss for the year
	➤ Tax expense ➤ 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 ➤ Profit or loss ➤ Each component of other comprehensive income classified by nature ➤ Share of the other comprehensive income of associates and joint ventures accounted for using the equity method ➤ Total comprehensive income	
Extraordinary items	Not existing category	Different from ordinary activities (separate presentation)
Presentation of dividends	Obligatory presentation of Earning per share, EPS (IAS 33)	Obligatory: presentation of amount of Approved dividends No obligation for presentation of EPS.
Presentation of discontinued operations	Presentation in the income statement (not extraordinary activities) or in the Notes (IFRS 5)	Presentation in the Notes

Source: Own presentation by KOROM – MADARASINÉ SZIRMAI – MIKLÓSINÉ ÁCS – MOLNÁR – SIKLÓSI – SIMON – SZTANÓ – SZTANÓNÉ, 2001 and ORBÁN, 2006 and I5 and I6

Other comrehensive income – in the practice of Hungarian listed companies

In the Budapest Stock Exchange (BÉT) companies can introduce shares to the market in three categories: premium category, standard category, and T category. The Premium category includes those companies' series of liquid shares, which has got broader investor base. (I8)

In the next table encompasses all listed companies, which are in the Premium category in the BÉT.

2. table:Other Comprehensive Income in the Financial Statements of Companies in the Premium Category at BÉT (2012)

Companies	OCI in the Report	Items in OCI
ANY Nyrt.	-	- gains and losses on remeasuring available-for-sale financial assets
Appeninn Nyrt.	-	-
Business Telecom Nyrt.	Not available	-
CIG Pannónia Életbiztosító Nyrt.	+	- gains and losses arising from translating the financial statements of a foreign operation - gains and losses on remeasuring available-for-sale financial assets
FHB Nyrt.	+	- gains and losses arising from translating the financial statements of a foreign operation - gains and losses on remeasuring available-for-sale financial assets - the effective portion of gains and losses on hedging instruments in a cash flow hedge
Magyar Telekom Nyrt.	+	- gains and losses arising from translating the financial statements of a foreign operation - gains and losses on remeasuring available-for-sale financial assets
MOL Nyrt.	+	- gains and losses arising from translating the financial statements of a foreign operation - gains and losses on remeasuring available-for-sale financial assets - the effective portion of gains and losses on hedging instruments in a cash flow hedge - the effective portion of gains and losses on hedging instruments in an investment hedge + - share of the OCI of associated companies
OTP Bank Nyrt.	+	- gains and losses arising from translating the financial statements of a foreign operation

		-	gains and losses on remeasuring available-for-sale financial assets
		-	the effective portion of gains and losses on hedging instruments in a cash flow hedge
		-	the effective portion of gains and losses on hedging instruments in an investment hedge
PannErgy Nyrt.	-		-
Rába Nyrt.	+	-	the effective portion of gains and losses on hedging instruments in a cash flow hedge
Richter Gedeon Nyrt.	+	-	actuarial gains and losses on defined benefit plans recognised in accordance with IAS 19
		-	gains and losses arising from translating the financial statements of a foreign operation
		-	gains and losses on remeasuring available-for-sale financial assets

Source: Own presentation by I9, and I10

As we can see in the 2. table, 11 companies are in the Premium category in the BÉT of which the Statement of Other Comprehensive Income of one company is not available, and three of them haven't got other comprehensive income. 7 companies have got OCI. Main items of them are the following: gains and losses on remeasuring available-for-sale financial assets, gains/losses on hedging instruments in a cash flow hedge, or in an investment hedge, and gains/losses arising from translating the financial statements of foreign operations. In some cases the Statement of OCI comprises of tax effect of other comprehensive income in the same statement, as well. (e.g. FHB)

Summary

In the system of IFRS profit is not equal to income less expenses, this deviation led to the other comprehensive income, OCI term. IFRS have created the term of other comprehensive income, but knowledge and using of it is not widespread. As basis of the research, definitions and formats related to the statement of comprehensive income were presented in the paper first. In order to get a clear picture about the differences between the income statements, I make a comparison of the IFRS and the Hungarian Accounting Act in the field of performance's representation. As a result of my comparison I've stated that the EU accepted the international financial reporting standards to present the financial performance of publicly traded companies, and as EU member state it is obligatory for the Hungarian companies as well. After the comparative analysis I've examined the Statement of other comprehensive income in the practice of 11 listed companies in the Budapest Stock Exchange. The Premium category includes those companies' series of liquid shares, which has got broader investor base. The aim of this examination was to reveal if the most significant listed companies calculate other comprehensive income and what kind of items do they present in the statement of OCI. As a result of the research we can state that statement of other comprehensive income is part of the statement of total

comprehensive income in general, and not an individual statement. Main items of the other comprehensive income of the examined companies are the following: gains and losses on remeasuring available-for-sale financial assets, gains/losses on hedging instruments in a cash flow hedge, or in an investment hedge, and gains/losses arising from translating the financial statements of foreign operations. In Hungary preparing the IFRS consolidated report is obligatory for the listed companies at Budapest Stock Exchange, and most of these companies present other comprehensive income, but the significance and aim of this kind of income is not commonly known yet. Most Hungarian companies deal with the IFRS, but not sufficiently extensively, so nowadays Hungary's task is to learn the IFRS mentality in deep context.

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THE SAMPLING PROCESS IN THE FINANCIAL AUDIT .TECHNICAL PRACTICE APPROACH

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Abstract
To ensure an optimum level of the sampling process in the financial audit,professional ,the one that performes the audit work has to comply to principles and procedures, such that to obtain, with minimum expenditures collecting the audit evidence edifying in the process of opinion expression.
So,in time have developed and diversified the sampling techniques regarding the studied population (The audit international standards define the population term like " representing a whole data set among a sample is selected and whereof an auditor wants to make conclusions. For example, all the events within the account or the transactions class represents a population." CAR- "Financial Audit 2000",2000) that can lead to a significant time relief needed for audit checking operations. Population example inside the audit mission, careless of the audited entity nationality : invoices, receipts, providers, clients, budgeted expenditures etc.
"Audit sampling" (sampling) assumes appliancing audit procedures for less than 100% of the elements within an account or a trasaction class balance, such that all the samples will be selected. This will allow the auditor to obtain and to evaluate the audit evidence on some features for the selected elements, in purpose to assist or to express a conclusion regardind the population within the sample was extracted. The sampling in audit can use both a statistical or a non-statistical approach.   (THE AUDIT INTERNATIONAl STANDARD 530 –THE SAMPLING IN AUDIT AND OTHER SELECTIVE TESTING PROCEDURES)

In order that the auditor will get enought reasonable evidence, the auditor has to do the necessary work with professionalism and efficiency.
Afer the sampling process we can say that it represents the application of some audit procedures on a part of the population subjected to auditing total, for obtaining safe evidence, to characterize the whole population. (Financial audit Marin Menu,Iuliana Panaitescu,Constantin Afanase,Dan Vilaia ,Editura Tehnica-Info,Chisinau ,2009).
We can applu the audit tests in the following way:
1-for all population components elements;
Example : we verify all the raw acquisition invoices, example in an entity from the estate construction domain, the auditor verifyes every cement acquisition invoice, because from the general estimate afferent to the relative building construction resulted an 35% exceed of the initial cement a necessary and more it hasn't found no add or enlarge of the initial construction, for this is required that every document will be checked, more, when a loe level population shows up in the discution, we can use this sampling technique because it doesn't requires a hight time volume, and the expenses are minimum, for example checking a third that hasn't answered to balance confirmation at the year end.
2- for a non-representative sample;

Example : in this cases the pro knows the checked operations particularities and is capable to find an enough number, really small of evidence, needed in the audition process.

If in an entity, the intern control sistem has the objectiv to attach thes short period loan contracts comming from the asociations for covering the stringent needs, ,the prior request of the treasory responsable person with the essay that contains the loan explaining(covering with cash the rent paiment when the entity has to receive amounts from clients) if in this procedure are missing over 10% accompanying documents, we can name the sample unrepresentative, there for can exist fraud.

3-for a representative sample.

Example : a sample is representative or has a high representativeness if the necesary and missing documents from a intern falls in the limit of 5% .

We can conclude that selecting some elements that have a high frauding probality or a cash defalcation etc, it can't be mistaken with the sampling process, because we can't generalize the result on the population which the checking was performed.

Along time there were developed a series of sampling methods and techniques in the audit process, like this:

a) Random selection;
b) Systematic selection;
c) The hazard technic selection;
d) The profesional judgment selection;

a) Random selection represents a technique where every element of an investigated objectiv can be the selection objectiv in equal way with the other elements.

Example : In the entity Construct S.A. case , the entity sunjected to the audit process , is checked the vericity of the dates regarding the invoice emission process (income) chronologically and systematic, consistent with the ledger, jurnal papers and VAT, in our case we can select 10 invoices out of 850, so the numbers 10,20,30,40,50,60,70,80,90,850 or 1,2,3,4,500,600,700,800,840,850.

To mention that the pro can use this method in case of the elements (populations) when the list presents abnormlities in the electronic format or when the operations are not homogeneous.

b) Systematic selection repesents eror detection by choosing aleatory to one or two elements from the checked sample and later as adding the medium sampling mode so that you can select the other probative elements, so that the auditor can appreciate fraud and it ca be applied and it has application when it's checked the tax sums and retention regarding wages including payment and payment approval.

Example : in case of the entity GRIGORE S.A. it's randomly selected an wage element no.8, the medium sampling range being 3, the next wage elements ar selected by adding 3, like: 8,12,15,18. A win of this method when monetary values are auditated, asures a plus to the auditor , becuse the big sums are checked.

c) The hazard technic selection it can't be recognised like a mathematical technic, but in technical-practical approach it's used by professionals when they verify small amount populations and in the case of checking a large amount population elements it can't be reached a real conclusion for the whole audited population.

d) The profesional judgment selection represents the checking redress on elements where the probability existing an error or material fraud is very high, for this reason in can appear subjectivism cases from the auditor.

Example : the auditor can use professional reasoning in determinating the sample size, for example if the auditor wants to check the supplier liabilities and sees that we have

liabilities for over 1.500.000 lei to 10 suppliers, and for 25 suppliers the liabilities doesn't totals 250.000, the auditor can check all the suppliers or only the ones that represents 85% from the liabilities, this means the 10 suppliers.

The sampling process steps in financial audit:

1. Sampling palnning and setting;
2. Setting the sampling size;
3. Selecting the elements that do the object of the sample;
4. Establish and evaluate the finnal result.

1. Sampling palnning and setting – in this step the financila auditor has the obligation insurancing that these samples are enough for achieving the audit objectiv, has to follow the following steps:

a) the objectives in cas of audit tests;
b) population (example :incomes,coasts,clients etc.) from which the samples are selected;
c) representativeness of the population elements;

a) the objectives in cas of audit tests – in this case the auditor sets the procedures, methods and technics uses in reaching the objectives and has to know the nature of the audit evidence, the ones that are significant in descovering erors and fraud.

The financial auditor has to straighten his attension on the choosen population for sampling, so the error searching and checking process or the negative facts will be efficient and useful.

b)population (example : incomes,coasts,clients etc.) from which the sampling will be selected we can define like a financial and material data useful instrument on that the financila auditor will head his attention to get the finnal conclusion. Example: the auditor can apply some procedures only the selected population is homogeneous, so in the example of the entity GRIGORE S.A. , the financial auditor considers like a homogeneous population an element segment like cliets, receipts, invoices, delivery note(wood materials) – special document according H.G. no. 996/2008 etc.

Financial auditor, according to the objectives that he had regarding auditor process, can divide a population in divisions or a segment of supporting documents.Example : in case of the same entity (wood materials) – special document according H.G. no. 996/2008 etc. Can be considered a population, those notices that shows wood cantity larger than 100 c.m. and another notice categories that have values from 1 to 5 c.m., or it can consider a category all the sent invoices with semnificative sums that are over 10.000 lei and another category with sums under 10.000 lei" .

We can see in case of the entity GRIGORE S.A. the fact that, the more population monetary values are lower , both the sampling size is lower too. Another population dividing or subdividing method is clasificating them by risk. Example : liquidities can have high risk rank, the existing value as cash for the pay of extern allowences, also can have a high risk rank regarding a tangible asset, that we frame it in low risk rank, because the entity injury with this kind of immobile is allot harder to acheve, because the alienation will asume closing some notarial acts, cadastral drawings and intabulation for right of the property in real estate transcriptions registers etc.

c) Representativeness population elements assumes choosing them according the importance and the level of satisfaction in relation with reaching the financial audit objective and the posibility of expresing an oppinion.

2. Setting the sampling size

The financial auditor has to target the sampling size so it can bring him a high level of relevance in decovering the errors, of course the auditor has to establish true reasoning the admission level of an error.

More than this the pro has to asure that the choosed sampling gives the possibility to be a repersentative for all the checked population elements. The auditor can accept or not a sampling risk and has to link this with the audit risk : control risk, nondetection error risk and inherent risk.

Also we can apreciate the fact that the auditor sampling risk, if we look at it as an error margin, we can apreciate it according significance level.

Example regarding the sampling size at the entity GRIGORE S.A.(T1)

Tabel nr. 1

	Tolerance %		
Insurance level	8	5	3
96	38	84	119
92	34	66	109
81	27	54	99
75	25	50	94
73	14	23	47
60	9	11	21

Regarding the statements above we can remark the following:

-financial auditor has to determinate correctly the torelable error marge
-the sampling dimension varies proportional with the sampling insurance level proposed by the financial auditor.

3.Selecting the elements that will do the object of some tests framing the sampling it has to be specified in the audit schedule prepared at the begining of the audit mission and have the responsability in choosing and selecting population elements, of their component(clients, invoice, statements etc).

No matter of the method, technic or the way that instrumentes the sampling, the financial auditor has to apply directly and without deviations the selection method and more important he shouldn't remove as evidence a sampling element if it has been in another checking procedure, or that the checking will be har to accomplish.

It can exist situations that appear in the document checking process such as lack of documents for some echonomic operations. For example: the last sent invoices are missing, or the invoice annex are missing also is missing an invoice book etc. Elements like this can lead to the conclusion of error generator or fraud or they will be interpreted by the financial audit regarding every feature.

4. Establish and evaluate the finnal result.

We have to take into account the significantly aspect of the errors, if they determine or generates monetary hijackings or they have a low impact in taking an expression decision for a professional oppinion, the financial auditor will quantify the error cause and the effect resulted for the other steps of the audit.

The auditor will check if the discovered errors behind undertaken checks exceed the tolerable error and in this cases we have to reanalize the sampling risk or we will extend audit procedures.

According to the auditor results, he can ask the entity to investigate the distortions he found or to make the necessary corrections. The auditor can extend the sampling size according to the undertaken checking he can test an alternativ control, only when he considers that the sampling wasn't the eloquence one.

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OPPORTUNITIES FOR DECREASING EXCHANGE RISKS OF FOREIGN CURRENCY TRANSACTIONS IN ENTERPRISES WITH A SPECIAL REGARD ON CHANGING-OVER FOREIGN CURRENCY BOOKING

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Abstract: The profitability of the operation of an enterprise is influenced by several factors. Besides the tendency of market demand and supply, taking the changes of inflation, interest rate and exchange rate into consideration is necessary, as all these are risks. 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 its tools is the currency based booking, which may make the effect of the change more predictable.

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.

The Role and Effects of Functional Booking

Changing-over booking in functional foreign currency has both advantages and disadvantages. It is a significant ease for those who change-over as significant exchange fluctuation is not expected in the prices of either the sold products or the purchased inventory, in this way the significant part of the income statement is not affected by the unfavourable tendency of the exchange rates. Thus, it is a good opportunity and method for decreasing the exchange risk, though in the previously introduced survey of Deloitte in September of 2012 only 10% of the asked enterprises consider it as an effective solution. It is a further advantage that the translation of an international statement package in case of a parent of foreign operation does not require the use of a newer exchange rate, thus the enterprise ensures the real and reliable introduction of its statement. Besides these for example a review made in EUR is better understandable for international investors, in this way there is a greater chance to involve new investors, by which the company may develop and step forward from the competitors.

The introduction of booking in foreign currency needs a thorough preparation and work, and further extra payables have to be coped with such as inner work expenses, IT costs and expert fees. All these may cause difficulties for enterprises. Besides the wages, taxes and contributions relating to wages as well as every other tax connection should be registered and paid in HUF.

There are strict conditions for changing-over booking in foreign currency, which will not be detailed due to length limitations.

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.

Figure 1: Changes in the Exchanges Rates of HUF and EUR between November 2011 and October 2012
Source: http://finance.yahoo.com/q/bc?s=eurhuf=X&t=1y&l=on&z=m&q=l&c=(I2)

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. 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.

Opportunity of Changing-Over Booking in Foreign Currency 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. For the managers of the company it was the opportunity of booking in foreign currency.
Effect of Booking in Foreign Currency for the Decrease of Exchange Loss

It is important to examine the earnings of the company for financial decisions, in case of booking in EUR as a functional currency. In case of accounts coming into the company or trade receivables the official exchange rate on the date of the account of the Hungarian National Bank 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 2011 in Cases of HUF and EUR Booking

A Data: in HUF

Ledger account No.	Description	Balance in HUF 31.12.2011	Calculated balance with EUR booking converted into HUF
8761	Expenditures for foreign exchange reserves converted into HUF	-103 345 485	0
8763	Expenditures for assets and liabilities in foreign currency financial (receivables from customers exchange rate)	-92 165 047	-52 912 244
8764	Expenditures for assets and liabilities in foreign currency (Year End evaluation)	-203 907 326	-1 352 283
9761	Incomes for foreign exchange reserves converted into HUF	3 427 331	0
9763	Incomes for assets and liabilities in foreign currency financial (receivables from customers exchange rate)	161 503 271	45 438 271
9764	Incomes from assets and liabilities in foreign currency (Year End evaluation)	59 305 973	2 670 121
	Total:	**-175 181 283**	**-6 156 135**
Differences:			**-169 025 148**

Source: Data of „Kereskedő" Ltd. Company

From the view of the company, the positive effect of booking in foreign currency mainly reveals during the conversions. In case of EUR booking, 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 HUF booking). This ensures significant savings even in case of the loan repayment as both borrowing and repayment happens in EUR.

There are several external factors affecting the exchange rate as well, which mean that EUR booking alone cannot prevent the company from realizing exchange rate losses. Functional booking makes the change of exchange rates more predictable for entities, because the ratio of the accounts on foreign currency and HUF turns around. Until now changes in exchange rates affected foreign currency accounts constituting 80% of

revenues; after changing the booking this would have effects only on the account of HUF, representing 20%.

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IS IT IMPORTANT THE ACCOUNTING MODEL USED BY THE ECONOMIC ENTITY IN MAKING DECISIONS BY THE USERS OF THE INFORMATION? POINTS OF VIEW.

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Abstract: *Nowadays it is vital to stay informed. But why is the information so important? The following will present the role and the importance of accounting information in decision-making regarding economic entity. Is accounting information a want or a need? Can accounting information be interpreted correctly indifferent of the accounting model used? Decisions made by the consumers of accounting information would be the same in terms of using the "cash" or "accrual" method? Based on these questions, this paper presents data as a whole for everyone and from where each consumer of information can extract only the part that they are interested in and which is useful for them. This paper follows the interests of users of accounting information regarding the interest, the need for information and the decisions they may take as a result of the information received, and also of the accounting model used by the entity from which the information is expected. This paper does not include all users of the accounting information that have interest in the economic entity, nor does it take into account all the information that are affected by the use of a model of accounting or the other one of the economic entity, but we can conclude that there are situations in which users ' decisions are influenced by the accounting model used, and others where there is no influence. We can't rule on any model to be the best; it is good that provides useful information showing the true reality of the economic entity.*

1. Generally Introduction

The information is the main force acting in the social and political development, but primarily in the economic development. By filtering the information, it can be taken the decisions about future actions.
Accounting, as an informational discipline, study and analyses the economic transactions made by the economic entities in terms of cause and effect using the information, but also by providing information to consumers of accounting. In another words, accounting is the only one that can provide information about the financial entity, information that are the basis in the evaluation of the entity by its users, external or internal.

2. Methodology of Research

The general objective of this paper is to identify the main categories of users of accounting information and the information that they need in their decision-making, and whether such information may be influenced by the accounting model used by the economic entity.

In order to achieve this objective, by using the descriptive method of research, I have started with collecting and studying the necessary documentation for analyzing the accounting information and its users, and the two models: "cash accounting" and "accrual accounting" methods.

The documentation consisted in bibliography: books and journals, regulations, reports of the relevant professionals, doctoral theses and last but not least the sites of internal and international organizations specialized in the field of accounting.

3. Literature Review

Much has been written about accounting information from several points of view. What is it? How do I get it? What are the qualitative characteristics that the information must satisfy in order to be useful? Is there a market of accounting information? ... And the other questions like these.

But what does the accounting information? Accounting information is to put face to face the accounting data and the knowledge necessary for their interpretation. For the accounting information to be useful and of quality, it is important that the interpretation of the data should be made in such a way that it can be perceived and understood correctly, to be useful for decision-making, and also for forecast and for retrospective purposes of measuring performances.(Bouquin, 2004: 65)

For the needs of users to be completed with minimal effort, the information turns from "raw material", indispensable in the system of organization and management, in "the connection" between the maximization of profit and the consumer's expectations of fulfillment of accounting information. All this with a minimum of effort and cost.(Tabara and Briciu et al. 2012: 11)

The market of accounting information is the way of putting face to face the offer and the demand in this area. The demand of accounting information is represented by the claims of the consumers of this kind of information, and their pressure on the system that produces it, while the offer is represented by all the accounting information of accounting system developed by the entity, as well as the ways and forms of transmission (Brabete 2007: 16)

The demand of accounting information comes from its economic relations with the environment in which they operate, and as creators of products have their attention directed toward the needs of consumers, so the accounting professionals must take account of the production of information to meet the demand of various users.(Malciu, 1998: 13)

As regards the area of offer of information, it starts from simple verbal answers to questions in the case of annual meetings of shareholders, to written communications of reports and summary statements.(Malciu, 1998: 39)

4. Conceptual Terms
4.1. General Ideas Regarding the Accounting Information

To be informed is to know and to get to know everything that is important for the user of information, in accounting, or in any other area. In the field of accounting, the information offers an insight into the patrimonial situation of the economic entity, the results of the economic and financial activity, the use of human and material resources, both for its own needs and those of third parties. In the present circumstances it is necessary to improve the economic and financial information, to enable it to meet the managerial needs in decision-making, but also for the informational requirements of the partners of the economic entity.(Mihalciuc, 2006)

In their concern to provide useful information in perceiving the image closely, the accounting professionals apply the so-called professional reasoning set out by the International Accounting Standards (Mihalache, 2005) and relying on the accounting principles, you will be able to interpret accounting data in such a way as to be useful for the accounting information consumers, but also in finding solutions for any intervention in the economic activity of the entity. Maybe sometimes the accounting principles are considered unwieldy and incomprehensible, but they are useful in any situation, whether or not foreseeable.

4.2. Basic Knowledge of Accounting Models

Accounting, as a source of information, can recognize the economic transactions taking into account the time of payment or receipt thereof, or when they occur. There are two basic models of accounting: accrual accounting and cash accounting models. In the cash method of accounting ("cash") transactions are recorded only when cash is received or paid, shall not make the difference between a good purchase and payment of expenses- both of which are considered "payments". Accrual accounting ("accrual") recognizes this distinction; transactions are recognized when they occur.

Accrual accounting, from its origins, was defined by the recognition of income in the period in which they were earned, the goods were delivered or services rendered, without conditioning of their collection. In general ledger accounting, the recognition of revenue is linked to the recognition of costs which have resulted in the realization of revenue generated, and the result must be recognized when it was generated.(Lungu, 2007: 239) The fundamental difference between the two models, as it is supported by H.A. Finney and Herbert E. Miller (1963-62) is a matter of time. It shows up often the process of association of income with expenses that have been generated for their accomplishment, this being achieved by the accrual accounting, but not necessarily achieved by cash method of accounting, unless revenues are earned in the same period in which the payment is made and the expenses are incurred in the same period in which the cash payment is made.

4.3. Decision. What is it and how it develops?

Because I started from the question "what is it?" we respond that decision constitutes a choice taken in examining issues, choosing a mode of action, a solution adopted in several possible options, so that by following the path chosen to reach the optimal results. In an entity's economic life, the decisions may be regarding the goals that the entity has, with regard to the structure of the proposed economic activity to be undertaken with respect to the best possible use of the resources available of the economic entity or on the time during which decisions should bring results.

In order to be useful for the entity, the decision must be materialized in obtaining material benefits or social benefits. The usefulness of "a decision can be appreciate depending on how it contributes to the increase of profitability, and the measure of its usefulness it would be expressed by the amount of benefits that it brings to the economic entity."(Bărbulescu, 2000: 268)

To the question "How are the decisions made?" we must say that in determining the strategies it is need to be considered the goods and supplies that the entity has, how they can be used in accordance with the principles and the policies of the entity, as well as the information provided concerning the accounting position and economic performance of the entity.

Looking from a realistic perspective, decision making is a complex process and with full responsibility. Accounting, using a model of accounting or another, will provide the

information on which users of accounting information will retrieve and analyze, and then they will decide.

5. The influence of the Accounting Model of Accounting on Users of Accounting Information and Their Decisions

Who are the users of accounting information and what decisions they may take in accordance with the accounting information received? These decisions may be influenced by the accounting model used? Here are some questions that await answers...

Some authors separate the types of users depending on the financial interest which they have in the entity-directly or indirectly- and in relation to the environment of the enterprise-internal or external. The consumers of the accounting information with direct financial interest are investors and creditors, and with the indirect financial interest are the auditors, financial analysts, banks, brokers, press, etc. The internal users of information are those who are in the management of the entity, the external ones being shareholders, associates, and others. (Mateş et al., 2005: 25)

If you were to present the accounting information and its users, in schematic mode, this would look like in **Figure No. 1.** where it can be seen that the accounting information is an unified whole intended for everyone and where each consumer of information can
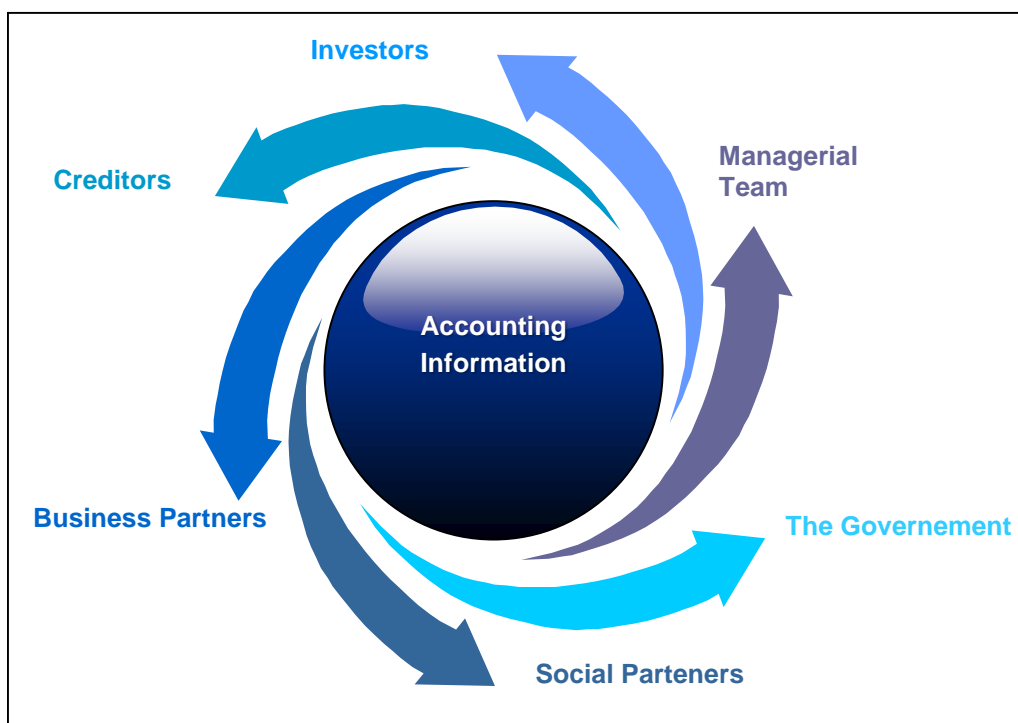
extract only the part that they are interested in and which is useful.
Figure 1: Accounting Information and its users
Source: own processing

In what follows we will take time and we will analyze in terms of interest, the need for information and the decisions that may be taken as a result of information received, and also of the accounting model used by the entity that expects that information, as follows:
Entrepreneurs (Investors) -Associates, shareholders, investors, are those who participate in the creation and the financing of the economic entity through the available capital. Their

interest is to get the greatest possible profit from the capital invested. The information that they need is that regarding the profit, dividends, but also the ability of the entity to generate further benefits.

The decisions they may take are about keeping, buying or selling shares of the entity. Keeping actions is the result of the satisfaction of the investor regarding the profit realized, but if these gains are more than thankful he will decide to buy new shares in order to supplement benefits. If, however, the earnings obtained are insufficient or even the result is materialized in the loss, the investor decides to sell shares or to withdraw the invested capital.

What happens if there are not mentioned details regarding the accounting model used? In the case of the use of accrual-based accounting, the profit communicated to the investor is the difference between the revenue and the expenditure, as they took place. The income which has not been received - what determines the claims with lower or higher risk of receiving - and expenses which were not paid - there are debts of economic entity which will have to be paid. There is also a risk that the economic entity does not record all expenses, by using the prepaid expense accounts, by reporting and allocating the dividends unreal, and that determines the investor to do further investment that will not bring the expected benefits over time.

In case of using the model of cash accounting, the profit communicated is actually realized and its distribution as dividends does not assume any risk for the entity or entrepreneur. There is no hidden information from the shareholder for the overview of the entity, he will have the information on the credits and debts of the entity in the near or distant future, and the decisions that he will take on the invested capital will be able to bring the expected benefits.

Lenders (Creditors) **-** funders-are those who make available the resources that the entity needs for its activity (Bogdan, 2005: 22), repayable loans or grants. Here we can mention: banks, financial companies, nonbanking financial institutions, leasing companies, etc. Their interest is to know if the loans and interest will be repaid at maturity, being interested in the economic entity's ability to generate profit, this will be the source of repaying the interest, but also in its ability to convert cash benefits, which are the source of repayment of the loans received.

These decisions are related to the grant or to the refusal of the loans, but also to the conditions for the granting of loans regarding the interest rate, loan period, warranties, etc.

It is also important to provide information on the accounting model used, since the use of cash accounting method provides additional information regarding the cash flow, in other words those information designed to shed light on the economic entity's liquidity, the ability to generate liquidity and the time required for processing benefits in available cash. When it is used the accrual-based accounting method, the creditor will receive information on the credits and debts of the entity in the future, without identifying the extent to which they participated in the determination of the result reported.

Behold, then, that the decision of the creditor can be influenced by the accounting model used for that, if in the case of the "accrual" the profits show the company's ability to generate profits from its activity, in the case of "cash" the reported profit is indeed the actual, but being the source of interest, it should be reviewed the rate of receiving the revenue or the rate of paying debts, so there are involved other factors that may influence the determination of the result.

The Business Partners -customers and suppliers-are the ones who need information on the ability of the economic entity to honor its financial obligations and to keep working for the continuation of the business in the short term, but also in the long term, when the partnership may be exclusive, unique as a supplier representative on an area or on a

particular segment of the market. The same happens in the case of the client only when the sale is dependent on it.

The service provider will have the interest in the economic entity to be able to pay all its debts at maturity, but also to continue to purchase goods and services that it offers, because its activity depends on the continuity of the economic entity business - business partner.

The customer will have interest, too, in the continuity of the economic entity business - business partner, because in this case it is not disrupted his activity, there is continuity in the supply of goods and services.

Considering that the information regarding debts and receivables do not depend on the accounting model used, the decisions of the trading partners will not be affected by the use of accrual accounting or the cash accounting method as the basis of the accounting information. What can influence their decisions is the additional information that they may require and that most of the time are mentioned in the notes attached to the annual financial statements.

The social partners -employees and unions representing them - are those users of accounting information that need to know if the entity is stable and if it is profitable, if it has the ability to offer higher salaries, if there are opportunities for trade or other benefits. Employees are interested in knowing the profit because if the entity is profitable there is a chance in increasing the wages or in new investment in production that lead to increasing the quality of working conditions. Unions are interested in knowing the useful information in support of its claims, substantiated in getting the image of the entity within the economic sector to which they belong.

Even if at first glance the employees are interested in the information on the entity - the profit differently depending on the accounting model used - the simple value over its information may not change the decisions of the employees or of the unions that represent them. They need and additional information in their decision making, therefore for them does not matter the accounting model used by the economic entity.

The Government – through its representing people - is a major user of accounting information. In terms of fiscal point of view the accounting information are the bases in determining the economic entity's obligations towards the local budgets, state budget, social security budgets and unemployment, as well as other debts to the state.

The obligations toward the local budgets, taxes on property or other different taxes that are not based on the profit reported by different financial statements-we are talking here of land tax, tax on buildings, car tax, taxes on display firm, fees for issuing licenses and permits, etc.-are no different in the case of use of a model or another of accounting. The decision of the local budget, which represents the calculation of taxes and fees paid by the entity; it is not influenced by the model used by the economic entity.

In terms of economic entity's obligation toward social security budgets and unemployment, the situation is similar to those from the local budget. As long as all the social contributions are regulated legally as the obligations based on the wages (regardless of who supports it), the accounting model used has no influence on them. Even if they should be calculated at *the salaries paid* to staff, there would be no influence from the accounting model used. The situation would be different if the social obligations should be calculated on the *salaries expenses* because they are different depending on the accounting model used.

The amounts due to the state's budget are of many kinds and are based on different tax bases. The decisions which the state takes on the manner of determining the fees and taxes are likely to lead to the establishment of different values depending on the accounting model used by the economic entity. We will take just a few examples:

Tax on the value added on the receipt as a first step towards cash accounting method, or just a test-is the most eloquent example that we can bring here. Entity's economic

discontent in collect the tax on the value added at the time of billing or achieving income arose due to the difficulty in collecting receivables and even of uncollectible income. The possibility of collecting TVA only at the moment of receiving the income led to the awareness that the economic entity pays the tax to the state budget for something that has been received.

The micro-enterprises income tax is a tax on income that is calculated at the time of recognition of income, which is a different time from an accounting model to another.

The corporation tax is a tax payable for the difference between revenues and expenses in accordance with the algorithm of calculation that we will not mention here-and we already know that both the income and expenses, and the profits have different values in the case of using accrual accounting method or cash accounting method.

An example is that of the tax on the income from self-employment activities (self-employment tax) where the accounting model used is the "cash" and the determination of the basis of the tax is based on the recognition of revenues when they are earned and the expenses when they are paid. The tax due is the state's part of the independent activity done, but it is also a part of the actual profit earned.

The examples may continue...

Managerial Team -is the one that needs the information in determining the performance of the economic entity but also in making decisions for future activities. When we speak of a managerial team we're talking about a user which can be the manager, the treasurer, the board of directors, the management team, etc., in other words whoever is staying at the helm of economic entity and is giving direction to the development.

For them, the interest is to know the information on the operating activity of the entity, on the funding and investment activity in order to make their decisions. It is true that the information provided by the financial accounts may be different in the case of the use of the cash accounting model or the use of accrual accounting method, but managers have at their disposal the management accounting that provides additional information useful in decision-making.

Therefore, the use of a model of accounting or another is not so important for obtaining the information because there are informational support of management accounting, but if the use of a model or another bring fiscal implications, then decisions are affected, the managerial team has information offered by both financial accounting and internal accounting.

In conclusion, as presented in **Table No. 1** there are users for which the usefulness of information received depends on the accounting model used by the entity, but there are also users that accounting model used does not matter.

Table 1. Users of accounting information and accounting model

No crt.	Users	The decision may be influenced by the accounting model used?
1.	Investors	Yes
2.	Lenders	Yes
3.	Business partners	No
4.	The social partners	No
5.	Local budget	No
6.	The State budget	Yes
7.	Managerial team	Yes, if the management accounting is not kept No, if the management accounting is kept

Source: own processing

6. Conclusion

Regardless of the accounting model used in accounting, the accounting information will provide certainty with respect to the internal environment of the economic entity, but there remain aspects of the external environment of the economic entity that can give a degree of uncertainty or risk in the process of managerial decision.

"The managerial decision should be based on relevant costs recognized by their forecast, which features include hidden costs, social costs and external costs."(Cokins et al., 2012: 28-42)

In conclusion, we can say that when it is placed in front of a choice, the user of accounting information will look carefully at both financial information and non-financial ones, will choose the direction to follow, but, like the pilot of an aircraft, and by the way that you have to go through to get to its destination, so will be the decision to serve the best of his interest.

Noting that this paper does not include all the users of the accounting information that may have interest in the economic entity and that I did not take into account all the information that are affected by the use of a model of accounting or another one of the economic entity, we can conclude that there are situations in which users ' decisions are influenced by the accounting model used, but we can not rule on any model to be the best. It is good the one that provides useful information showing the true reality of the economic entity.

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SCORING ASSESSMENT AND FORECASTING MODELS BANKRUPTCY RISK OF COMPANIES

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Abstract*: Bankruptcy risk made the subject of many research studies that aim at identifying the time of the bankruptcy, the factors that compete to achieve this state, the indicators that best express this orientation (the bankruptcy). The threats to enterprises require the managers knowledge of continually economic and financial situations, and vulnerable areas with development potential. Managers need to identify and properly manage the threats that would prevent achieving the targets. In terms of methods known in the literature of assessment and evaluation of bankruptcy risk they are static, functional, strategic, and scoring nonfinancial models. This article addresses Altman and Conan-Holder-known internationally as the model developed at national level by two teachers from prestigious universities in our country-the Robu-Mironiuc model. Those models are applied to data released by the profit and loss account and balance sheet Turism Covasna company over which bankruptcy risk analysis is performed. The results of the analysis are interpreted while trying to formulate solutions to the economic and financial viability of the entity.*

Keywords: risk; bankruptcy; Z score; evaluation and forecasting; viability.

JEL classification: G33, M41.

1. Introduction

The methods of risk analysis, which are *static, functional, strategic, non-financial* help to measure the past performance of the company, informing at small extent its future. It is known that the financial performance can degrade quickly over time and therefore appears the more obvious need for more accurate information about the future, the risk of bankruptcy. As a practical response to these requirements, the diagnosis of bankruptcy risk has experienced an important development due to the use of statistical methods for the analysis of financial condition from a group of rates.

2. Scoring methods for prediction of risk of bankruptcy

Method of *scoring* means to provide the predictive models for assessing the risk of bankruptcy of an enterprise. Predictability, according to Howard H. Stevenson, in his work *Do lunch or be lunch. The power of predictability in creating your future*, *"is the possibility that things happen as we expect them to happen: how safe can it be that a certain action will have a particular outcome"* (Stevenson 2003: 41). The concept of the same author , the word "*prediction*" literally means an anticipation of something that will happen, anticipation based on observation, experience and reasoning.

This method is based on statistical techniques of discriminating analysis. Its application involves observing a group of companies consisting of two distinct groups: a group of companies in financial difficulties and a group of healthy businesses. For each of the two groups set out several installments, then determine the best linear combination of the

rates to distinguish the two groups of companies. For characterization and classification in the category of businesses in difficulty and those with financial problems have been developed a number of studies , particularly in the U.S. and France , based on surveys , based on samples of firms in difficulty , thus establishing indicators with high predictive power (Bărbulescu 2002: 106).

Studies in France and U.S. showed that in order to forecast a business bankruptcy there can be used *accounting methods* (quantitative and analytical - use in comparative analyses in time to estimate the future development of the company) and *banking methods* (which suggests early detection of vulnerability and bankruptcy risk through synthetic risk notes obtained based on statistical methods of discriminating analysis for the determination of a function score). The calculation of the score function requires knowledge of certain rates that allow detection of a business bankruptcy risk and to take timely corrective action. A note (*Z*) called the score is assigned to the company, being a linear combination of rates, and the value score, firms are classified as vulnerable, bankrupt and healthy. Most score functions constructed to detect the likely state of bankruptcy of enterprises used the statistical technique *discriminating analysis*, which is especially good when you want to extract from the multitude of financial ratios calculated on the explanation to a very large extent the risk bankruptcy of the company (Dragotă 2003: 274). Several researchers and financial organizations were preoccupied with developing a method for predicting the risk of bankruptcy from a group rate linked with health or to the weakness of enterprises (Stancu, 1996: 385). The method used is the statistical technique of discriminating analysis of the financial characteristics (calculated by using rates) businesses to the normal operation and management of the economic and financial difficulties. Most methods for the analysis of insolvency risk, based on the score function which is used to determine approximately where a company will go bankrupt or will have bad economic results in the next review period (two years). Thus, the methods of risk assessment - scoring known internationally as bankruptcy (Anglo-Saxon school and Continental school), attention focused on *Altman* and *Conan-Holder* model. Also, the models developed nationally by the Romanian school of economic and financial analysis model stands *Robu-Mironiuc*. Based on the three models of analysis shall be carried bankruptcy risk analysis based on information released by the profit and loss and balance *Turism-Covasna* company, listed on the Bucharest Stock Exchange (http://www.bvb.ro).

2.1. Functions-score bankruptcy prediction developed internationally

The following paragraphs are two methods -scoring evaluation of bankruptcy risk, highlighting and analyzing the main schools of analysis, namely the Anglo- Saxon school (Altman model) and Continental school (Conan-Holder model). Altman model was developed in 1968 in the U.S., the first feature - score that allowed the anticipation of 75 % of bankruptcies two years prior to their occurrence, based on a comparative study between a group of companies that have gone bankrupt and a group of companies that have developed remain in business. The study is based solely on the information taken from the accounting firm and some indicators were calculated on a statistical and mathematical (Burciu 1999: 223).

The Altman model is suitable for the analysis of listed companies in countries where exchange operates under equilibrium conditions, the courses consist mainly based on demand/supply ratio, otherwise the model is most often used in industrial developed countries. For the development of the model, Altman select a list of 22 indicators, following two criteria: their popularity in the literature and potential adequacy, which adds some indicators that take into account the size of the market. Among these may be mentioned the indicators expressing the ratio between the market value of equity to book value of total debt (Bărbulescu 2002: 109). The 22 indicators retained by Altman covers five key areas, such as the liquidity, profitability, solvency, leverages and asset rotation. Based on

the analysis of these indicators and taking into account other criteria, Altman determined that the best discriminating function has the following expression (Mironiuc 2006: 443):

$$Z = 1{,}2 \times R_1 + 1{,}4 \times R_2 + 3{,}3 \times R_3 + 0{,}6 \times R_4 + 0{,}999 \times R_5, \text{ wherein:}$$

R_1 = Working capital/Total assets - is an expression of the company flexibility, determined by reference to the share of current assets (working capital) in total assets of the company;
R_2 = Retained earnings/Total assets - reflects internal financing potential of the enterprise;
R_3 = Gross profit/Total assets - known as the economic profitability of the enterprise;
R_4 = Equity/Total Liabilities - reflect the company's financial autonomy;
R_5 = Turnover/Total assets - total assets reflect the efficiency of the company.
Depending on this score, the vulnerability of the company's bankruptcy risk is estimated as (Petrescu, 2006: 197):

Table no. 1. *Vulnerability company at risk of bankruptcy according to Altman model*

Company Statement	Z score value	Probability of bankruptcy
Good (solvency)	Z > 2,675	Low-nonexistent
Poor (difficulty)	1,81 < Z < 2,675	Indefinite
Tough (insolvency)	Z < 1,81	Maximum-imminent

Function-score values in the table are valid for U.S. public sector industrial enterprises and should be interpreted as follows:
a) A score greater than 3 indicates the absence of risk;
b) A lower score of 1.8 indicates a risk of imminent bankruptcy;
c) A score between 1.8 to 3 shows a gray area with a probability of occurrence of risk of 95% in one year and 70% in two years (Petrescu 2008: 262).
Altman model has the advantage that it applies very easy but involves some drawbacks:
- It does not include all the factors that affect the business of the undertaking;
- Accounting data sometimes contain deliberate distortions leading to erroneous conclusions;
- External aspects of the company are not accounted for although frequently a notable contribution to the crisis situations (Burciu 1999: 223).
The Altman model of bankruptcy risk prediction in *Turism Covasna* company, determines the following values of the function Z score:

Table no. 2. *Determining function Z score - Altman model*

Indicators	Financial year				
	2009	2010	2011	2012	2013
The working capital	2.717.391	10.986.366	3.807.060	4.110.562	-434.252
Development indices (%)	-	404,30	34,65	107,97	-10,56
The total assets	26.878.567	36.034.772	43.280.413	54.523.935	65.976.383
Development indices (%)	-	134,07	120,11	125,98	121,00
Earnings result	-1.502.812	0	-505.332	0	214.829
Development indices (%)	-	0,00	#DIV/0!	0,00	#DIV/0!
Gross result	963.483	1.001.670	311.941	211.744	-1.390.081

Development indices (%)	-	103,96	31,14	67,88	-656,49
Equity	24.903.346	25.718.104	25.651.398	32.233.923	30.843.842
Development indices (%)	-	103,27	99,74	125,66	95,69
Total debts	1.829.989	10.106.750	17.464.119	21.901.527	34.754.530
Development indices (%)	-	552,28	172,80	125,41	158,69
Turnover	8.608.558	8.516.191	9.975.234	10.488.971	10.423.829
Development indices (%)	-	98,93	117,13	105,15	99,38
R_1	0,101098805	0,304882351	0,087962654	0,07539005	-0,0065819
R_2	-0,055911165	0	-0,01167577	0	0,00325615
R_3	0,035845773	0,027797318	0,00720744	0,00388351	-0,0210694
R_4	13,60846759	2,544646301	1,468805727	1,47176601	0,88747688
R_5	0,320275928	0,23633259	0,230479178	0,1923737	0,15799334
Function score Z	**8,64637019**	**2,22047401**	**1,2245258**	**1,178525**	**0,6174528**

Source: *Own after the annual financial statements of Turism Covasna* company

In *Turism Covasna* company - function values below the minimum score of 2.675 in 2010-2013 puts the company in an uncertain financial situation, except in 2009 when the situation was good for the company.

The probability that the company will go into bankruptcy is quite high, except for 2009, when default risk has been reduced, with the opportunity to receive credit for continuing investments aimed at both the expansion and modernization of the hotel complex treatment and full replacement of medical equipment and the acquisition of high-performance devices, which gives the possibility of achieving functional explorations.

The vulnerability of the company, depending on the tool-score values calculated, it is estimated as follows:

Table no. 3. *Vulnerability company whichever function Z score*

Years	Z score value	Probability of bankruptcy	Company Statement
2009	8,64637019	Low-nonexistent	Good (solvency)
2010	2,22047401	Indefinite	Poor (difficulty)
2011	1,2245258	Maximum	Tough (insolvency)
2012	1,178525	Maximum	Tough (insolvency)
2013	0,6174528	Maximum	Tough (insolvency)

The evolution of the risk of bankruptcy in 2009-2013 and its proximity to the lower limit of 2.675 are shown in the figure below:
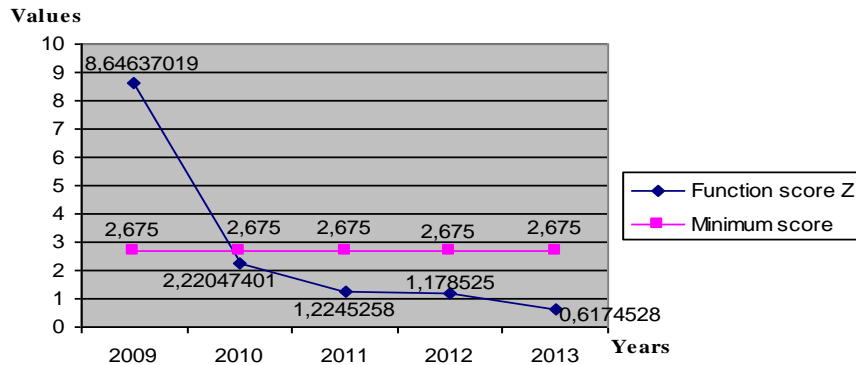
Figure no.1. *Evolution bankruptcy risk and its proximity to the minimum level*
Source: *Developed by author*

The Conan-Holder model was developed in the CEREG Retail (Centre de recherche de l' Université de Paris-Dauphine) to analyze the degradation of the financial situation of SMEs, the model has the advantage of simplifying the calculation, so that it continues to be used today. The formulation and model results are based on the analysis of 31 rates, 190 small and medium enterprises in various fields: industry, trade, services and transport. Of the 190 selected companies during 1970-1975, 95 companies were bankrupt, and another 95 were healthy businesses whose activities were appropriate waist and bankrupt enterprises. Sector-specific models were developed (Dumitrescu 2010), so that the commercial sectors were detained five installments, the function with the following expression (Păvăloaia 2009: 25):

$Z = 0,0197 \times R_1 + 0,0136 \times R_2 + 0,0341 \times R_3 + 0,0185 \times R_4 - 0,0158 \times R_5 - 0,01222$, wherein:

R1-Cash/Total assets
R2-Permanent capital/Total assets
R3-Self financing/Total balance
R4-Gross operating/Total balance
R5-Working capital requirements/Turnover

Based on this model, the vulnerability of the company in the commercial by - score function value is estimated as (Dumitrescu 2010):

Table no. 4. *Vulnerability company at risk of bankruptcy, Conan-Holder model*

Company Statement	Probability of bankruptcy	Z score value
Very good	40%	Z ≥ 0,2
Unfavorable (danger)	40-65%	-0,3 < Z < 0,2
Catastrophe	> 65%	Z < - 0,3

The contribution of this function is found mainly in the decision-making rule; the probability of error in the classification of enterprises is even greater as the amount taken into calculation for this business function is closer to the threshold decision (Avare 2002: 237). Typically Conan-Holder model gives significant results in predicting short-term development of enterprises. Such a model is valid only if the bankruptcy law works, hidden subsidies are abolished, trade credit is well established and suitable statistics (Spătaru 2004: 488).

The Conan-Holder model of bankruptcy risk prediction in *Turism Covasna* company determines the following values of the score function Z.

Table no. 5. *Determination function Z-score model Conan-Holder*

Indicatorrs	Financial year				
	2009	**2010**	**2011**	**2012**	**2013**
Cash	3.309.271	11.748.431	10.593.315	4.781.437	1950572
Development indices (%)	-	355,02	90,17	45,14	40,79
Total assets	26.878.567	36.034.772	43.280.413	54.523.935	65.976.383
Development indices (%)	-	134,07	120,11	125,98	121,00
Permanent capital	25.637.919	34.934.218	35.493.946	51.911.879	62.452.683
Development indices (%)	-	136,26	101,60	146,26	120,31
Self-financing	1.702.027	1.869.484	1.087.779	1.260.300	-9.619
Development indices (%)	-	109,84	58,19	115,86	-0,76
Gross operating surplus	1.601.098	1.765.298	890.348	1.644.882	1.342.633
Development indices (%)	-	110,26	50,44	184,75	81,62
Working capital requirements	-385.112	-469.445	-5.626.157	1.024.696	-801.378
Development indices (%)	-	121,90	1198,47	-18,21	-78,21
Turnover	8.608.558	8.516.191	9.975.234	10.488.971	10.423.829
Development indices (%)	-	98,93	117,13	105,15	99,38
R_1	0,123119324	0,326030396	0,244760026	0,08769428	0,0295647
R_2	0,95384248	0,969458555	0,82009259	0,95209341	0,94659149
R_3	0,063322833	0,051880001	0,025133286	0,02311462	-0,0001458
R_4	0,059567833	0,048988738	0,020571615	0,03016807	0,02035021
R_5	-0,044735948	-0,055123822	-0,56401253	0,09769271	-0,0768794
Function score Z	**0,00714585**	**0,01093379**	**0,013904**	**0,002259**	**0,0028223**

Source: *Own after the annual financial statements of Turism Covasna* company

In the analyzed society, the function-score values are below the minimum of 0.20, which places the entity in an uncertain financial situation throughout the period of analysis, the probability that the company into bankruptcy hovering between 40-65%. In this case an urgent action is necessary to redress the economic and financial situation, taking into account that there is a worsening of net cash (-17.66% in 2011, -67.29% in 2012,

respectively -88.10% in 2013). The vulnerability of the company based on the calculated score values of the function table, above, is considered as follows:

Table no. 6. Vulnerability company whichever function Z score

Years	Z score value	Probability of bankruptcy	Company Statement
2009	0,00714585	40-65%	Unfavorable (danger)
2010	0,01093379	40-65%	Unfavorable (danger)
2011	0,013904	40-65%	Unfavorable (danger)
2012	0,002259	40-65%	Unfavorable (danger)
2013	0,0028223	40-65%	Unfavorable (danger)

The evolution of risk bankruptcy in 2009-2013 and the proximity to the lower limit of 0.20 is shown in the figure below:
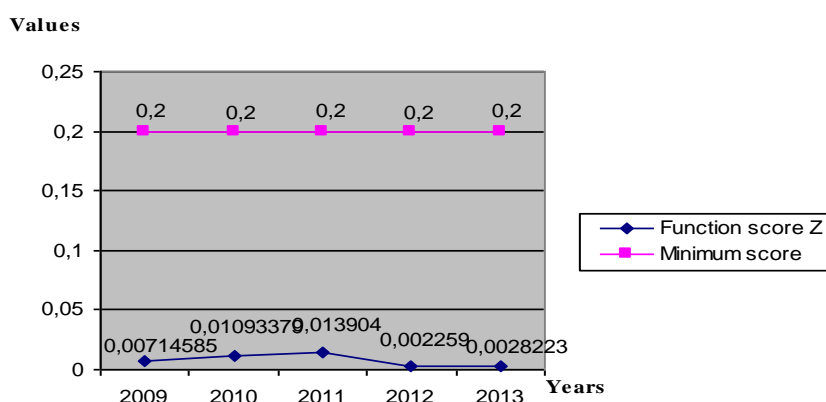
Figure no.2. *Evolution bankruptcy risk and its proximity to the minimum level*
Source: *Developed by author*

2.2. Functions-score bankruptcy prediction developed by the Romanian school of financial analysis

Concerning the development of discriminating analysis, models for bankruptcy risk existed in our country, although they occurred with a small offset global developments as the information necessary for the calculation are not time periods (10-15 years) or if they are not relevant, given the specific transitional period, compared to countries where there is a stable market economy. Romanian specialists and practitioners have expressed a particular interest (especially as a result of research and studies from the university), based on the structure of the Romanian economy and especially that of the industry.

The Robu-Mironiuc model was developed from a study based on a sample of 60 industrial companies from different sectors, which are quoted on the Stock Exchange, Bucharest (Muntean and Solomon, 2011: 278). The score function that determines the risk of bankruptcy is presented as follows:

$$Z = -0,002 \times R_1 - 0,028 \times R_2 - 0,0570 \times R_3 + 1,034 \times R_4 + 4,629 \times R_5 + 0,096 \times R_6 + 0,170 \times R_7 - 0,106 \times R_8 - 0,024 \times R_9 + 0,524, \text{ wherein:}$$

R1 - Current assets/Current debts
R2 - Total assets/Current debts
R3 - Total debts/Total liabilities
R4 - Gross profit/Equity
R5 - Net income/Total assets

R6 - Gross operating/Turnover
R7 - Total Debt/Equity
R8 - Financial expenses/Turnover
R9 - Turnover/Stocks
Based on this model, the vulnerability of the company to the value function-score is estimated as follows:

Table no. 7. Vulnerability businesses bankruptcy risk model Robu-Mironiuc

Probability of bankruptcy	Z score value
Redus	1 ≤ Z < 4
Mediu	0 ≤ Z < 1
Foarte mare	-4 < Z < 0

The Robu-Mironiuc bankruptcy risk prediction in *Turism Covasna* company determines the following values of the score function Z.

Table no. 8. *Determination function Z-score model Robu-Mironiuc*

Indicators	Financial year				
	2009	2010	2011	2012	2013
Current assets	3.950.933	12068605	11566062	6699704	3061122
Development indices (%)	-	305,46	95,84	57,93	45,69
Current debts	1.205.673	1100554	7776596	2604034	3515675
Development indices (%)	-	91,28	706,61	33,49	135,01
Total assets	26.878.567	36.034.772	43.280.413	54.523.935	65.976.383
Development indices (%)	-	134,07	120,11	125,98	121,00
Total debts	1.829.989	10106750	17464119	21901527	34754530
Development indices (%)	-	552,28	172,80	125,41	158,69
Total liabilities	26.878.567	36.034.772	43.280.413	54.523.935	65.976.383
Development indices (%)	-	134,07	120,11	125,98	121,00
Gross profit	963.483	1.001.670	311.941	211.744	-1.390.081
Development indices (%)	-	103,96	31,14	67,88	-656,49
Equity	24.903.346	25.718.104	25.651.398	32.233.923	30.843.842
Development indices (%)	-	103,27	99,74	125,66	95,69
Net income	804.025	814.758	203.609	140.608	-1.390.081
Development indices (%)	-	101,33	24,99	69,06	-988,62
Gross operating	1.601.098	1.765.298	890.348	1.644.882	1.342.633
Development indices (%)	-	110,26	50,44	184,75	81,62
Turnover	8.608.558	8.516.191	9.975.234	10.488.971	10.423.829

Development indices (%)	-	98,93	117,13	105,15	99,38
Financial expenses	192.166	226.571	1.356.820	1.471.951	2.504.559
Development indices (%)	-	117,90	598,85	108,49	170,15
Stocks	129.004	135.087	187.967	355.676	140.816
Development indices (%)	-	104,72	139,15	189,22	39,59
R_1	3,276952374	10,96593625	1,487291098	2,57281741	0,87070676
R_2	22,29341372	32,74239338	5,565470162	20,9382577	18,7663487
R_3	0,068083578	0,280472151	0,403510914	0,40168647	0,52677228
R_4	0,038688897	0,03894805	0,01216078	0,00656898	-0,0450683
R_5	0,029913239	0,022610328	0,004704414	0,00257883	-0,0210694
R_6	0,059567833	0,048988738	0,020571615	0,03016807	0,02035021
R_7	0,07348366	0,392981924	0,680825232	0,67945583	1,12678991
R_8	0,02232267	0,026604734	0,136018864	0,14033321	0,24027246
R_9	66,73093858	63,04226906	53,06907063	29,4902411	74,0244645
Function score Z	**-1,51787554**	**-1,73009502**	**-0,7938174**	**-0,675821**	**-1,785904**

Source: *Own after the annual financial statements of Turism Covasna* company

In the analyzed society, function-score values are below the minimum score of 0, which places the entity in a precarious financial situation throughout the period of analysis, the probability that the company goes into bankruptcy is quite high. In this case an urgent action to redress the economic and financial situation is necessary, taking into account the fact that in addition to net cash deterioration it is also noticed a decrease in current assets, equity, results in conjunction with an increase in current liabilities and the total financial expenses.

Evolution of risk of bankruptcy in 2009-2013 and its proximity to the minimum are shown in the figure below:
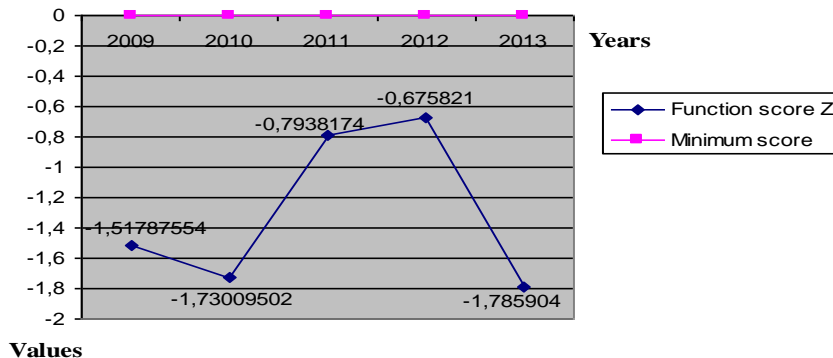
Figure no.3. *Evolution bankruptcy risk and its proximity to the minimum level*
Source: *Developed by author*

3. Conclusions

The conclusion of this analysis shows that the company cannot get loans, is insolvent, recorded a negative cash flow for the entire period of analysis, except for the year 2010, mainly due to the increased short-term bank loans due to lower cash and cash equivalents; in this regard the banks should continuously monitor the enterprise. The three methods of analysis of bankruptcy risk confirms the unfavorable situation in which the company values results, demonstrating that the company may borrow even at risk of bankruptcy.

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EXAMINATION OF IMPACT OF PHARMA R&D ON PROFITABILITY

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Abstract: *By today, in our business environment, mostly based on innovation, the potential opportunities in the pharmaceutical sector and impact of these to the national economic trends has a determining significance. This latter requires the examination of the impact of research and development activity as the most important factor to the profitability of two selected regional market leader pharma companies and presentation of how these groups handle their high operating risks which resulting from these investments. National and international importance of the pharmaceutical industry defined by not only the prominent role of application of the biochemical academic research, but the humanitarian concerns which increasingly appreciating in the global context. In the developing and overpopulated countries the risks of become massive epidemics arisen from the emergence viruses which mutating quickly and in increasingly complex forms has risen due to the scientist discoveries and more modernize preventive procedures. These facts – in view of growing efficient immune substances developing procedures – are stronger pressure on the industrial actors, with this affecting the profitability of future operations. The farming specificities and their role can be illustrated well by comparing the activities of the Central European market-leader Richter and the world-renowned Swiss Novartis which ranked number two in sales with approximately 47 billion dollar among the world-wide pharma groups in 2010. Since the comparable figures based on IFRS, it must be also mention that how the international accountant standards display these management areas. Among the examined factors, the pharma R&D activity had the highest impact on the long-term firming both individually and in comparison, but the different of the financial strategy and accounting policy as a kind of asset of risk management had no negligible. My analysis is mostly theoretical and based on quantitative methods. All the pharma companies cross-border can use my results, because they show that why need to pay more attention in this sector to the R&D in order to preserve their market position, thus to ensure multilaterally the prevention of the diseases.*

Keywords: pharma, R&D, profitability, management, risks, IFRS
JEL classification: O32

1. Sectoral outlook

The ability of companies to hold themselves in the globalized market economy, the maintenance and improvement of its competitiveness, furthermore inform the foreign investors, and utilization of the different opportunities of financing such as cross-border type of emerging challenges in some innovation-intensive sectors make it necessary strategic-level management of those as well as the spatial and temporal comparison of activity of concerned companies. In the most capital-intensive pharmaceutical industry – in addition to its stable position in the short term has not undermined even by the impact of the 2008-2009's financial crisis – the extent of the R&D and innovation investment – even in 2011 – exceeded all same values recognised in another industry. The profitability of pharmaceutical sector is determined by the public health and income status of regions population, the social and innovation policy of the state as the price and market conditions which primarily affect the demand trends. Internationally, the most favourable prospects

are attributed to this sector since in this area proceed of technological changes relatively rapid due to the introduction of the new medicinal preparations. Partly because of this, the health budget expenditures have increased dramatically worldwide owing to the impact of ever growing costs pressure (FRANK–CHEE-RUEY, 2007.). The pharmaceutical industry is under growing pressure from a range of environmental issues, including major losses of revenue owing to patent expirations, increasingly cost-constrained healthcare systems and more demanding regulatory requirements (STEPHEN et al).

Table 1: Key financial data of the three major segments of the pharmaceutical industry internationally (2012). Revenue = 100%

Segment	Gross profit	Operating income	Net income	R&D	R&D / Revenues*
Major Drug Manufacturers	70%	21%	17.0%	15%	0.2%
Biotechnology Manufacturers	80%	22%	15.2%	22%	-5.7%
Generics Drug Manufacturers	68%	16%	11.3%	9%	0.6%
Overall Industry	**71%**	**21%**	**16.1%**	**15%**	**0.56%**

*it shows, how R&D change with every additional bnUSD in net sales.
Source: Business Data Insight (I1), 2013.

Industry margins in the sector are high enough and as it can see the splits below, the Major Drug Manufacturers segment is the most profitable one, which also indicates 17% net margin as a result of the exploitation of blockbuster drugs, which brings in high cash flows (FRANCESCO, 2013). The principle of economy of scale prevails: generally speaking that overall in the industry, the R&D expenses decrease with the company getting bigger in owing to mostly the fact that many activities are shared and further efficiencies found (FRANCESCO, 2013). According THOMAS (2007) the pharmaceutical market can be divided three sections based on the type of costumers: patients, institutional buyers (hospitals, pharmacies) and the government. In the traditional retail market the price of prescribed medicinal products is paid out by the consumers and/or the social insurance, so this segment is the less price-sensitive. Although the medical institutions may use certain products limited by the law, these able to cause large demand for some preparations via the freedom of the drug contest, so their strong market position and price sensitivity is also higher than the retail consumers, which has been a key factor in terms of profitability for manufacturers.

2. Material and method

At the analysis of impact of R&D and other factors I demonstrated the results by the method of sensitivity analysis in such a way that I deduced the necessary conclusions resulting from the deviation between the trends of actual indicators and the same results changed next to the ratio or items of the Novartis serving as a benchmark while being all other factors unchanged. I used IFRS reports those serving a basis of comparison for the secondary data collection.

3. Comparative analysis of the profitability of the Richter and Novartis

It is necessary to underline those financial indicates to the exam of the profitability which reflects that how effectively provide its result through the managemant of scarce resources (LUC – TARNÓCZI, 1995). These include the return on sales (ROS), assets (ROA) and equity (ROE).
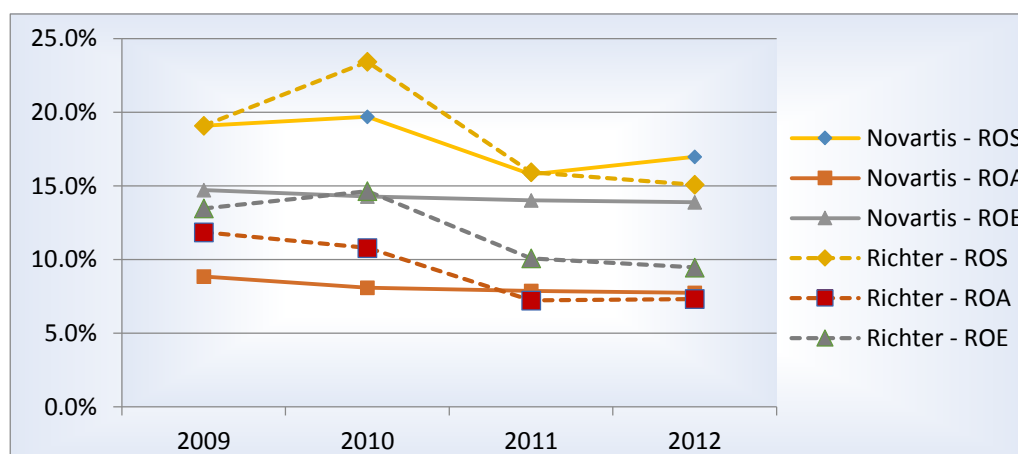
Figure 1: Comparison of the three profitability rates (2009-2012)
Source: own compilation.

The ROS after tax in 2009 and 2011 are almost equal in the two company groups, in turn the index of Richter fell to a lower level in 2012 at the same time when increased the borrowed loan portfolio. The Richter's ROA after tax in 2011 approached to the same index of the Novartis partly due to the total asset turnover rate, on the other hand the decreasing returns of sale which effect has manifested to the return on equity: the Hungarian factory was able to provide more capital increase for its owners only in 2010. Because of the positive impact of the equity multiplier, the ROE indicators in both cases were higher than ROA rates: the Novartis could multiply its equity approximately twice as good as the Richter the years under review. Later, in the comparison of effects, I use pre-tax ROS and ROA in my analysis in order to simplification, as comparison made it difficult by several factors: these include the different tax environment, the marginal effect of income taxes on basic tendency and the consolidated type of reports.

3.1. The impact of the pharma R&D and innovation investments

The most capital-intensive type of the pharma industry is explained by the R&D expenditures and the related investments which are significant part of all the expenses related to the manufacturing activity. Furthermore, the associated potential government grants and tender sources also have to be considered as revenue-raising items until marketing of the newly developed products, from the time when it also contributes to the revenue growth so it plays an important role in determine of the result. Requirements for the presentation of R&D expenses are outlined under IAS 38, which enable that the accounting treatment of intangible assets and in case of accomplish of internationally valid conditions identification and account of those. IAS 38 applies to the advertising and start-up as well as the R&D – in accordance with standard research is original and planned investigation, that will contribute to a new scientific or technical knowledge or theoretical knowledge to obtain it: for instance in this sector it could be tests aimed at obtaining new knowledge to develop a new vaccine. Development can be attributed to the results of

research or the knowledge gained in utilizing in order to design new or substantially improved materials, devices, production of products, processes and services, even in the marketing of products and use prior to the start (ROBERT, 2009). If an entity cannot be clearly separated the research phase of an internal project to creating an intangible asset from the the development phase, so the company can also manage its cost such a way as if those only would have been incurred in the research phase (KAMAL, 2005). Generally, the R&D projects – including the basic and applied research – are always embedded in the larger scope of innovation management (SEBASTIAN et al, 2009).

Both Novartis and Richter has invested several million forint and dollar into the R&D field and various development projects – significant part of connected costs appear outside the expenditures, also among the intangible assets if those meets requirements of IAS 38. As regards the investment policy, although within the estate of Novartis the share of fixed assets approached the eighty percent in the latest years – until then with the exception of the year 2010, when Novartis could reach remarkable product portfolio growth by the acquisition of Alcon – in the case of Richter there was greater relative role of the producers and developers investments. This can be explained by the difference which can observe in the investment policy that the Swiss pharma producer placed more emphasis on acquisition of financial instruments, in spite of this the Hungarian company focused on graduating expansion of existing generating capacities. Consequently in 2010, during the acquisition of Preglem S.A., a new preparation, the ESMYA intangible asset and goodwill has been recorded, then, from 2011 the complete of the plant building – specialised on biotechnological mammalian cell method and related technological system installation – carried out as a Greenfield investment in Debrecen has already contributed by considerable extent to the growth of the fixed assets in the following year.
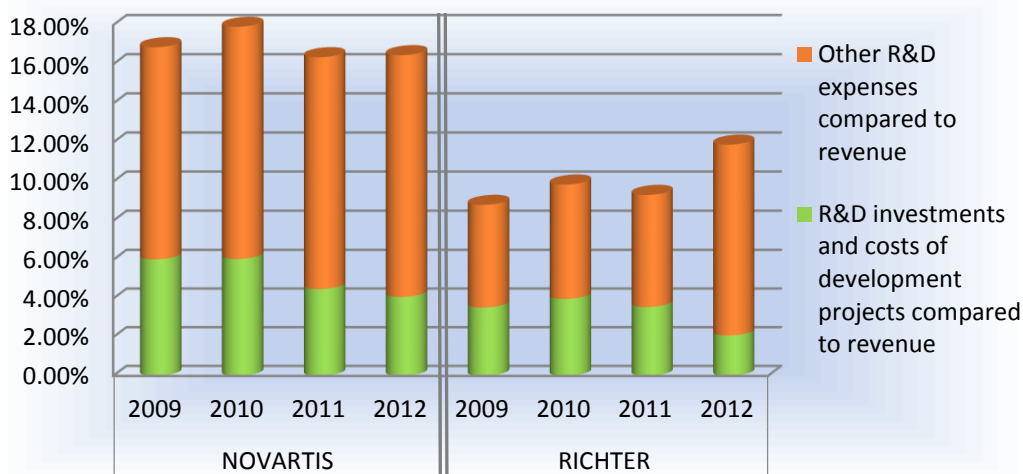
Figure 2: The share of R&D investments and costs turned to the development projects within all the R&D expenses and the share of the latter value within the revenue
Source: own compilation.

Due to the acquisitions and the Greenfield investment were able to increase its fixed assets substantially and inside of this, the extent of intangible assets for both of two companies – only the consolidation of Alcon caused nearly 18 billion USD goodwill growth for Novartis. One part of the costs incurred in connection with research and development activities consist of the personnel (related to employees in group headquarters and locations those specialized in vaccine production) and other material expenses, the remaining part of these make up from the acquisition of material and intangible assets – in the pharma sector mostly computer softwares which help to study of the different molecular structures modelling – these are made up from research and development

investments. The deviation between also the share of the latter values within the net sales (Figure 2), also all the operating and marketing costs of two companies decreased considerably by 2012, primarily due to the investments of Richter in that field. While the Novartis was turning 16-18% of its net sales to product development from 2009 to 2012, its Hungarian competitor could surpass the 10 percent only the last examined year during the same time due to the fact that early this year the European Commission has granted the marketing authorization of the 5 mg ESMYA, so Richter could embark clinical studies concerning the Pill in the third quarter of 2012 in order to facilitate the durable cure that is surgical interference-free and resulting the reduction of benign tumours. Besides of this the earlier noted biotech plant of Richter was also handed over that can keep R&D expenses above level of 10 percent sustainably as a result of industrial production of more complex protein-based preparations – thus the Hungarian pharma company can reach value that indicated at Novartis which stagnated above 16%. As regard the share of R&D expenses within all the operating costs, at none of two companies can already show greater fluctuations: while there were identical trends until 2011, in the following year the role of concerned kind of cost increased by 3% at Richter opposite the Novartis on effect of handed biotech plant.

At determining of the impact of R&D activity on profitability only the related expenses and the net sales revenue surplus associated with marketing of the successfully developed products were considered by me. Nevertheless I did not calculate with the tax benefits, post-tax credit and other benefit provided connection with the research activities has been caused by that I started from the earning before tax at the evaluating of the profitability indicators – for the reason mentioned above. Therefore, the state grants which received to compensate costs similarly cannot be taken into account in the calculation, because, although – unlike the Richter – the Novartis was obtained different amount of state grants after investments and capacity buildings carried out in the USA to purchase material assets – those help to improve new vaccines – and to build other sites in the framework of the American government grant contracts, the effect of these items on earning before tax offset by the costs of purchases which financed by the grants (the accrued grants released among incomes in proportion with the depreciation that deducted from the cost of the purchased assets every year). So only the effect of R&D's direct and indirect costs may be considered until the realize of revenue growth that is arising from sale of preparations which is newly placed on the market as a result of proving successful experimental development projects, clinical trials and these are under patent law protection.
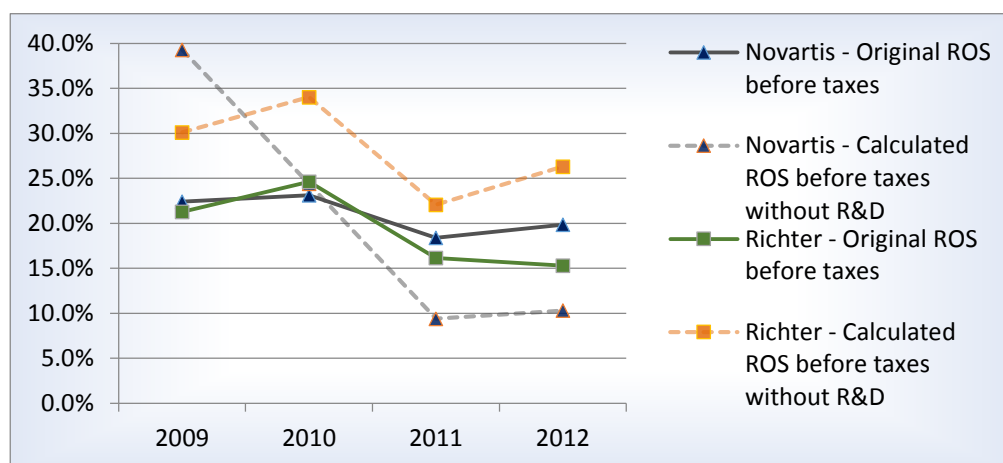
Figure 3: The effect of R&D activities on the return on sales

Source: own compilation.

Light of the foregoing, it could be mostly illustrate the impact of R&D in the difference of the indicators, if we examine the changes of the rates for both companies on the condition that the period under view those did not carry out this type of activity. If the result items are adjusted by disregard of the showed net sales of the newly introduced products manufactured exclusively during the examined period, furthermore the accounted R&D expenses in each year, then it can be observe a bigger difference than between the original ROS values. It can be identify from tendencies that – against Novartis – the ROS of Richter – which group primarily specialized in developing of gynaecological preparations – without R&D would higher by 5-7 percent than that in fact. This can be explained by funds of Richter turned to the development projects paid off less than expected, namely the later years these were not associated with such revenue growth that equal or higher than the magnitude of earlier investments, in addition the results of the large projects started in 2012 can only occur naturally in the coming years. At Novartis sales revenue of the newly marketed preparations enhanced the Group's total net sales by an average of 26 percent between 2010 and 2012, which contribute to its falling trend. As a result the lack of this would have completely neutralized the solvency advantages from possible saving of costs connected with developments. It should mention even tax effect of R&D on the earning after taxation, because this item has been greatly influenced by the tax benefits those are available after research activities and different from country to country, possibilities of tax credit, furthermore the connected costs – particularly in the case of Richter can be considered relevant factors – accounted as tax base reducing items at the corporate tax base and – from 2010 – at the local tax base which became possible by the Act C of 1990 on Local Taxes and the Act LXXXI of 1996 on Corporation Tax and Dividend Tax.

Table 2: Calculated amounts of all the tax saving coming from R&D in million EUR

Tax Saving (million EUR)	2009	2010	2011	2012
Novartis Group	257.7	282.7	61.2	138.9
Richter Group	14.9	16.6	17.6	15.7

Source: Based on IFRS reports of Richter and Novartis, furthermore own calculation at Richter.

Under recent facts partly, the company could available developing tax benefit in present value of about 100 million Ft in the case of investment projects serving basic and applied research or experimental development. On the other hand Richter could ensure itself 10 years from the installation 100% corporate tax saving with the productive investment of value more than 3 billion Ft after the results of the parent company in Hungary. The Table 2 included all the tax saving validated by the support system exclusively resulting from the R&D and recalculated to euro in order to comparability. Extraordinary tax benefit of the Novartis – against Richter – results from its institutional network that considered wide and strength internationally too. All in all, Novartis can distribute its new formulations on markets where demands are less price-sensitive but high solvent, so it can ensure the return on investment of product developments more successfully than Richter.

3.2. Managing of risks arising from R&D by financial and accounting policy

At comparing of profitability the effect of financial strategies of both companies must be taken into account as those determine the structure of asset finance and influence the all asset rotation speed that multiplication factor between the ROS and ROA. As a test of

this, on the one hand we seek the answer to that the assets serving the activity and ranking according to terms of liquidity financed by which structure and origin of liabilities, furthermore which corporate financing policy can observe behind of this in the long run, on the other hand in what extent the cost of acquisition of foreign resources affects the results, so the profitability. Two indicators those expressing the mostly the asset financing are the coverage of non-current assets and the rotation speed of the current assets decreased by short-term liabilities, namely the net working capital. The results of the previous indicator (from 101% to 123% at Novartis and from 275% to 433% at Richter) clarify that the non-current assets of both producers are covered fully by the permanently available resources, although the values recorded at Richter exceeds third times the data of its Swiss competitor which already refers that Novartis – against more conservative and prudent financial strategy of Richter – use more aggressive or so-called solid policy that is better suited for the fit principle: its long-term working capital fixing financed by long-term sources much lower than Richter, which allows also riskier operation in case of Novartis.

Table 3: The ratio of net working capital within the all asset

Denomination		2009	2010	2011	2012
Net working capital / The all asset (%)	Novartis	14.9%	1.6%	0.8%	3.2%
	Richter	47.7%	30.4%	29.7%	35.4%

Source: own compilation.

The ratio of net working capital decreased by 2011 due to the restructure performed in the assets that result at Richter the acquisition of Grünenthal and PregLem S.A., and the share purchase transactions in the Protek Group which is Russia's largest pharmaceutical wholesaler, while that at Novartis the increasing non-current asset ratio owing to the consolidation of Alcon and the rise of equity also was not able to offset – even nor with a long-term borrowings.

Table 4: The all asset rotation speed of Richter calculated assuming the ratio of net working capital of Novartis

Denomination	2009	2010	2011	2012
Change in the all asset rotation speed by modifying	-0.51	-0.43	-0.46	-0.45
Change in the ROA at Richter	-9.0%	-8.4%	-6.9%	-6.9%

Source: own compilation.

Follows from the foregoing that the continuation of market policy of Novartis for acquisitions intensified in 2010 was much riskier in terms of using financial strategy, as in the case of Richter, which was able to reserve allocated in previous years partly to cover of this. The high net working capital certified strong solvent position and at the same time ensured to pursue more flexible financial policy for both groups. As the ROA is affected by the all asset rotation speed so the effect of different financial strategy on ROA can also be illustrated if the ratio of average net working capital of Richter modified to the same index value of Novartis in such a way that the size of total assets and the net working capital rotation speed is left unchanged and we solely wish to express the net sales in knowledge of the amended variable – assuming that the modifying net working capital is also managed effectively the same away than otherwise by Richter. As a result, the received new net sales divided by the unchanged average all asset, the new all asset

rotation speed, thus the ROA would much lower if Richter continued as the same financial policy as the Swiss producer. From this it can define that the different ratio of current assets financed by permanent sources significantly contributed to the fact that Richter was able to use its asset more efficiently than Novartis almost all the time. Besides that the two groups had to endure high risk arising from the different foreign currency exchange caused by cross-border sales, which cover with derivative assets.

The impact of accounting policy can also remarkable in terms of profitability. If other expenditures of Richter would rise so far as by which more provisions are separated by the Novartis in a percentage of total asset compared to Richter, so the ROA of Richter would lower by 6% in average than otherwise in all the examined period (Figure 5). Although provisioning is accounted against profit, in fact, thereby Novartis can decrease its higher operating risk exposure – resulting from the uncertain outcome of researches – and to offset the Richter's benefit resulting from its prudent financial policy.
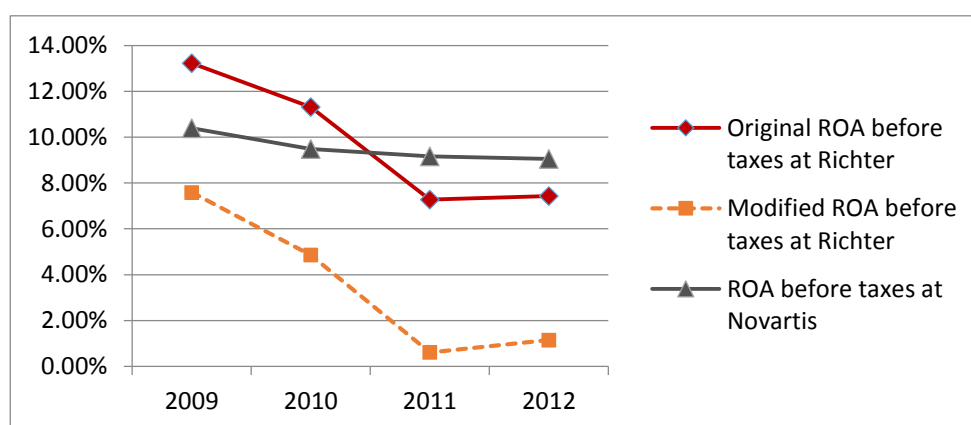
Figure 4: The calculation of return on assets (ROA) of Richter next to the provision ratio of Novartis
Source: own compilation.

4. Proposals and summary

The Richter would able to decline its disadvantage against Novartis in terms of return of R&D investments with that if it corrects its investment policy: as Novartis, in addition to sales, also growing part of its research activities performs in states those provide grants by compensate the acquisition costs for instance in the USA. In that case it would sales its formulas developed in manufacturing technology of higher level next to lower producing costs and – partly due to the demand there that claims less discounts and has lower price sensitivity – higher price reduction benefit compared to its regional competitors. However, for this single or combined use of multiple Japanese management techniques already may be necessary for the majority of companies included in the consolidation. The formers cannot devoid harmonize of the ever-changing trends in the global pharma market and the external market risks arising from the acquisitions with the company strategy. As it can see above, the pharma R&D activity had considerable impact on the long-term firming both individually and in comparison: this is mostly also supported by amount of tax saving validated by the aid system and the lower return of research investments at Richter compare with its Swiss competitor. Beside the grants both producers provided for the coverage of the high operating risk arising from R&D and foreign currency exchange: as long as the Novartis enforces the principle of prudence in its accounting policy, the Richter does the same in its financial strategy. All in all, the leadership of two companies show

maximum effort and diligence to promote the pharmaceutical researchers and by this to improve the overall public health situation of the regional and world population.

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IFRS reports and accounting policies from 2009 to 2012 of Richter and Novartis

THE EFFECT OF DERIVATIVE FINANCIAL INSTRUMENTS ON BANK RISKS, RELEVANCE AND FAITHFUL REPRESENTATION: EVIDENCE FROM BANKS IN HUNGARY

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Abstract

In a continuously changing business environment accounting data have to provide useful information in order to achieve relevant and faithful representation in financial statements. Since global markets have changed radically, growing international trade means the horizons of investors and borrowers have now become global, which has increased the level of their risks. Concerning international trade and investment, one of the most important risks is uncertainty about future foreign currency exchange rates and interest rates. Changes in financial markets have increased the use of derivative instruments (such as forwards, futures, swaps, and options) to hedge risk exposure worldwide, while the related accounting standards have not kept pace with those changes. Because of the complexity and variety of these instruments, reporting on derivatives faces many difficulties, since a different framework and different accounting concepts are required to present useful financial information. For these reasons the growing use of derivative financial instruments and the challenges of the global financial system have intensified and sharpened debates about whether derivative instruments increase or decrease the risk of banks, affecting faithful representation based on their financial statements and decision usefulness of the reported information. This study aims to describe the transformation of accounting concepts and its effect on fair value accounting for derivative financial instruments in the information economy. The research question of the paper is whether the advantages of fair value accounting exceed the disadvantages, especially in the case of derivatives, in reducing the uncertainty and risk associated with financial reporting. Based on this question, the purpose of the empirical research is to assess the level of different risks which banks operating in Hungary face when using derivative financial instruments and to investigate how and to what extent relevance and faithful representation is affected. To answer this, a random effect regression model is conducted to verify whether or not the banks under consideration in Hungary were at risk or not as a result of their use of derivatives during the period from 2003 to 2012. The results indicate that the use of futures, forwards, and swaps tend to mildly increase liquidity, leverage, and credit risks, while options negatively affect leverage, liquidity and credit risks. Other derivatives have a negative effect on bank risks as well. There is some evidence that the relationship between the use of derivatives and overall risk is not significant; hence the banks in the sample are not put at risk by using different derivatives. In sum, it can be concluded that fair valuation of these instruments satisfies the fundamental requirements of useful financial information.

1. Introduction

Over the past few decades accounting has gone through significant changes in line with financial globalization, and as a result accounting concepts appear to be undergoing transformation. In a continuously changing business environment accounting information have to be useful to achieve relevant and faithful representation on the financial position of business entities. Because of the challenges in measuring certain balance-sheet items, the valuation method is much more based on fair value rather than on book value, in order to increase the usefulness of annual reports. In recent years the shift in accounting measurement has been driven by market-based measures, especially in the case of financial instruments. The two main standard setters, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) also underline the importance of incorporating market values in accounting information systems. Improving the conceptual framework for financial reporting is directed towards better performance of both functions within the conventional accrual system of accounting through the use of fair value (Rayman, 2007:211).

Over the last few decades global markets have changed radically. 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. One of the most important risks associated with international trade and investments is uncertainty about future foreign currency exchange rates and interest rates. Practices and markets have developed which help firms manage the added risks of doing business abroad (Crawford et al., 1997). Changes in global financial markets and related financial innovations have led to the increasing use of derivative instruments (such as forwards, futures, swaps, and options) to hedge risk exposure arising from changes in both exchange rates and interest rates. The main problems with these instruments is that accounting standards have not kept pace with these changes; it is, however, very important to improve financial information about derivatives and related activities (Wilson and Smith, 1997). Reinstein and Lander (2000) also emphasise that the accounting for derivatives has also created uncertainties for preparers, auditors, regulators, and users of financial statements. Because of the complexity and variety of these instruments, reporting on derivatives is difficult. Developing consistent accounting rules is extremely challenging since derivative instruments under the different accounting systems may be carried at historical cost, fair value, or some hybrid of fair value and historical cost (Reinstein and Lander, 2000). Over the last decade the increasing use of derivative financial instruments and the challenges of the global financial system have intensified and sharpened debates about whether derivative instruments increase or decrease the risk of banks, affecting faithful representation based on their financial statements and decision usefulness of the reported information. According to Hitz (2007) opponents of fair value measurement criticize the relevance of fair value measures, since if there are no market prices available, they mainly rely on management's expectations and projections; however the use of fair value accounting has grown considerably in financial reporting in the last decade. The movement towards global accounting convergence has been a driving force behind the increased use of fair value, especially in the case of financial instruments.

The research question of the paper is whether the advantages of fair value accounting exceed the disadvantages, especially in the case of derivatives, in reducing the uncertainty and risk associated with financial reporting. Based on this question, the purpose of the empirical research is to assess the level of different risks that banks operating in Hungary face when using derivative financial instruments and to investigate how and to what extent relevance and faithful representation were affected during the period from 2003 to 2012. The paper also aims to verify whether the banks in Hungary under consideration are put at risk or not by using derivatives.

2. Value-based accounting for derivative instruments: literature review

Today's challenges and transformations in accounting could be captured in the move towards value-based accounting from traditional cost-based accounting, since in a historical perspective fair value measurement of financial instruments might be regarded as one specific form of value-based accounting, which is predominantly focused on available-for-sale financial assets and derivative financial instruments (Ishikawa, 2005, Mirza and Holt, 2011). By analysing the economic background of accounting for these instruments, it can be concluded that their usage embodies a different type of capital, which, unlike industrial or commercial capital, represents financial claims. Similarly to Shortridge and Smith (2009), Ishikawa (2005) also emphasises that the original accounting (conceptual) framework with its emphasis on historical cost and realization was essentially designed to capture the flow of real capital (i.e. the production and sale of goods and services), and a different framework and different accounting concepts are required to adapt to the quantitative and qualitative development of capital markets in the information economy. Derivative financial instruments exactly tailored to avert risk in the marketplace represent a further stage in this development (Ishikawa, 2005). In sum, the challenge of accounting for derivatives was a vital transformative facilitator in the history of fair value because it required a return to fundamentals and was a test case for the objectivity and coherence of conceptual frameworks for accounting (Power, 2010).

In the nineteenth century accounting was shaped by industrial capital, while at the end of the twentieth century it was considerably influenced by the expansion of financial claims. Operating and financial assets involve different processes in creating value. The value of operating assets is created and realized through a firm's operations, while in the case of financial assets the returns and risks are determined by market expectations and macroeconomic trends, and they are subject to larger risks caused by changes in the market environment. Currently fair valuation of certain financial instruments has become a leading trend, but there is no ultimate theoretical agreement on how to recognize and measure the value and returns of financial assets – which are different from real assets such as plant, property and equipment – and how to present them accurately in the balance sheet and income statement. For this reason, the valuation and income recognition of financial assets cannot be undertaken by an extension of the traditional accounting framework and concepts; consequently it requires an alternative framework in order to provide useful information on the underlying economic activity. This kind of framework is better able to raise the level of transparency and the faithfulness of financial transactions, the effectiveness of corporate governance, and the efficiency of capital markets (Ishikawa, 2005). In the International Financial Reporting Standards (IFRS) Framework useful financial information is relevant and represented faithfully. This usefulness is enhanced if it is comparable, verifiable, timely and understandable. Relevance and faithful representation are the fundamental qualitative characteristics in financial reporting (IFRS Framework, 2010). Landsman (2007) finds that disclosed and recognised fair values are informative for investors, but the level of informativeness is affected by the amount of measurement error and by the source of the estimates – i.e. from management or external appraisers. In practice, when an active market for the asset or liability does not exist, fair value may not be well defined. In this situation, it becomes difficult to separate an asset or liability's fair value from its value-in-use to the business entity. For example, the estimated fair value of a non-traded swap instrument to a bank depends on the existing assets and liabilities on the bank's balance sheet (Landsman, 2007:20). Blakespoor et al. (2013) prove that the fair values of banks' investment securities, loans, and derivatives are informative for their historical cost equivalents in explaining share prices. Their findings demonstrate that the relationship between credit risk and leverage becomes stronger as the number of financial instruments measured at fair value increases, and fair values are most highly associated with credit risk

determinations (Blakespoor et al., 2013: 1171, 1175). Nowadays many different types of forwards, futures, options, swaps, and other derivatives are regularly traded worldwide by financial institutions, fund managers, and corporate treasurers. A derivative can be defined as a financial instrument whose value depends on the value of other underlying variables. Usually the variables underlying derivatives are the prices of the traded assets (Hull 2009:1). Derivatives are basically designed to achieve an economic result when an underlying security, index, interest rate or commodity moves in price. Futures are standardized contracts in which the purchaser is allowed to buy or sell a specific quantity of a commodity, financial instrument, or index at a specified price. Forward contracts are similar to futures contracts, but they are not traded on an exchange. A swap is an exchange of payment streams between two parties for a certain period of time. An option contract offers the holder the right, and not the obligation, to sell or buy an item at a specified price during an indicated time period (Crawford et al., 1997:112, 113).

In accordance with IAS (International Accounting Standards) 32 (Financial Instruments: Presentation) a financial instrument can be defined as "any contract that gives a rise to a financial asset of one entity and a financial liability or equity instrument of another entity" (Mirza and Holt, 2011:264). IAS 39 (Financial Instruments: Recognition and Measurement) requires derivatives to be measured at fair value to provide more useful information in the balance sheet (Mirza and Holt, 2011). IFRS 13 (Fair Value Measurement) defines fair value as a "price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date" (IFRS 13, 2011 paragraph 9). A published price quotation in an active market is the best evidence of fair value. For assets and liabilities that are not quoted in active markets, fair value is determined by different valuation techniques, such as discounted cash flow models (Mirza and Holt, 2011).

An overview of the related literature shows that several articles have studied the effect of derivatives on bank risks in different countries and regions. Siregar et al. (2013) examine the value relevance of derivative disclosures in U.S. commercial banks; their findings confirm that recognitions of derivatives are value relevant, and quantified derivative disclosures is negatively associated with the value of firms. Keffala and Peretti (2013) find that forwards and swaps decrease bank risk, while options positively affects bank risk, and futures have a mildly significant effect on bank risk in emerging and recently developed countries. According to Yong et al. (2009) the use of derivatives appears to decrease Asia-Pacific banks' short-term interest rate exposure but not their long-term exposure. The results of Augusman et al. (2008) indicate that surveyed Asian countries firm-specific risk is more important than systematic risk. Instefjord (2005) concludes that a financial innovation in the credit derivatives market may raise bank risk. Park et al. (1999) present findings that value differences in available-for-sale and held-to-maturity securities (fair less book value) explain the value of bank equity. Venkatachalam (1996) suggests that fair values have incremental explanatory power over and above the notional amounts of derivatives. Finally, Chaudhry et al. (2000) study the impact of different types of contingent foreign currency claims, and find that options increase all types of bank risk for all banks.

3. Data sample description

Accounting data were obtained from banks' consolidated financial statements prepared in accordance with the International Financial Reporting Standards as adopted by the European Union. The sample represents an unbalanced panel database consisting of 9 banks operating in Hungary, and the study covers the period from 2003 to 2012. In the model derivative financial instruments are separated and presented by contract types (futures and forwards, swaps, options and other derivatives). Other derivatives might

include any types of basic derivatives, as they are not identified in the notes to financial statements. Derivative financial instruments are measured at fair value, and are carried as assets when fair value is positive and as liabilities when fair value is negative.

4. Methodology

4.1. Risk measures
Accounting data from financial statements are used to investigate the effect of the use of derivative instruments on leverage risk, liquidity risk, credit risk, and the volatility of return on assets (overall risk) in banks operating in Hungary. In the model leverage risk is the ratio of equity to total assets. Liquidity risk is defined as the ratio of liquid assets to total assets. Liquid assets are cash, amounts due from banks, and balances with central banks. Credit risks are the ratios of gross loans to total assets and loan loss reserves to total assets. The volatility of return on assets is the standard deviation of return on assets estimated from the figures of the current year and three years before the current year. The return on assets is defined as profit before tax divided by total assets.

4.2. Description of variables
The risk measures are the dependent variables in the model defined by EQTA (leverage risk), LIQATA (liquidity risk), GLTA (credit risk), LLRTA (credit risk), and SDROA (volatility of return on assets). Independent variables are totals of derivative assets and liabilities of each type divided by the total assets (TERM, SWP, OPT, OD, respectively). The control variable is the natural log of total assets (LTA). In my model the dependent variables are regressed on different derivative instruments and the control variable. Table 1 illustrates the variables employed in the empirical research, along with their definitions.

Table 1: Description of variables

Labels	Description	Proxy for
Dependent variables		
EQTA	equity divided by total assets	Leverage risk
LIQATA	liquid assets divided by total assets	Liquidity risk
GLTA	gross loans divided by total assets	Credit risk 1
LLRTA	loan loss reserves divided by total assets	Credit risk 2
SDROA	standard deviation of returns on assets estimated from previous financial statements	Overall risk
Independent variables		
TERM	fair value of futures and forwards divided by total assets	Futures and forwards
SWP	fair value of swaps divided by total assets	Swaps
OPT	fair value options divided by total assets	Options
OD	fair value of other derivatives divided by total assets	Other derivatives
Independent variable: control variable		
LTA	natural log of total assets	Bank size

Source: edited by the author

4.3. Empirical model
The study empirically tests the relationships between accounting measures of bank risk and different derivative instruments by using the following random effect panel regression model for each risk measure:

$$\text{Risk measure} = \gamma_0 + \gamma_1 \text{TERM}_{i,t} + \gamma_2 \text{SWP}_{i,t} + \gamma_3 \text{OPT}_{i,t} + \gamma_4 \text{OD}_{i,t} + \gamma_5 \text{LTA}_{i,t} + u_i + e_{i,t}$$

The model I use follows the methodology adopted by Keffala and Peretti (2013), Agusman et al. (2008), and Chaudry et al. (2000).

5. Empirical results

Tables 2 and 3 present the estimated coefficients of the random effect regression

	EQTA (leverage risk)			LIQATA (liquidity risk)			GLTA (credit risk 1)		
	coefficient	z	P>z	coefficient	z	P>z	coefficient	z	P>z
term	-0.516	-0.44	0.659	2.062**	2.09	0.036	4.626**	2.14	0.033
swp	0.397***	3.73	0	-0.886	-1.57	0.117	0.154	0.12	0.901
opt	-1.574**	-2.55	0.011	-2.448**	-2.5	0.012	-7.282**	-2.02	0.043
od	-0.250**	-2.31	0.021	-1.056***	-2.75	0.006	-0.665	-0.8	0.425
lta	0.006	0.89	0.375	0.006	0.57	0.571	-0.038	-1.37	0.171
_cons	-0.022	-0.2	0.84	0.020	0.11	0.915	1.306	2.95	0.003
R^2 within	0.386			0.247			0.0183		
R^2 between	0.025			0.044			0.655		
R^2 overall	0.134			0.159			0.291		
F (chi^2)	0			0			0		
Number of observations	64			64			64		

analysis. From these tables it is evident that futures and forwards positively affect liquidity risk and credit risk 1 at a level of significance equal to 5. There is a weak positive relationship between swaps and leverage risk at a significance level of 1 percent, and credit risk 2 is also positively correlated with swaps at a significance level of 10 percent. The association between options and leverage risk, liquidity risk and credit risk 1 indicates a strong negative relationship at a significance level of 5 percent, while options negatively affect credit risk 2 at a significance level of 1 percent. In the case of other derivatives, the results suggest that they negatively and strongly affect liquidity risk at a significance level of 1 percent, while negatively but mildly affecting leverage risk at a significance level of 5 percent. The relationship between derivatives and overall risk is insignificant.

Table 2: Estimated coefficients in the random effect model
Notes: *, ** and *** indicate 10%, 5% and 1% levels of significance, respectively.
Source: edited by the author

Table 3: Estimated coefficients in the random effect model (continued)

	LLRTA (credit risk 2)			SDROA (overall risk)		
	coefficient	z	P>z	coefficient	z	P>z
term	-0.031	-0.01	0.989	-0.150	-0.21	0.834
swp	0.540*	1.88	0.06	-0.081	-1.68	0.094
opt	-2.246***	-3.54	0	0.017	0.06	0.954
od	0.396	1.22	0.223	0.113	1.18	0.239
lta	0.022***	3.88	0	0	0.02	0.982
_cons	-0.300	-4.03	0	0.065	0.63	0.531
R^2 within	0.267			0.063		
R^2 between	0.341			0.001		
R^2 overall	0.283			0		
F (chi^2)	0			0.053		
Number of observations	64			61		

Notes: *, ** and *** indicate 10%, 5% and 1% levels of significance, respectively.
Source: edited by the author

6. Conclusion
The paper outlines the transformation of accounting concepts and frameworks in the information economy, emphasising the importance of providing useful information in financial reports. Nowadays the change in accounting measurement is determined by market-based measures, especially in the case of financial instruments, and as a result the use of fair value accounting has grown considerably in the last decade. Major changes in global markets have increased the level of import and export related activities resulting in higher risks for investors and borrowers. These changes have led to an amplified use of derivative instruments to hedge risk exposure; however the key problem is that the related accounting standards have not kept pace with these changes, and this means that a different framework and different accounting concepts are necessary to present useful financial information.

The main purpose of this paper is to determine the effect of derivative instruments on bank risks in Hungary, measured in terms of leverage risk, liquidity risk, credit risk and overall risk. Regarding these effects, the paper also aims to clarify the impact of derivative instruments on the usefulness of reported financial information. Using panel data analysis, the random effect model indicates that the use of futures, forwards, and swaps tends to mildly increase liquidity, leverage, and credit risks. The association between options and leverage, liquidity and credit risk is intensely negative, whereas other derivatives negatively affect leverage and liquidity risks. The overall risk is not expressly affected by the use of derivatives. Based on the results for the control variable, I conclude that size does not increase bank risk. The empirical results show that the banks under consideration do not seem to be at risk when using different derivatives, and therefore the main finding of the paper is that fair valuation of these instruments corresponds to the fundamental qualitative characteristics of useful information in financial reports.

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HISTORICAL ANALYSIS ON THE APPEARANCE OF THE SUPREME AUDIT INSTITUTIONS IN THE EUROPEAN UNION

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Abstract: *Our scientific approach in the land of Supreme Audit Institutions, begins, as naturally, from the first moment of appearance and of engagement, in order to achieve a succession of the most important historical moments in the evolution of organizations. Under these conditions, our approach pursued by this paper is focused on two main areas: identification of the arising for the first time of the Supreme Audit Institutions and their evolution. We believe that we have no access to a full knowledge of a domain at the present time, as long as we do not know the past, because this is the only way we can build the future. As a result, we begin the journey into the realm of the Supreme Audit Institutions from the ancient times, considering this approach not only a necessity, but our duty, to take it from the beginnings.*

Keywords: Supreme Audit Institutions, public external audit, auditors, accounts, history.

JEL classification: M42

1. Introduction

The value of the audit of public accounts seems to have been recognized since ancient times, as *the audit is one of the oldest and most venerable functions of the state* (Pollitt *et al*, 1999:1). This statement makes us turn our gaze and shift research objectives for the audit in the state, not for all audit activity on the public sphere, but only to the external one, recognized as the main objective of Supreme Audit Institutions (SAI).

But, like any process of knowledge, the beginning is represented by the first manifestations of the profession. Online Etymology Dictionary tells us that the origin of the word „audit" comes from the Latin „*audire*", meaning „*to listen*" and „*to pass forward*" or „*person who satisfies his confidence about someone else's accounts*" (Puttick *et al*, 2007:2). This last meaning reminds us to seek early manifestation of the audit on the historical background of accounting.

The apparition of writing leads to the development and preservation of accounting records, and thereof, to the need to verify their correctness (Tiron-Tudor *et al*, 2009), activity recovered over time in different cultures and geographically remote civilisations, such as: the Egyptians, the Babylonians, the Greeks or the Romans, as follows:

- in Ancient Egypt, the correctness of records was verified by the existence of two independent scribes who recorded the same transaction;
- the Babylonians wrote the operations on a tablet of clay – an original one - which was then wrapped in another table – the witness one - then sealed by the scribe, the merchant and the witnesses, so one could not make changes to the original tablet only by destroying the tablet of control. As a result,it began to appear the first manifestations of the audit by the technique of double-checking;
- public accounting in Ancient Greece was so important, that everyone related to the public administration was forced to submit his accounts (Woolf and Gordon, 1912), and verification was done by people called *controllers*, which basically are treated as financial auditors;

- in Ancient Rome, the Senate acted as a Board, verbally checking the accounts of the magistrates by quaestors who held great importance because they had the task to inform and monitor accounts of the magistrates (Tiron-Tudor and Popa, 2010), thus giving birth to the audit technique.

One can easily deduce that, since that time, both the Greeks and the Romans had a complete public checking accounts system. According to the writings of Aristotle, the Athens Senate consisted of 500 people who chose a „*Council*" , consisting of 10 *Logistae* (logistics) and 10 *Euthuni* (eutemists), who were designated to examine the accounts of all public servants, with a special preoccupation in the detection of fraud (McMickle, 1978:11-12):

> *Ten [logistae] ... and ten [euthuni] ... were chosen by lot. Every public official should be considered. They [the auditors] have exclusive control over the subject [of examination] .... and send the findings to the court. Anyone found that embezzled funds should be convicted and fined by the court to pay ten times the amount found . Whatever the court.... if proven to corruption is also obliged to pay ten times the amount received as a bribe. If the person is found guilty of administrative errors, they are valued at a certain amount and the person is fined with the assessed sum, if paid within nine months, otherwise the fine is doubled.*

According to the special literature, similar activities of verification were found in England, too, where:
- William the Conqueror (William the Conqueror: 1027-1087) seems to have disposed of the property inspection and inventory of his kingdom to determine how to divide the lands and collect taxes (Bowers *et al*, 1985);
- Henry I (1100-1135), after the establishment of the Treasury, appointed special officers who had the primary task of checking, to ensure that state revenues and expenditures were properly accounted for (Gul *et al,* 1994:1), and the person responsible for examining accounts was called „*auditor*" (Lee and Azham, 2008). The verification purpose was to prevent fraudulent actions (Abdel- Qader, 2002);
- Edward I entitled barons to appoint auditors, giving an example by asking for the checking of the testament accounts of his wife, Eleanor (Collins and Valin, 1992). The word *probatur* was found almost in all the totals from the will. *Probare* (approval) is a technical word used in audit that means „audited and found correct";
- Edward II proclaimed in the Parliament that the kings are not obliged to keep a spending account (Tiron-Tudor *et al*, 2009), but decided that the officials found with irregularities in the accounts to be sent to prison based on the testimony of auditors (Littleton, 1966).

There was also revealed the existence of control activities in the Italian states (Lee and Azham, 2008), which had the same audit concerns, fraud detection:
- The merchants of Florence, Geneva and Venice were using auditors to help them in verifying the riches brought by ship captains returning from Old World on the European continent;
- City of Pisa, in 1394, asked a well-known accountant, Leonardo Fibonacci, to perform the audit municipal accounts on the based of a fixed fee-twenty pounds (Collins and Valin, 1992), and his appointment record is kept in the state archives;
- In 1494, Luca Paciolo, a Franciscan monk and professor of mathematics, published the principle of the double recording, as it was practiced in northern Italy in those days, in his „Summa de Arithmetica, Geometria, Proportione et Proportionalita". This included a part entitled „De Computis et Scripturis" stating that the registers were closed and open, and the journal of entries was read aloud by an assistant and compared by the owner (the listener) with highlighted entries

in the register. At the end of the outcry and comparison exercise (listening) were pointed to records that did not appear in both registers (Robert de Koning, 2007). Therefore, our view is that one can easily observe a practice of setting auditing public accounts - made by special audit officers - until the thirteenth century, in all land of European countries. The statute of the profession gave prominence to the honesty of auditors because they were intended to ensure that revenues and expenditures were properly accounted for, and state fraud and errors were detected.

Richard Bowle said in 1629 that the audit „is conducted to serve loyally the barons, yet the accounts are ready to be shown to God" (Collins and Valin, 1992:10). Also, according to Lamond (1890) there were formulated the following tips for auditors of feudal accounts in a land property management book written by Walter of Henley: *„The auditors should exercise caution and faith...and accounts must be ready to be submitted for each area, in order to know the losses and profits , the hirings of servants , policemen , teachers, and others...".*

One can easily see that the external audit of the state long preceded the advent of modern democratic governance (Pollit *et al*, 1999). However, this event is only a primary form of the profession, which had as the main objective *the checking of the honesty of those responsible of financial problems.*

In time, the object and purpose of public external audit work has changed, gradually evolving to adapt the system to which it belonged. So, the evolution of society in general can be found in the work of external audit in the public domain. An important development, reflected in the many adaptations in history, is the appearance of „the machinery of democratic accountability" (Pollit *et al*, 1999:1), meaning the professional regulatory bodies, or more specifically the Supreme Audit Institutions.

2. Historical background of the appearance of the Supreme Audit Institutions

While the external auditing in the public sector, as we have seen so far, existed in one form or another since the early centuries of civilization formation, the structure, functions and powers of the Supreme Audit Institutions have evolved over time (NAO, 2005:2). Following the economic circumstances of each country, the passing of the audit presented orally has been done to a technical discipline practiced by professional auditors who advises on compliance of the annual financial statements of an entity with established standards (Ramkumar and Krafchik, 2005). In this context, *the Supreme Audit Institution is a public body of a state or a supranational organizations that,howsoever designated, constituted or organized, exercises, by virtue of law, or other forms of action of the state or supranational organizations, the highest public auditing function of that State or supranational organization independently with or without jurisdiction* (INTOSAI, 2007:3).

Given our main objective, to explore public external audit exercised by the Supreme Audit Institutions of the European Union, we considered relevant that, in order achieve it, to present a historical analysis, since the first apparition of its forms. In achieving this, we studied in detail the sites of the Supreme Audit Institutions, using non-participating observation. In this context, our work is a process of identifying, analyzing and comparing the Supreme Audit Institutions of the European Union, which helps to highlight the differences and similarities and to draw some conclusions on the occurrence of *the machineries of democratic accountability*.

Table 1 captures the historical analysis carried out on the occurrence of the Supreme Audit Institutions, from the first manifestations until determining the form and name currently held. Research shows the development of each institution, particularly, for the most thorough knowledge of information to provide useful conclusions at the end.

Table 1. Analysis on the appearance of the Supreme Audit Institutions

Country	First manifestation of the form	Transition to its current form
Austria	1761 Rechen - Cammer	1919 Rechnungshof
The history the Supreme Audit Institution of Austria is quite complex and important, given that the Austro-Hungarian Empire was spread over several countries in Europe. It is known that in 1761 the Empress Maria Theresa established Rechen-Cammer *„to highlight all diseases in finance, especially spending disease"*. The positions held by the institution aimed especially: to give advice on all aspects of major financial decision, with suspensive effect until the subsequent decision of the Empress (ie preventive audit), to work to improve methods of audit and accounting management, to assume management of public accounting. Subsequently, in 1782, Emperor Joseph II describes the accounting and auditing procedures that he implemented in the Habsburg Empire and strengthens the authority of the Supreme Audit Institution in carrying out the review of public funds. In the next years, the institution changed its name several times, until in 1866 it becomes *Rechnungshof* – the audit authority Austro-Hungarian Empire. It was established as being directly answerable to the king, operating as such until the collapse of the Austro-Hungarian Empire. The year 1919 is actually the year when the Republic of Austria, newly established, takes *Rechnungshof* as an authority answerable to the National Assembly for all its economic and state debts.		
Belgium	1386 Chamber of Accounts	1830 Rekenhof
From the historical point of view, in Belgium it is reminded of the Supreme Audit Institutions even before the fourteenth century, but the first Supreme Audit Institution with a clear organization was established in 1386 in Lille by the Duke of Burgundy and Count of Flanders. Its powers were extended to other regions, due to annexation made by the dukes of Burgundy, aiming mainly the monitoring and closing of all accounts of the Dukedom. Despite the circumstances, such an institution existed until 1830 when, after separation from the Netherlands and the winning of independence, in Belgium was established by the Constitution „Rekenhof" as the Court of Audit.		
Cyprus	1879 Accountant and Auditor General	1960 Audit Office
The history of the Supreme Audit Institution in Cyprus dates from pre- independence era. Following the annexation of the island in 1878 to Britain, the first Auditor General, under colonial rule, was appointed in February 1879. He also held the position of Accountant General of the island and Member of the Executive and Legislative Council. It was later decided to separate the functions of an auditor and general accountant and the Audit Department was placed under the administration of Controller and Auditor General of Great Britain, for which he had a strong influence on the formation of the Supreme Audit Institution in Cyprus. The year 1960 is the moment when Cyprus became an independent state and thus is called the first Auditor General of the Republic.		
Denmark	1926 State Accounting and Audit Act	1976 Rigsrevisionen
The Danish state audit dates back several centuries, but nevertheless in most ministries, audit departments have been set up in 1848. In 1917 the state has reorganized accounting and accounting system that included the reorganization of public external audit. Thus, in 1976, the Law of the General Audit appeared, which provided that the audit of the state accounts to be conducted by an independent auditor general leading a unified audit organization.		
Estonia	1918 State Audit Office	1990 Riigikontrol

In Estonia, due to the historical evolution of the country, the State Audit Office was established in 1918, but its work was influenced and stopped by the Soviet Union annexation since 1940. So, just in 1990 there appeared a new independent audit institution, modeled on the contemporary audit practices.		
Finland	1695 National Audit Office	1948 National Audit Office
The National Audit Office of Finland finds its origins in 1695, when an independent body was created to monitor the financial management under the Swedish crown. The first National Audit Office predecessor, the General Revision Court, was established in 1824 in the finance department of the Finnish Senate. The year 1919 brings through the Constitution of Finland the need to create a body that will audit state funds - NAO. During the Second World War, a second audit body was created - the Audit Office of War Economy, due to higher expenses during the period. So, in 1945, the question of unification of the two institutions appeared, and only in 1948 the National Audit Office starts to operate in its current form.		
France	1320 Chambre des Comptes	1807 Cour des Comptes
„Cour des Comptes" is the product of a long historical process (Alventosa and Baldacchino, 2013). The contents of an anonymous chronicles stipulated that it appeared at the beginning of the fourteenth century, Chambre des Comptes was formed from Curia Regis, a different institution based in Paris, which had the main tasks to audit the finances of royal administration and the supervision of the financial administration (Daly, 2013). In 1320, the institution appears as a separate entity, independent and modeled after the Parliament, with legislative and administrative tasks related to royal accounts and the king's domain or crown lands (Encyclopaedia Britannica). Initially, Chambre des Comptes was in control of all the finances of the field, responsible for managing all litigation about the king's accounts and financial policy.The king was the only one who had the right to revoke the decision of the Court. During the French Revolution (1790), Chambre des Comptes was abolished and Napoleon established in 1807 *Cour des Comptes*, which continues its activity as a Court of Accounts of France. Since the establishment, the Court experienced a slow and steady change in order to contribute to the belief under Article 15 of the Declaration of Human Rights: „*Society has the right to ask any public official accountable for his administration*" (Alventosa and Baldacchino, 2013:15).		
Germany	1714 General Chamber of Accounts	1950 Bundesrechnungshof
In 1714, Prussian King Frederick William I established the *General Chamber of Accounts*, as an independent external audit, autonomously within the administration. Its tasks aimed at auditing the accounts of the State, issue a report on its findings and presenting expert on administrative reforms. Even after Prussia became a constitutional monarchy, the yearly „Comments" of the institution had to be submitted to Parliament. After German unification in 1871, the body became the Supreme Audit Institution, gaining the name of Bundesrechnungshof in 1950.		
Greece	1833 Court of Audit	1972 Court of Audit
The audit of Greece follows the French model of Cour des Comptes, and thus arises the Greek Court, made and established by decree in 1833. Court development undergoes smoothly through a series of new activities it was assigned. In 1972, it was established the classification of the audit record of public funds for post and pre - audit.		
Ireland	1866 Office of the Comptroller and Auditor General	1923 Comptroller and Auditor General
The audit institution in Ireland is emerging only in 1923 when they set the terms and conditions of appointment of the Comptroller and Auditor General. The Constitution		

of 1937 states the need for external audit by the State to exercise „*control over all payments on behalf of the state and to audit the accounts managed by or under the authority of the state*" (www.gov.ie).

Italy	1862 Corte dei Conti	1948 Corte dei Conti

The history of the Supreme Audit Institution of Italy had an upward trend of modernization continually. Corte dei Conti was established in its current form by the Law 800/1862, which merged four existing Courts at the time (based in Turin, Florence, Naples and Palermo), before the Kingdom of Italy was proclaimed. Law gave institution responsabilities on judicial accounting and pre-audit activities and in 1948 the Court appears stipulated in the Constitution.

Latvia	1918 Valsts Kontrole	1923 Valsts Kontrole

The first Supreme Audit Institution of Latvia was founded in 1923, but the writings show that after the independence, in 1918, the new government was formed and its intended position in the Auditor General . Therefore, it can be considered that the foundation of the National Audit Office was set in 1918, during the formation of the provisional government. That worked up until the occupation of the state in 1940, when it was closed and was re-established by the restoration of independence in 1992.

Lithuania	1919 State Control Institution	1990 State Control Office

The law - State Control Institution - appeared in 1919, defines the institution as „part of public administration" and establishes its objects, rights and obligations. The institution adheres to standards set at that time by institutions in developed countries. In 1940, the State Control Institution is abolished and its re-establishment occured in 1990 as the State Control Office, with the responsibility for exercising supervision over the legality, management and use of state property and the budget.

Luxembourg	1840 Chambre des Comptes	1999 Court des Comptes

Chambre des Comptes was established in 1840 as an independent institution by Royal Decree. it exercised control over all the financial operations of the state and had the power to refuse certain expenses of the state. In this way it is exercised the post- audit of state over spending and control on the legality and regularity of expenditure before payment, but after commitment. Court des Comptes in its current form was established in 1999.

Malta	1814 Audit Department	1997 National Audit Office

The external public audit activity in Malta was historically influenced by external public audit structures developed in the UK. Thus, in 1814, following the introduction of a centralized financial control of State Audit Department, was established the Audit Department by the British governor of Malta. Its existence persisted until 1997 when the National Audit Office was established as an independent institution of the executive branch of government.

UK	1314 Auditor of the Exchequer	1983 National Audit Office

The earliest mention of a public official charged with auditing government spending in the United Kingdom is referred to the Auditor *of the Exchequer* since 1314. This structure remained until 1559 when, during the reign of Elizabeth I, appeared the *Auditors of the Imprest*, who was officially responsible to audit the Treasury payments. Gradually, this system breaks down and is replaced in 1780 by the *Commissioners for Auditing the Public Accounts* which was intended to audit government accounts of the Treasury. Since 1834, Comissioners work in tandem with the Comptroller of the Exchequer - function that was responsible for auditing government funds. In 1866, William Gladstone Edwart (Minister of Finance between

1859 and 1866 in the UK) promulgates the Exchequer and Audit Departments Act that binds the two historical function as *Comptroller and Auditor General* (C&AG). Actually, the year 1983 brings the replacement of Exchequer and Audit Departments with the body known today as the National Audit Office.		
The Netherlands	1447 Generaliteitsrekenkamer	1814 Algemene Rekenkamer
Origins of public audit in the Netherlands can be traced from the fourteenth century when Generaliteitsrekenkamer appeared, but over the years the organization has gone through many changes. Traditionally, external public audit work was carried out in the name of sovereignty, practically dukes of Burgundy, who ruled principalities in the Netherlands, this mechanism being needed to monitor their remote possessions. In 1608, the Estates - General of the Confederation of Utrecht , which existed within the new sovereign state,s have established an audit court in The Hague, called The Generaliteitsrekenkamer. Only in 1814, King William I, by the adoption of the Constitution, established Algemene Rekenkamer as the Supreme Audit Institution.		
Portugal	1849 Tribunal de Contas	1930 Tribunal de Contas
In 1849 appears the *Tribunal de Contas* whose responsibilities have grown to include activities of pre and post-audit. From 1910 to 1926 the institution was abolished and replaced with the Supreme Council for Financial Administration and, since 1930, is restored Tribunal de Contas.		
Slovenia	1761 Rechen - Cammer	1994 Court of Audit
As for Slovakia, in Slovenia the Supreme Audit Institution follows the same course of history until 1919 when the newly established Kingdom (Serbs, Croats and Slovenes), later renamed the Kingdom of Yugoslavia, formed its own State Auditing Institution - *General Control* - which was responsible for reviewing state accounts and control the implementation of the state budget. The current form of the Supreme Audit Institution was established in 1994.		
Spain	1924 Tribunal Supremo de la Hacienda Pública	1931 Tribunal de Cuentas
Year 1924 brings to the Spanish state the *Tribunal Supremo de la Hacienda Pública*, which performed both internal and external control of the management of public funds. Later, in 1931, the Constitution binds the Court of Cuentas to the Parliament of Spain , until 1953 when it goes under the jurisdiction of the head of state and organic instances. As a result, the Constitution of 1978 stipulates that „*the Supreme Audit Institution is responsible for auditing the accounts and the economic management of state and public sector*" (section 136).		
Sweden	1921 National Accounts Board	1961 Riksrevisionsverket
The external public audit of Sweden manifested in some form since the sixteenth century, but only in 1921 appears the *National Accounts Board* as the control body of administering the government funds. In 1943 was formed *the Government Audit Bureau* to examine how the organization of government worked, by checking certain state bodies. In 1961, the two organizations merged to form Riksrevisionsverket or National Audit Bureau (later Office) constantly evolving its remit, and in 1998 it became the Supreme Audit Institution by moving responsibility for the state accounts for another agency.		
Hungary	1528 Royal Chamber	1989 Állami Számvevoszék.
The first document referring to auditing the accounts of the Hungarian state and the establishment of institutions responsible for the financial powers of Hungary, appears		

> in 1528. However, only in 1868 appeared the *Imperial and Royal Supreme Audit Office*, which is abolished during the communist era to be reborn in 1989 as the Supreme Audit Office of Hungary-Állami Számvevoszék.

Source: the projection of the author according to the sites of the Supreme Audit Institutions

Analyzing the history of Europe, we can easily deduce that, since the eighteenth century, but more pronounced in the eighteenth century, there was an extensive process of democratization that led to the emergence of the Supreme Audit Institutions, as institutions of the state (Bostan, 2011). If in the previous period prevailed the idea that the state is an extension of the power of the monarch, who, in turn, had direct sovereignty of the deity, in the nineteenth century it is stated more and more the idea that the state is or should be an emanation of the nation and, therefore, responsible to the institution representing the nation (CCR, 2005:16).

One can easily notice that the main objective pursued by the Supreme Audit Institutions at their beginning was primarily concerned with the control of public finance management (the legalisation of the post-enactment control), guaranteeing of legal administration, in an accurate and systematic way, in order to meet the interests of the state. More specifically, the work of the Supreme Audit Institutions was pursuing aspects of morality, ethics and equity in the financial field (NAO, 2005), as well as the checking of the compliance with the law and the achieving of the maximum economical efficiency.

This task was crucial for the „health" and the performance of the economic mechanism and for the morality of the entire society (Bostan, 2011:34).

3. Conclusions

Following the historical analysis realized on the appearance of the Supreme Audit Institutions in the European Union countries, we can say with ease that these,due to the importance they detain, are part of the state and, like other institutions, are contributing to the formation and shaping of history. So, they are not only part of the history of a state, but they are an important element that sometimes decisively influenced certain actions.

The passing of the external public audit from the detective work or „watchdog" (Sarup, 2004) to an organized form, consisting of state audit offices, was made through many adaptations during history. Therefore, the appearance of the Supreme Audit Institutions was sometimes made as a result of:

political changes such as:
- the restoration of the dynasty *House of Orange* in the Netherlands;
- the unification of Italy;
- the establishing the new Republic of Austria;

the reform of public administration such as the establishing of the Department of Finance and Audit in the UK;

due to a registration in the ample European current that highlighted new concepts about the administration and control of public finances.

In terms of time of occurrence, at the European Union level, the oldest mention of a Supreme Audit Institution is found in the case of the French Court which has its origins since 1318. However, the National Audit Office in the UK, has the earliest mention of a public official responsible for government spending since 1314. From this moment until the sixteenth century, at the European Union countries level, there were established five Supreme Audit Institutions (in the UK, France, Belgium, the Netherlands.

During the seventeenth and eighteenth centuries, they have been established in six EU countries, in Finland, Germany, Austria and Slovenia, but we should keep in mind that

four of them are part of the Austro-Hungarian Empire, having therefore a single authority that operated the external public audit.

The first Supreme Audit Institutions, in the modern sense, were established during the first half of the nineteenth century.

The evolution of the Supreme Audit Institutions was not done individually or in isolation, they have influenced each other and contributed to the formation and shaping of the external public audit activity in the countries they belong to. A good example of this is found in the UK where the Supreme Audit Institutions had an influence on historical and audit structures developed by Cyprus and Malta.

The aim of this article was to capture and provide an overview regarding the evolution of the Supreme Audit Institutions. Addressing from the past to present and from general to particular, both on the special literature and the regulations in the field, allowed us to detach a historical-cultural context that favored their emergence and development. Finally, we believe that the objectives of the research: *identification of when the first Supreme Audit Institutions appeared and their evolution*, have been achieved.

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SUB-SECTIONS: BANKING, PUBLIC FINANCES

IMPACT OF THE GLOBAL FINANCIAL CRISIS ON SOVEREIGN DEBT IN THE EUROPEAN UNION

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Abstract: *At European Union level, the global financial crisis intensified the issue of sovereign debts and member states had to implement a series of fiscal measures in order to reduce the budgetary deficit and public debts, that have peaked in the last decades. These changes were also imposed in the Romanian fiscal system and the effects were felt in particular through increased tax rates or even the introduction of new taxes. 2008 was the year that marked a turning point in the fiscal policy of member states of the European Union from multiple perspectives. The impact of the economic crisis was felt mainly through the drastic decrease in tax revenues for all member states, which led to an accelerated growth of the budgetary deficit and implicitly of the indebtedness degree. In this context, EU member states were forced to adopt measures that would reduce the budgetary deficit (increases in some taxes and reduction of certain public expenditures). In 2010, the sovereign debt crisis in the euro area exposed the weaknesses of the EU economic governance. In response, the so-called "six pack" regulations were introduced in December 2011. Moreover, many countries have intensified their consolidation efforts in an attempt to regain the confidence of financial markets. The new architecture of fiscal policy in the European area has undergone many changes in recent years, market not only by the fiscal harmonization process, but mainly by the temptation of fiscal coordination that aims mainly to achieve fiscal stability and reduce medium and long-term public debt. The excessive growth of countries' indebtedness degree in recent years led to the need to study the sustainability of the indebtedness policy, considering that maintaining the budgetary deficit at a prudent level would also ensure the sustainability of fiscal policy. The study analyzes the effects in budgetary plan of economic recovery measures by highlighting the evolution of public debt in EU member states. In recent years was spoken increasingly about a sovereign debt crisis in PIIGS countries (Portugal, Italy, Ireland, Greece and Spain) as the level of public debt exceeded 100% of GDP.*

The issues regarding public debt sustainability were addressed by international organizations such as the International Monetary Fund, Economic Organization for Cooperation and Development, World Bank. These bodies have established methodologies for determining the sustainable level of public debt, including external debt, since early 1980s when most industrialized countries registered high indebtedness rates. Also, financial crisis and excessive debt accumulated by developing and especially least developed countries negatively influenced investments, country risk, public budgets and present and future generations.

In 1923, when France faced a high level of indebtedness, Keynes explained the need to respect government budgetary constraints in order to apply a sustainable fiscal and budgetary policy. This approach can be considered a definition of public debt sustainability and consists in the French state's obligations that were expressed by the volume of budgetary expenditures, constrained by the national income. If we transpose Keynes's conception to the current economic conditions, we can say that the issue of

sustainability occurs when the indebtedness degree reached a level appreciated as being excessive and when budgetary revenues should also allow the funding of associated costs associated with new loans contracted by the government to financially support budget deficit.

The excessive indebtedness degree is the result of accumulation of government debt. This will involve a cost represented by the public debt service, which can be honored only if there is a fiscal adjustment materialized by increasing taxation and reducing budgetary expenditures. These types of measures are taken through fiscal and budgetary policies. For these policies to be sustainable on medium or long term there must be a consistency and stability in time of fiscal and budgetary measures, so that the positive effects to be also reflected in microeconomic statistics.

According to the author Domar (1944) the indebtedness rate must converge to a finite value to avoid the continuous growth of the tax burden, or, as the authors Blanchard, et. al. (1990) said, it must converge to the original level. This level also confers stability to the fiscal and budgetary policies, including the one regarding public debt.

According to the author Zee, sustainability represents stability, as shown in his study regarding sustainability and the optimum public debt, respectively "the sustainability level of public debt is the one that allows the economy, in the absence of exogenous unanticipated shocks, to aim for balance" (H. Zee, 1987:603).

In addition, the authors Blanchard, et. al. (1990) impose a restriction that the present value of future primary surpluses must be equal with the current level of public debt. If these variables are expressed in nominal terms, and the discount rate is the interest rate on public debt, then the public debt must converge to zero. If new governmental debts are accumulated, there is the chance that the indebtedness policy is not sustainable. But here also intervenes the way in which, in each state, the other microeconomic variables react to the increase of the indebtedness degree, respectively the macroeconomic variables are not influenced by the problem of choosing between the accumulation of new debts or increasing taxation if citizens do not react, medium or long term, by increasing the consumption as a result of supplementing the available income; or macroeconomic variables are influenced by the increase of indebtedness as the next period there will be fiscal adjustments most likely materialized also through the increase of taxation that will affect consumption, or according to the last scenario, the macroeconomic variables are less influenced if, in that respective country, economic growth allows the collection of a higher volume of public resources that provides funding for continuously growing budgetary expenditures.

Indebtedness policy sustainability reduces ultimately to the necessity to ensure limited resources for unlimited needs of communities, which can be expressed based on inter-temporal budget constraint. However, in concrete terms, debt sustainability derives from this budgetary constraint, according to which total governmental debts must be covered by the updated value of future governmental revenues. (Blanchard, 1990)

The problem of correlating governmental obligations with public resources, respectively to consider the budgetary constraint, led to the association of the concept of sustainability of the indebtedness policy, or fiscal sustainability, with the term of government financial solvency or even liquidity. Thus, sustainable public debt represents that level of indebtedness that can be reimbursed by public authorities without making, in the future, adjustments to budgetary revenues and expenditures. In this respect, public debt sustainability is strongly influenced by the cost of funding and ability or willingness to honor the public debt service and includes state solvency and liquidity (International Monetary Fund, 2002).

Nevertheless, a simple analysis of the indebtedness degree of a country is not sufficient to determine if the public debt policy is sustainable. An increase of indebtedness doesn't necessarily imply the inexistence of sustainability if the economic growth is higher than

the real interest rate in state loans. So, state solvency is a necessary condition, but not a sufficient one for fiscal policy to be sustainable in a country considering its economic situation and funding sources.

Nickel, et al. (2010) in the paper entitled "Major Public Debt Reductions. Lessons from the Past, Lessons from the Future", capture the most substantial reductions in the public debt of some states, including the time periods in which these reductions have occurred and the factors that influenced them; they review the possible macroeconomic effects of very high public debts, as well as the composition of the public expenditures incurred by the Government, for a predetermined sample of countries in the European Union.

The factors that determine public debt are analyzed by Forslund, et al. (2011), in the paper entitled "The Determinants of the Composition of Public Debt in Developing and Emerging Market Countries". The authors classify these causes into five categories, from macroeconomic imbalances, to the exchange rate regime. Also, Antonio Afonso (2002), approaches the subject of agencies Standard & Poor's and Moody's, respectively of the system under which they give ratings to countries based on their public debt, as well as the factors that influence the allocation of a rating or another.

The presentation of public debt goes hand in hand with the presentation of the evolution of the public deficits that have determined its appearance. The wishes and suggestions of international bodies to organize the management of public debt policy in a manner independent from the monetary and budgetary policy derives from the necessity to ensure control and total transparency for the population regarding public funds. As a state registers rising budgetary deficits, the public debt will be higher and, consequently, the public debt service will be more difficult to bear. The long term stability of the ration public debt/ GDP implies bringing together two conditions (Călin, 2008:215):

- balanced economic growth;
- reducing budgetary deficit.

1. In an expanding economy, in which the state is indebted, applying a budgetary policy of maintaining constant in the long term the ratio between public debt and GDP requires that the volume of public debt to increase on average at the same rate as the nominal GDP. The budgetary deficit that ensures this ration between debt and GDP is equal with the product between the growth rate of nominal GDP and, respectively, the volume of public debt (Călin, 2006:216):

$$\text{Budgetary deficit} = z \times \text{Public debt}$$

Where:

z = growth rate of nominal GDP;

$z = g + d$;

g = growth rate of real GDP;

d = inflation rate.

2. The effect of the volume of public debt depends essentially on the difference between the nominal interest rate and the growth rate of nominal GDP. Covering the additional expenditures that exceed the level of resources is achieved by contracting loans internally or externally, thereby achieving the total deficit of the state, which is given by the formula (Călin, 2006:217):

$$\text{Total public deficit} = p_t G_t - p_t x_t Y_t + i_{t-1,t} B_{t-1}$$

Where:

p_t = price level;

G_t = public expenditures in t;

x_t = tax rate in t;

Y_t = national income in t;

$i_{t-1,t}$ = nominal interest rate between t-1 and t;

B_{t-1} = total debt in t-1.

The monetary policy of each state determines the inflation rate, thus influencing directly the growth rate of nominal GDP in the long term. To produce positive effects, monetary policy should seek a solution through which to obtain an inflation rate to determine a growth rate of nominal GDP higher than the nominal interest rate. (Călin, 2006:219)

The factors that influence public debt could be divided into five categories, namely (Forslund et al., 2011:6):

- macroeconomic imbalances: the most representative example is inflation;
- size of the country and its level of development: GDP, respectively GDP per capita;
- periods of crisis: a representative example is banking crisis;
- trade openness of the country;
- exchange rate regime.

The inflation rate can have two opposite effects on public debt. On the one hand, an increase in the inflation rate can enhance public debt dynamics by reducing the real value, actually reducing it. On the other hand, an increase in the inflation rate contributes negatively to public debt dynamic, through the fact that governments are forced to pay higher nominal interest rates. Also, the real economic growth registered by a state implies a decline of the indebtedness rate, which eases the burden of public debt. Also, a growing economy contributes to the absorption of excess labor force, to the reduction of unemployment, to the increase of the living standards and minimization of possible social conflicts and political instability. The degree of economic development is also taken into consideration through GDP expressed per capita. Nevertheless, rating agencies assign a greater possibility of reimbursement to countries labeled as being developed. The history of the states can also influence the opinion of rating agencies, a history that includes repeated reimbursements is automatically penalized with a low rating. (Afonso, 2002:9, 10)

Budgetary deficit represents a variable of flows, while public debt represents a variable of stocks. Whenever the state faces budgetary deficit, at the end of the year, it requires funding funds, thus affecting the public debt level. The classic school saw as main negative effects of deficit the low level of investments and the high level of the interest rate, which was later transposed by the specialized literature in the so-called crowding out effect. Crowding out occurs together with changes in interest rates. Because the deficit actually represents a negative public saving, the national savings level is decreased. When the government increases the demand for loans, the interest rate – the credit price – will increase. Along with this increase, private investments become more expensive, and the temptation to make them decreases. So we observe that the general assumption is that public debt mainly affects private investments. (Moldovan et al., 2010:56)

If public debt increases to fast, for a long period of time, there is the theoretical risk to reach the credit state limit – that level of debt that would make creditors doubt the possibility that the state would continue to pay interest. In this case, the state would be close to disaster. A small increase in the share of public debt in GDP could lead to a cessation of future loans or the imposition by creditors of prohibitive interest rates to compensate the increased risk. Without having at hand the possibility to borrow at reasonable interest rates, the budget must be balanced immediately. (Moldovan et al., 2010:58)

In the following we will perform an analysis of the evolution of indebtedness as a percentage of GDP for the EU member states to highlight the growth of public debt in the last decade, particularly the steep increase after the onset of the crisis. We will perform both a global analysis on aggregates EU 27, EU 15, EU 17, NMS 12, as well as a detailed analysis of the component states, respectively the old Member States and the new Member States, that adhered in 2004 and 2007 in NMS 12.

Table 1: Evolution of public debt as share in GDP

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
UE 27	61.00	60.50	61.90	62.30	62.80	61.60	59.00	62.20	74.60	80.00	82.50	85.30
Zona euro (UE17)	68.20	68.00	69.20	69.60	70.30	68.60	66.40	70.20	80.00	85.40	87.30	90.60
UE 15	59.15	58.35	58.12	57.93	57.67	56.17	54.19	59.65	69.15	75.98	80.97	84.89
NMS 12	37.08	36.62	37.37	36.71	34.66	32.88	31.07	31.38	39.42	43.28	45.61	49.38
Romania	25.7	24.9	21.5	18.7	15.8	12.4	12.8	13.4	23.6	30.5	34.7	37.8

Source: Processing based on data from Eurostat

The lowest level of indebtedness is registered in the new EU states on average, and regarding old states, respectively states from the euro area, the average indebtedness degree is almost double compared with that from new member states. In the states from the euro area not even in 2001 the average indebtedness degree did not stay within the limit 60% of GDP.
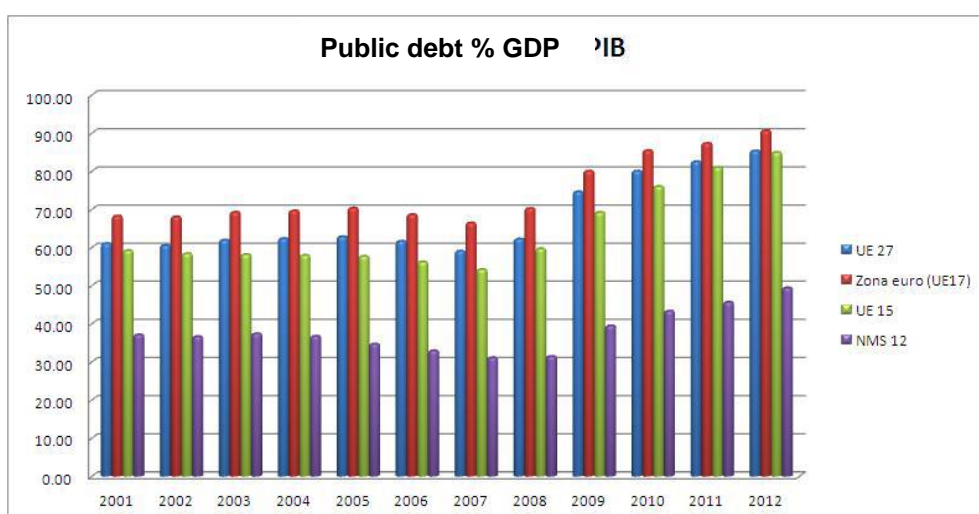
Figure 1: Evolution of public debt as share in GDP
Source: Processing based on data from Eurostat

The share of public debt in the euro area ranges between 66.40% and 90.60% of GDP. In the first year of analysis, the ranking of GDP as share in GDP is as follows. Euro Area with 68.20%, followed by EU 27 with 61%, EU 15 with 59.15%, and least NMS 12 with 37.08%. In the last year of analysis, 2012, the hierarchy is maintained, although the values are higher.

Table 2: Public debt % of GDP

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
UE 15	59.15	58.35	58.12	57.93	57.67	56.17	54.19	59.65	69.15	75.98	80.97	84.89
Belgium	106.50	103.40	98.40	94.00	92.00	88.00	84.00	89.20	95.70	95.50	97.80	99.60
Denmark	49.60	49.50	47.20	45.10	37.80	32.10	27.10	33.40	40.60	42.90	46.60	45.80
Germany	59.10	60.70	64.40	66.20	68.50	68.00	65.20	66.80	74.50	82.50	80.50	81.90
Ireland	35.20	32.00	30.70	29.50	27.30	24.60	25.10	44.50	64.90	92.20	106.40	117.60
Greece	103.70	101.70	97.40	98.60	100.00	106.10	107.40	112.90	129.70	148.30	170.60	156.90
Spain	55.60	52.60	48.80	46.30	43.20	39.70	36.30	40.20	53.90	61.50	69.30	84.20
France	56.90	58.80	62.90	64.90	66.40	63.70	64.20	68.20	79.20	82.30	86.00	90.20
Italy	108.20	105.10	103.90	103.40	105.70	106.30	103.30	106.10	116.40	119.20	120.70	127.00
Luxembourg	6.30	6.30	6.10	6.30	6.10	6.70	6.70	14.40	15.30	19.20	18.30	20.80
Netherlands	50.70	50.50	52.00	52.40	51.80	47.40	45.30	58.50	60.80	63.10	65.50	71.20
Austria	66.80	66.20	65.30	64.70	64.20	62.30	60.20	63.80	69.20	72.00	72.40	73.40
Portugal	53.80	56.80	59.40	61.90	67.70	69.40	68.40	71.70	83.20	93.50	108.10	123.60
Finland	42.50	41.50	44.50	44.40	41.70	39.60	35.20	33.90	43.50	48.60	49.00	53.00
Sweden	54.70	52.50	51.70	50.30	50.40	45.30	40.20	38.80	42.60	39.50	38.40	38.20
United Kingdom	37.70	37.70	39.10	41.00	42.20	43.30	44.20	52.30	67.80	79.40	85.00	90.00

Source: Processing based on data from Eurostat
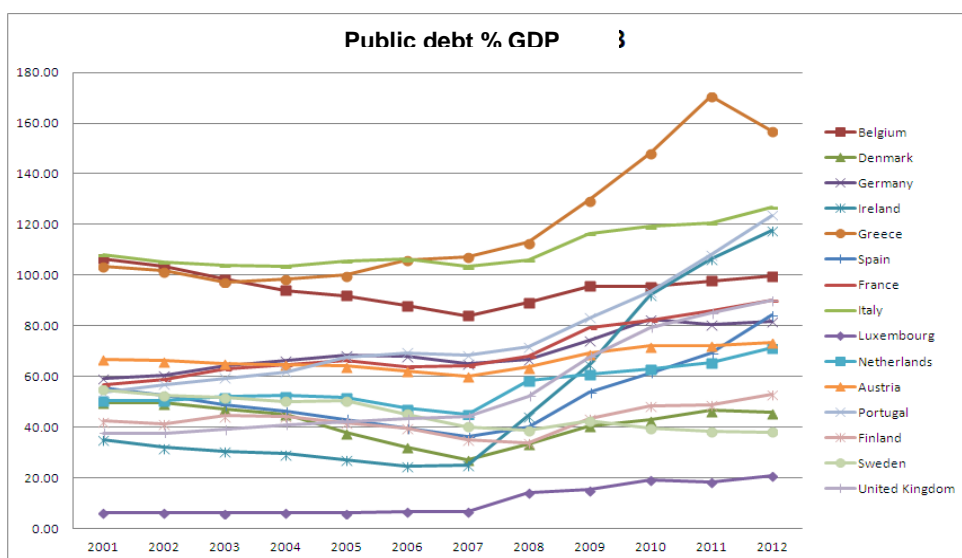
Figure 2: Evolution of public debt as share in GDP in EU 15
Source: Processing based on data from Eurostat

Countries that constantly exceed the public debt barriers in the EU 15, the limit being 60% of GDP imposed by the Stability and Growth Pact, are Belgium, Greece, Italy and Austria. Of these, Greece has the highest debt ratios in GDP, of 170.60% in 2011.

The remaining states slightly exceed the limit, other states are even below this limit. An eloquent example is Luxembourg, which has the public debt as share in GDP below 20%, in the first years of analysis registering values of 6% of GDP.

Table 3: Public debt % of GDP

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
NMS 12	37.08	36.62	37.37	36.71	34.66	32.88	31.07	31.38	39.42	43.28	45.61	49.38
Bulgaria	66.00	52.40	44.40	37.00	27.50	21.60	17.20	13.70	14.60	16.20	16.30	18.5
Czech Republic	23.90	27.10	28.60	28.90	28.40	28.30	27.90	28.70	34.20	37.80	40.80	45.8
Estonia	4.80	5.70	5.60	5.00	4.60	4.40	3.70	4.50	7.20	6.70	6.10	10.1
Cyprus	61.20	65.10	69.70	70.90	69.40	64.70	58.80	48.90	58.50	61.30	71.10	85.8
Latvia	14.10	13.60	14.70	15.00	12.50	10.70	9.00	19.80	36.70	44.50	42.20	40.7
Lithuania	23.00	22.20	21.00	19.30	18.30	17.90	16.80	15.50	29.30	37.90	38.50	40.7
Hungary	52.70	55.90	58.60	59.50	61.70	65.90	67.00	73.00	79.80	81.80	81.40	79.2
Malta	60.50	59.10	67.60	71.70	69.70	64.00	61.90	62.00	67.60	68.30	70.90	72.1
Poland	37.60	42.20	47.10	45.70	47.10	47.70	45.00	47.10	50.90	54.80	56.40	55.6
Romania	25.70	24.90	21.50	18.70	15.80	12.40	12.80	13.40	23.60	30.50	33.40	37.8
Slovenia	26.50	27.80	27.20	27.30	26.70	26.40	23.10	22.00	35.00	38.60	46.90	54.1
Slovakia	48.90	43.40	42.40	41.50	34.20	30.50	29.60	27.90	35.60	41.00	43.30	52.1

Source: Processing based on data from Eurostat
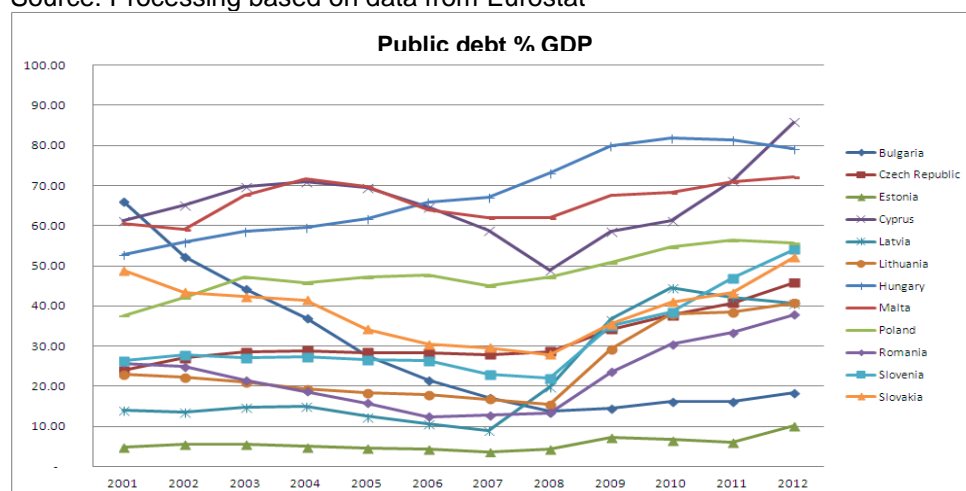
Figure 3: Evolution of public debt as share in GDP in NMS 12
Source: Processing based on data from Eurostat

In NMS 12, during the analyzed period, the share of public debt in GDP increased from the minimum value recorded in 2007 of 31.07% to the maximum value of 49.38% in 2012. The lowest share in GDP registered throughout the analyzed period is held by Estonia, with a value of 3.70% reached in 2007. The highest share in GDP is held by Cyprus in 2012, when public debt reaches 85.8%. The total of 12 member states reported an average level of debt of over 37% of GDP during the analyzed period.

We also analyzed the correlation between public debt and economic growth for three years: 2008, 2009, and 2012 to see the effect of indebtedness of member states. We plotted and calculated the regression equation between public debt of EU27 member states and the economic growth rate for EU27.

In 2008 we find an indirect link between public debt and economic increase, so that highly indebted countries register and economic decline, but the correlation is greatly reduced.
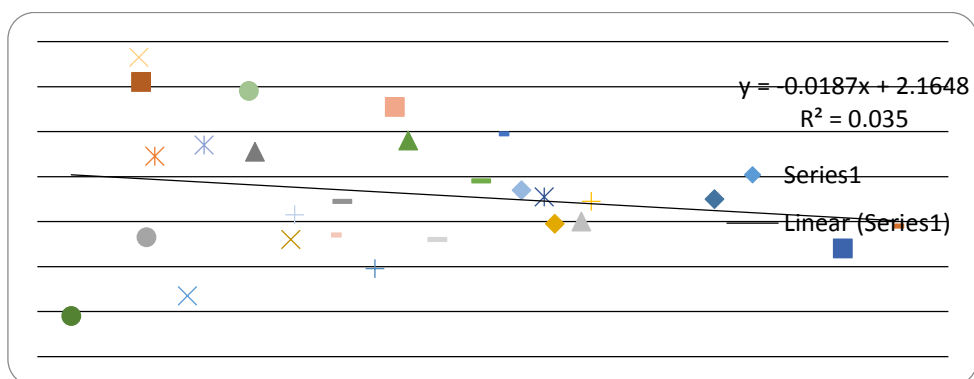
Figure 4: Correlation public debt - economic growth in EU27 in 2008
Source: Processing based on data from Eurostat

In 2009 the result is no longer conclusive because almost all EU countries record economic decline (except only Estonia), for which the link between public debt and economic growth is no longer conclusive.
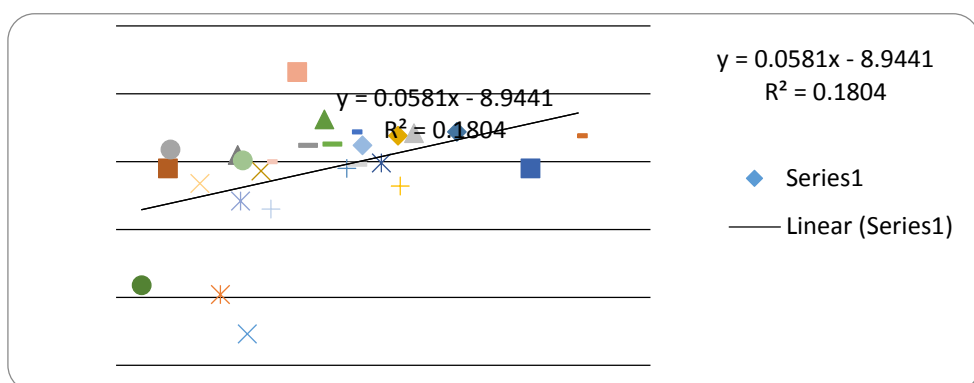
Figure 5: Correlation public debt - economic growth in EU27 in 2009
Source: Processing based on data from Eurostat

2012 already appears as a year in which member states' economies have recovered and we have economic growth especially in states that have a moderate level of indebtedness. In this case it is relevant the indirect link between indebtedness and economic growth, the correlation coefficient is approximately 42%.
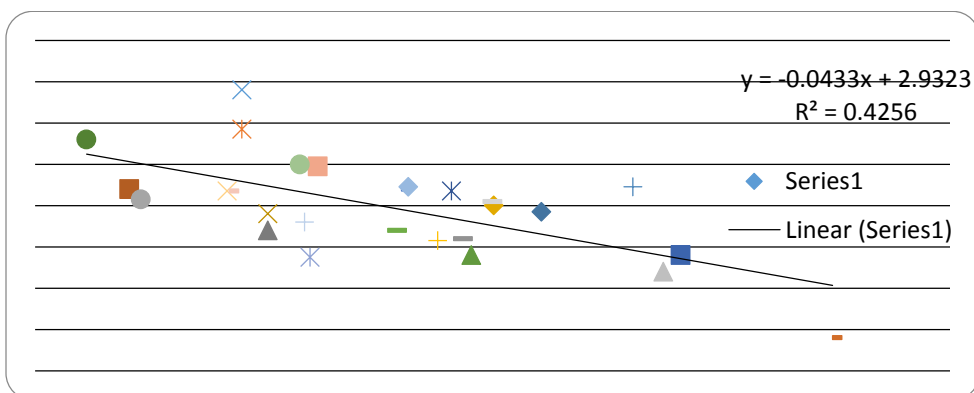
Figure 6: Correlation public debt - economic growth in EU27 in 2012

Source: Processing based on data from Eurostat

We can state that states with a moderate level of indebtedness stimulated much easier economic growth, not having budgetary constraints imposed by the indebtedness degree. But economic growth in member states remained modest based on a cautious fiscal policy.

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BANK MERGERS AND ACQUISITIONS IN ROMANIA AFTER 1989

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Abstract: *In this paper I proposed to myself to analyse the main bank acquisitions and mergers from Romania after 1989, causes that led to their appearance, their effects on the bank system and their future perspectives on the Romanian bank market. In the context of adherence to the European bank system a solution for the Romanian banks is the concentration of the bank system by mergers and acquisitions or the increase of the bank capitals because in the period of transition the smaller banks are vulnerable, don't dispose of an infrastructure that would alow them to offer financial services comparable to those offered by the great bank groups, can't offer large credits and is addressing to the smaller and average enterprise, which in their turn are exposed to all the shocks that are felt in the economy. The strategies of concentration and consolidation applied by the banks in this period implemented by the transactions with mergers and acquisitions are essential because of their success depends the existence of the bank, the rank it will have on the market, the profit of the bank, the efficiency, the increase of the satisfaction degree of the clients and the increase of the shares' value. The increase of the interest of the investor in mergers and acquisitions determined the creating of the great financial conglomerates that offer a large range of services, operates simultaneously on many markets and include beside the bank activity insurance, leasing subsidiaries, investment funds, pension funds, subsidiaries specialized in credit saving. In the last decades the Romanian bank financial system suffered significant changes, registering an ample consolidation process, the number of bank institutions decreased and in the context of the present financial crisis, the continuing of the process of restructuring is anticipated.The main reason for choosing this subject if the fact that in the evolution of the concentration the bank mergers and acquisitions have a special purpose, they are necessary operations of draining the bank life by the absorption of the banks without stability by those with potential of economical and managerial stable capital. It is well known that the great banks, very strong and well consolidated created in the process of mergers and acquisitions have another potential in maintenance of the flux of profit and the balanced increase of the profitableness, having a great impact on the economy. The contribution consists in combining some conceptual elements with some empirical aspects, with the process of bank concentration created by acquisitions and fusions that leads to the elimination of some bank entitites that are not credible and stable and maintenance of those that are efficient, useful and credible for the client and for the Romanian society. The subject is a present one in the entire world, in a continuous change and adapting to the existent tendencies in the entire world, having a major impact also on the Romanian bank market, on the bank financial institutions that in order to face the competition have directed their strategies for the diversification of the risks.*

Keywords: mergers; acquisitions; bank; concentration; consolidation, globalization

JEL classification: G21; G34; F65

1.Introduction
In this research I proposed to myself to present in an original manner the concept of bank mergers and acquisitions by fathoming the following points: the main bank mergers and acquisitions from Romania after 1989, the advantages, the risks and the effects of the financial crisis on the phenomenon of fusions and acquisitions on the national level. The financial crisis and the risk of contagion of the global economy determined the fall of the market of mergers and acquisitions. To this fall contributed factors as the restraining of the existent liquidities, the increasingly harder accet to the credits for the finanancing of the operations and, generally, the increase of the aversion to the risk of the investors against the unfavorable economical situation and the incertainties regarding its future evolution. I considered important the theoretical aproach of the concept of mergers and acquisitions because they represent an essential component of the proces of bank financial globalization on the national and world level. Some specialists afirm that the mergers and acquisitions are one of the effects of the globalizaion, other consider that on the contrary they represent one of the factors that determine the globalization. Inside the strategy of bank concentration and consolidation a great number of banks adopt this type of increase; we could say that the mergers and the acquisitions represent the favorite method of creating this strategy. This is due to the fact that this type of strategy is the one offering the possibility to obtain the fastest increase compared to the internal growth and the creating of partnerships.
It is well know the fact that a developed market economy exists if it has strong banks, consolidated that could compete with the strongest banks in the entire world

2. Mergers and acquisitons in the bank sector

2.1. The Typology of the mergers and acquisitions and their definition
The mergers and the acquisitions represent together with the internal growth and together with the partnerships creating, a method of developing a bank. The mergers and the acquisitions are a part of the strategies of internationalization and of strategic re expanding of the groups, when the fast action of external growth can bring the company advantages compared to the competition or when new information has to be achieved, for the technology, research – development, marketing or management. (Bleoju, 2010)
The merging is made by absorbing a group by another group or by the merge of two or more groups to form a new group and are classified in three categories: horizontal merging (entities that produce and commercialize the same products on the market), vertical merging (entities that act in non related sectors).
The acquisition represents the process by which a company takes total or partial control on another company, in exchange for a price.
The degree of bank concentration is determined also by the intensity of international cooperation accomplished by cross border mergers and acquisitions that lead also to the support of the process of economical growth of the beneficiary countries. We could say that the relations of bank mergers and acquisitions don't take place between the countries but between the bodies of the state.
One of the advantages of the bank mergers and acquisitions is the diversification; the banks that merge are summing up the financial potential and are created financial resources for the approach of another type of operations and their accelerated expansion. The great bank can difusse the risks, can cover the deficience from some market segments by the positive results from other segments which leads to the balanced maintaining and growth of the profitability. The acquisitions and mergers lead to the optimizing of the subsidiaries network in the sense of their optimization, the increase of the quality of the services offered and of the profitability; being the most convenient

method of expanding, of penetration in the territory. A collateral advantage can be also the decreasing of the taxation; the strong banks involved in the merging will agglomerate not only the shares of the banks but also the results, respectively the profits and losses. Also an important factor is the quality of the management and the evolution of the competition spirit; it is known that the banks are involved in a competition due to the conditions of market where they function, from the desire to have better results and larger shares. The volume and speed with which the merging was made followed the growth of the market share, the increase of the business, the quality and efficiency in serving the clients, the reducing of the costs, the creating of additional profits for the shareholders and promoting more efficient procedures of management. Thus with a strong management can be harmonized some aspects related to the obstacles presented in the organizational cultures, the differences related to the language, the preparing and development of the business lines, the background of the strategic plans establishing. (Berea,2001).

No matter the purposes of the external growth by mergers or acquisitions, the advantages they confer are multiple: the increase of the development rhythm of the bank by taking over some existent shares with visible, immediate efficiency; are reduced the risks by the increase of the economical force of the bank, also the costs of acquisition are usually underestimated. The mergers and the acquisitions especially those horizontal are a certain method of penetrating and controlling new markets and of increase of the market share for the newly created bank group.

The economical reality showed that the mergers and the acquisitions hide the negative secondary effects that can lead to the slowing of the rhytm of growth of the company, can lead to employers dismissal while trying to readjust the costs, to the decreasing of the innovation due to the focusing on the growth generated by acquisitions.

The strategy of mergers and acquisitions is the strategy that gives the possibility to the banks to obtain the fasest an increase of the volume of activity by conquering new markets but is also the strategy that has the greatest effect on the national and regional economies. It was observed that overall the volume and ampleness of the mergers and acquisitions from all the areas increased continuously, in the period of the 80's took place over 55000 mergerss and acquisitions with a total value of over 1,3 billions of dollars, but in the period of the 90's lead to an explosion of this type of transactions being accomplished a double number of mergers and acquisitions with a value of approximately 11 billions of dollars. The mergers and the acquisitions remained one of the preferable strategies of the company after 2000. These mergers and acquisitions were made with the purpose of obtaining scale and strong economies on the markets following an increase of the competitiveness overall. (Dobocan, 2010)

In spite of their popularity many of the mergers and acquisitions don't succeed to produce the financial benefits that are expected. In fact the studies underline that almos 70% of the mergers and acquisitions don't succed to improve the performance of the companies involved. (Drucker, 2001). The failure of the mergers and acquisitions, most of the times, is due either to the ilussory synergy, to the vain of the high management or to a slow integration. The mergers and the acquisitions are a very complex type of strategy and in the same time challenging for the management of the company that has to solve problems as the integration of two organizational cultures totally different or the unification of two hierarchic structures totally opposite. The role of the top management in accomplishing a transaction is extremely important because if it is not made an adequate evaluation of the company that will be purchased or with which will be made the merge, can appear major difficulties afterwards.

It was proved that if there is no strategic vision the acquisitions and the mergers are not efficient.

In the last decades the nature of the bank activity was changed, the progresses registered in the technology made the interdependencies from the economy, the speed of the financial transactions would reach to a high level so that it would feel the need of renouncing to theold geographical limitations in favor of some banks from Europe and USA which determined the appearance of some great banks, overnational. During the period after the transition to the market economy were made mega transactions, and namely acquisitions or mergers between the great banks that created new gigantic structures. The justification for the performance of these mega transactions is the following: in order to succed the conquering of a gigantic market as the global market we need gigantic companies, namely companies that would have the force to deliver products to a large market. (Dobocan, 2010). The great gigantic banks and financial groups are united, are merging, dominating and controlling the entire activity in this department. "We assist today to the so called mergemania (the mania of merging), the great ones becoming greater and stronger" (Mihai and Mihai, 2002). The bank globalization is made not only geographically, on the planet level, but also structurally; the great international financial groups being real conglomerates, that include, beside the banks, companies of insurance-reinsurance, investment or pension funds, activities on capital market, leasing, capable to offer the so called integrated financial services.

The bank systems of the developed capitalist countries were submitted to a process of change: first of all, there was a strong process of internationalization of the bank systems from the developed countries. Practicing an aggressive policy of implanting in new finanancial points on the globe, these banks consider the extending on other markets as a part of their development policy.

Having an important role in the process of concentration the mergers and the acquisitions have as an effect the restraining of the number of competitors and the creating of some privileged positions on the top, the creation of "quiet areas" in which the competition begins to be blur. (Hurduc,2005).

A group of German specialists propose the decreasing of subventions, the elimination of the risky speculations, the forcing of creating its own reserved by the great banks because they consider that they are so great, than the growth fluctuations of credits affect the macroeconomy. The mega banks, relaxed quantitatively due to the restrictive decreasings, took as hostages the world economy and the governments of the main countries. (Gribincea and Ulim, 2003).

Thus the developed countries approved a series of measures in order to limit the impact of the banks on the global economy. The demands Basel III restrict the demands regarding the regulaton on the liquidity in the euro area and approved already the regulations of the unique mechanism of surveillance of the banks, whose total assets are over 30 billions of EURO or 20% of the country's gross domestic product. It is considered that the dimensions of the bank are significant due to the fact that the great banks are less careful (cautious), because they are sure that they are "to big to fail" and the tight connections between the great banks and the politicians could unbalance the entire financial system.

2.2. Bank mergers and acquisitions in Romania

2.2.1. The privatizing of the banks in Romania
The privatizing is an important factor of the economical social reforms that leads to the creation of an economy bansed on the demands of the market. This phenomenon is not recent, it preoccupied the economists even from two centuries ago. Adam Smith observed a very important tendency "when the fields of the crown were passed in private property, they became during a few years, more neat and better cultivated" (Danila,2000). In the context of the globalization and of integration in the European bank system a solution for

the Romanian banks beginning with 1990 was the privatization of the banks. The premise was created by the state in this period because it gave up step by step to the governing of the economical sector, allowing thus the emergence of the most enthusiast defenders of the principle of maximizing the value, and namely the private shareholders. We can affirm that the privatizations were the premses of the development of the mergers and acquisitions market from Romania. (Vancea, 2011).

We could say that the privatization means using more and more the private institutons of the state and less the state for the satisfying of the population needs and the extending of the role of the private sector or the diminishing of the role of the state in a certain activity" (Danila, 2000).

There were many dillemas regarding the need of the privatization in the phase of transition of the market economy in process of development. Some specialists considered that the state should keep the management of the financial bank system because only this way the resources from the economy could be correctly managed. Another opinion was that regarding the fact that in the first period of transition to the market economy it could be found a strategic investor and this means the access of the great foreign investors to the key institutions of the financial system which means it would have the possibility to influence the decisions on the level of the national economy. (Danila,2000)

But after 1989 it was observed that the strategy of privatization of the banks represents a critical factor of growth in a period of economical transition. (Danila, 2000). Or the absence of competition in the banks sector would have represented a great price because the inefficient allotment of the resources postpones more the industrial restructuring.(Danila, 2000)

In the process of privatization, the foreign banks present in Romania competed and are competing highly with the Romanian banks. The efficiency of the foreign banks from the point of view of the costs and a better financial know-how offered them a net financial advantage in relation with the internal banks.(Danila, 2000)

These mutations that appeared in the structure of the bank system have consolidated the position of the foreign capital, capital that attracts with it many advantages: the fact that more and more investors will credit the internal economy with cheap financing and the improvement of the profile of risk of the country that allows it to obtain a cheaper financing. We could say that due to the bank financial globalization the bank activity is in a continuous transformation due to the technological progresses that determined the scale economies to give up more and more the geographical limitations, fact that lead to the appearance of greater, overnational bank organizations. Against these great banks the governments of the states with an economy in process of transition have the possibility to integrate in the international market by attracting foreign investors or to build banks with national property that could compete with the foiregn organizations, namely the consolidation of the national organiazations.

The advantages of banks privatisation are: quality and efficient management, the state authorities do not have the opportunity to interfere in bank activity so that we can talk about implementing measures and technologies that would assure the competitive spirit of the Romanian banking system with the foreign one, their price becomes competitive, so that the client would be pleased.

2.2.2. The peculiarities and characteristics of the bank merger and acquisitions market in Romania after 1989

In Romania, the banking restoration and privatisation process has started heavily; in 1997, the privatisation principles and procedure of the banks in which the state is a shareholder according to the Law 83/1997. There were 38 banks with privately owned capital having a limited weight within the indicators regarding the development of the bank activities. The state banks: The Romanian Commercial Bank, The Rural Bank, The Romanian

Development Bank, Bancpost and Eximbank were holding 2/3 of the total assets. (Berea, 2001).

The banks which were forced to downsize or be absorbed by merger by other banks are:

▪ *Dacia Felix*, become Eurom Bank in 2001 – on the date of May the 18th 2001, the Government has issued an Emergency Order that allowed the settlement of the creditors' claims by assigning to them accounts receivable held by KOLAL BV Amsterdam and created the conditions of the bank revitalisation. This bank, become Eurom Bank in 2001, was absorbed by Leumi Bank, one of the largest banks in Israel, with a market share of 32%. Leumi Bank purchased a share package of 95% of the Eurom Bank shares for 41.7 million dollars.

▪ *The Romanian Development Bank* (BRD) – privatised in 1999. The French Bank Societe Generale won in December, 1998, the auction for the privatisation of the Romanian Development Bank, the package of 51% of the shares exchanges for 200 million dollars. Of this sum, approximately 138 million dollars were paid to the authorities for 42% of the existing shares, the rest representing a 20% increase of the capital.

▪ *Bancpost* – the first step in favour of the privatisation of Bancpost was made on April the 2nd 1999, when General Electric Corporation and Banco Portugues de Investismento purchased 45% of the bank shares for 92.8 million dollars. The EFG Eurobank Ergaşias of Greece bank purchased repeatedly a last 17% share package held by the state in Bancpost, paying 20.08 million dollars. So far (2006), the Greek bank has increased its participation to 62.74% of the capital.

▪ *The Rural Bank* – the privatisation of this bank was concluded by selling, on April the 12th 2001 the share package held by the state to the consortium formed of Raiffeisen Zentralbank Osterreich AG (93.19%) and the Romanian American Enterprise Fund (5.70%). Thus, the consortium has absorbed the package of 98% of the Rural Bank shares, renamed afterwards Rural Bank Raiffeisen, merging in June, 2002, with Raiffeisen Bank Romania, and in 2003 it absorbed the client portfolio of Citibank.

▪ *BCR* (Romanian Commercial Bank) has entered the last stage of the privatisation, respectively the negotiation for the selling of the majority shares package to a strategic investor. The winner of the auction for absorbing BCR was designated the Erste Austrian Bank, that offered for the majority shares package (61.88% of the social capital) approximately 3.75 mld. EUR;

▪ the merger between *Bank Austria Creditanstalt* (BA-CA, vision of the German HVB Group and the main shareholder of Romania Bank HVB) and Ţiriac Bank; at a European level, the absorption of the HVB German group by UniCredit Italia has transformed the merger between Romania HVB Bank and Ţiriac Bank in a triple one: the Romanian subsidiary of the Italian group will join the other two, the newly resulted bank being to have assets of approximately 2.5 mld. EUR and a network of over 100 units

▪ the operating permit revocation for the subsidiary in Romania of the National Bank of Greece, as a result of the assets and liabilities transfer, as well as of its mixed means sale to *The Romanian Bank-MKB*, the former foreign trade bank of Hungary, held with 89.62% by the German Bank Bayern LB, bought in October, 2005, the majority shares package pertaining to Romexterra Bank, having, thus, a control on 55.36% of the capital; being operational since 1994, Romexterra Bank was established by a group of companies with activities in the Oil and Gas Industry;

▪ *The C.R. Firenze Italian Bank* purchased a package of 56.23% of the Daewoo Bank Romania, the transaction of 30.5 mld. EUR being closed in March, 2005; C.R Firenze is a part of the group bearing the same name, that holds more banks and financial companies in Italy, in sectors like leasing, factoring and insurances;

▪ *ATE Bank*, the fifth bank in Greece judging by the Market value, absorbed 57.13% of Mindbank, for which it paid approximately 36 mld. EUR and, last year, the Greek group Piraeus Bank recently finalised the sale of the ATE Bank Romania subsidiary to the

business man Dorinel Umbrarescu. Dorinel Umbrarescu signed in April an agreement with Piraeus Bank for the absorption of the subsidiary ATE Bank Romania, followed by the payment of 10.3 mld EUR for 93.27% of the credit institution shares
▪ the merger by absorption by the Țiriac HVB Bank of the UniCredit Romania Bank, the new entity developing its activity under the name of *UniCreditȚiriac Bank*, which in 2013 absorbed the RBS portofolio
▪ the termination of the Blom Bank Egypt activity and its transfer to Blom Bank France Paris, Romania Subsidiary;
▪ the absorption of the di Roma Bank – București Subsidiary activity by UniCredit Țiriac Bank, as a result of the merger at the European level between the shareholders of the two institutions (UniCredit Group and Capitalia);
▪ changing the name of the SanPaolo IMI Bank Romania Bank to the Commercial Intesa SanPaolo Romania Bank as a result of the merger between Intesa SpA and SanPaolo IMI SpA;
▪ the absorption of the ABN Amro by the Royal Bank of Scotland which in 2013 was absorbed by Unicredit Țiriac Bank
▪ MARFIN Bank absorbed the deposits of the Bank of Cyprus clients
▪ the merger by absorption between Intesa Sanpaolo Romania and C.R. Firenze Romania (the absorbed bank), finalised in October the 1st, 2012.

3. Perspectives on the bank mergers and acquisitions in Romania in 2014
Due to the financial crisis and the reduced growing and development potential of the bank market in Romania, the mergers still represent a necessary element in the year of 2014. In order to survive, the small bank with a low market share will be bound to choose merging. If they have a large bank beside them, they will get through all the existing challenges in the financial field at the present day.
The most probable merger in 2014 could be:
▪ *Millennium Bank*: the greatest listed bank in Portugal by assets intends to withdraw from Romania by the end of 2014, selling the Millennium Bank subsidiary, which holds less than 1% market share.
▪ *Marfin Bank*: The envisioned transaction of selling the Cypriot bank by the end of the year at the latest has not materialised yet, but the bank is still for sale.
▪ *The Carpatica Commercial Bank*: mush has been said about this bank as wel; its location is in Sibiu and it appears to be for sale.
▪ Given the fact that it has to withdraw the activities in all the Eastern Europe countries, the National Bank of Greece (NBG) bank group, which holds 85% of the *Romanian Bank* shares, is looking for a bank buyer.
▪ Also, Volksbanken AG (VBPS), the parent bank of *Volksbank Romania*, has in view the sale of the local subsidiary after the Russian bank Sberbank bought the largest part of the European subsidiaries of the Volksbank.
▪ *Bancpost and Alpha Bank* is also a merger supposed to be finalised this year, Bancpost will have 47.55 of the new bank capital and Alpha Bank – 57.5%.
Due to the economic recession, most of the banks have as objective the survival and the small banks in Romania are the target of the absorption operations and the merger and acquisitions market in Romania has transformed, relatively abruptly, from a seller's market into a buyer's market.
In a unstable and crisis-struck economy as this in Romania, the merger and acquisitions market reorient to small transactions. If, long ago, mega-transactions were the most wanted, currently the repositioning of the "players" and reorienting the interests drew the attention to small and medium businesses.

4. Conclusions

Natalița Hurduc says that the mergers and acquisitions are operations that are a necessity for the clearance of the bank life through the absorption of the entities with no viability by entities with viable economic and managerial capital potential. It can be said that by mergers and acquisitions, the non-competitive distributions of the bank potential are readjusted and there is a wish for efficiency and enhanced profit; being thus a way of the bank construction of the major repairs type that need support and help within the national bank system and the entire national economic environment. They have a considerable role in the increase of concentration degree since they are specific instruments for realisation and intensive increase of the concentration degree. (Hurduc, 2005)

If their implementing strategies were adequately applied, the bank mergers and acquisitions will lead to the costs decrease and the increase of profitability both for the bank and of the client. The globalisation will facilitate the dispersal of the bank risks and will improve the general performance of the individual economies by the refinement of the resources allotment.

As for the negative aspects, if the strategies applied are not adequately achieved, this aspect can lead to abuses due to the dominant market positions and the problems of moral hazard, as in the cases where the institutions are considered "too great to enter bankruptcy". Moreover, the excessive involvement on the foreign markets without sufficient knowledge on the specific conditions of local economy can aggravate the vulnerability of individual banks.

As for the rhythm of the mergers and acquisition activity recovery in Romania, this is much slower compared to the rhythm of the better developed markets because the economy situation on the whole is the one determining their rhythm and evolution. Given the fact that the economy in Romania will keep ascending, the business environment will develop more and more and the invertors' trust in economy will increase as well, determining the intensifying of the mergers and acquisitions activity.

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THE FINANCIAL SUPPORT AND SOCIAL MISSION OF THE CLERGY IN ROMANIA

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Abstract
This study reflects some features of the financial support of the clergy and non-clergy personnel integrated in units of worship in Romania. In particular, we refer to the legal framework in which the Romanian state contributes to the remuneration of the clergy and non-clergy staff of the Romanian Orthodox Church, taking into account the regulations issued by the synodal decisions of strict implementation within the Romanian Patriarchate. The last part of the study is devoted to the particularities of the social mission or of the Church apostolate shock in the current socio-economic context.

In conclusion, even if all religious denominations in Romania, without any discriminatory factors involved, are supported by local and public authorities, for the Romanian Orthodox Church, by administrating the funding sources, the Church promotes with its personnel and also with its institutions of religious assistance an effective activity intended towards the common good.

Key words: remuneration; contribution; clergy; Church; legislation; financing

JEL codes: Z12, K11, G02, G32.

Preliminary considerations
The church was successively deprived of its land heritage, but also of an important part of its real-estate property, starting from the period of Prince Cuza and ending with the nationalization of land and property during the communist regime. In this political and socio-economic context, the Romanian Orthodox Church has gradually become dependent on financial support from the state. The communist state provided a minimal survival of the Church through partial funding for the maintenance of the places for worship and for clergy salaries.

Although there were many obstacles imposed by the communist state, many churches and monasteries have been restored and preserved in this period. Some of them have benefitted from the care of specialized international forums (Moraru, 2006, 173). Professor Moraru argues that "as shocking is the fact that in the same period of repression, most Romanian Orthodox monasteries have been restored with funds allocated by the communist state; it was a political attitude, which showed the Western Europe that the Church in Romania was not persecuted, but moreover, it was supported by the Romanian state". (Moraru, 2006, 524).

Following the secularization of church assets, in order to survive, the church would hold collections to obtain additional funds through direct donations received from the parishioners. The revolution in December 1989 found a poor Orthodox Church, and the situation of priesthood in terms of wages and the social security system was extremely precarious. The Holy Synod of the Romanian Orthodox Church worked hard to overcome this situation. Thus, by the Synodal Decrees and legislative provisions, it was considered that the clergy could be assimilated to public officials, or financing could be obtained from the state for clerical salaries, which should not be below the minimum wage (Conovici, 2009, 249). We should also mention that the state subsidies granted to religious denominations in Romania do not involve discriminatory factors (Ionita, 2003, 143).

The financial support from the Romanian State takes various forms (Harosa, 2011, 76). Thus, it may provide income tax deductions from wages in accordance with art. 56-57 of the Tax Code. From the tax on annual income, derived from developing independent activities or from wage income, the amount of 2% of the income can be directed towards ecclesiastical units. Article 84 of the Tax Code is supplemented by Article 21 para. p, sections 1 and 2 of the same law that provides that the amount of up to 3 ‰ of the turnover and up to 20% of the income tax owed by the economic entities can become a real source of financing church entities. Also, the State, at the request of stakeholders, taking into account the number of parishioners who are Romanian citizens, supports the religious entities by providing clergy and non-clergy staff salaries, under the conditions set by the legislature (Armand-Munteanu, 2003, 190 - 196). As a provider, the State may involve in various social services, at the request of the religious unit. However, the specific of the religious entities is self-financing. By good administration of funding sources, the Church is able to promote through its institutions of religious support a broad project destined for the common good.

1. *The State's contribution to clergy salaries in the post-communist period*

During the communist period every cleric received a preset wage rate from the State. The difference in salary stemmed from own funds of every eclesiatical unit. Some features and scales were also considered, such as:

• seniority at work/ in the field;
• increase in wage due to the additional percentage;
• the level of qualification of each cleric (graduate school or higher education);
• percentage due to managerial indemnity; this category was varied depending on the parish and was allotted from the funds of the unity of worship (Dobrei, 2010, 544).
Legislative provisions that aimed at the financial support of the clergy in both the communist period and the post-communist one, share the Romanian state's position which sets the remuneration, according to the payment scales in force but also taking into account the position held by the clerical employee, in the national currency, for the work performed (Dobrei, 2010, 544).

The directing of public funds regarding financial resources will be done by the state, which plays an important role through its policy regarding the distribution of the GDP. On the other hand, the State may control – through the Court of Auditors – the way budgetary allocations were used for investments, grants or other types of financial support (Văcărel, 2007, 75). The state's contribution pursues a number of objectives regarding the financial support of religious units in Romania, of the employees of the respective religious unit, and also the objectives jointly set by the state and the religious units.

Currently, in what regards the clerical staff salaries, the state pays a part - called "contribution" - of the salary due to the clergy of eligious units. The difference will be completed by ecclesiastical entities within the Romanian Orthodox Church, to which the clergy is subordinated. Thus, the rest of the fee regarding retribution is borne by the employing unit -diocese/ deanery / parish – out of own funds consisting of various activities of the religious unit, donations, sponsorships, and administrative and economic activities.

The financial resources specific to religious units could be classified as follows:
• subsidies from the state budget;
• income from voluntary contributions of perishioners for the support of the religious unit;
• income from voluntary contributions of subunits of the religious units;
• income by annex revenue management;

• income from renting housing or buildings of another destination;
• income due to entrance fee and other economic activities specific to dioceses.
Similarly, the expenditures of ecclesiastical establishments can be categorized as follows:
• Expenditure for religious activities (personnel, material and services costs, expenditures to support the religious unit);
• expenses for related activities (agricultural expenditure, expenditure on leased spaces, historical and cultural collections' costs, expenses resulting from the economic activity)
• investments.
Legal relations existing between the clergy and the employing unit are not based on a collective employment agreement, as the agreement between the employer and the employee, or the individual employment contract, of the employer-employee type. According to statutory regulations, in the case of the Romanian Orthodox Church, the clergy and the non-clergy staff perform their work based on a Decision issued by the Church Sovereignty, which the clergy receives when being ordained and the non-clergy individual when assigned to the job, following the selection process organized by the competent ecclesiastical authorities. The Decision issued by the Church Sovereignty represents the legal document stating the salaries of the clerical and non-clerical staff. In particular, according to art 123 para (7) of the Statute, the relationship between the clergy and the Diocesan Center is one of a freely assumed mission and ministry, according to the Public solemn testimony (Declaration) presented and signed by every candidate before ordination to the priesthood which is based on both the canonical provisions and the regulations in force.

Article 192 of the Statute stipulates that the remuneration of church management personnel, as well as clergy and non-clergy staff is made according to the general rules in force governing the Romanian Orthodox Church, through contributions from the religious units' own budget, contributions from the state budget, from the local administration's budget and other institutions', according to the law.

According to general specifications (ziarullumina.ro / current-religious / open-letter-to-paper-on-the-west, accessed on February 17, 2014) signaled was the possibility of a cleric who "voluntarily performs duties as ecclesiastical adviser", failing to comply with those of a vicar (http://mitropolia-banatului.ro/centrul-eparhial/, accessed on February 17, 2014) or priest (http://mitropolia-banatului.ro/protopopiatul-timisoara-i -2 / /, accessed on February 17, 2014), in the same form, in fact, "as all the clergy working for the church run their activity in the country" (ziarullumina.ro/actualitate-religioasa/scrisoare-deschisa-catre-ziarul-ziua-de-vest,accessed on February 17, 2014). Interestingly, art. 201-202 of the Church statute does not include among the mentioned incompatibilities the status of coordinator of a permanent diocesan sector and simultaneously the one of coordinator / head of administration subordinated to the Diocesan Center, in this case the parish.

This situation occurred due to the Decision issued by the Church Sovereignty, is to be found after 2003. Up to that point both the vicar and other diocesan advisers or employees could enjoy the status of employees in parishes, but without the benefit of another administrative allowance in this sector, and to that could be added another ¼ part timeemployment per hour (Panțuru, 2013, 249) or, from time to time, ½ part time employment (Panțuru, 2013, 247). To note is that the employment decision of 1/1 work of a person both in the diocesan administration and the parishes of the respective unit, if it were to be conjunctioned with the civil law, it would be found to be inconsistent with art. 298 para. (2) of Law no. 53/2003 which repealed the overlapping of functions. But not the entire civil law is applicable to the Romanian Orthodox Church. For instance, the Holy Synod Decision no. 6289/1988 ruled that Law. 154/1998 can not be applied to employees of the religious units within the Romanian Patriarchate, therefore it can also not be applied

to the remuneration of the clergy belonging to other religious denominations, but only to state budgeted institutions (Armand-Munteanu, 2003, 192).

After the revolution of December 1989 a series of conciliar decisions were underlying the regulation of the clerical and non-clerical staff salaries. The decisions of the Holy Synod 2594/1990 and 3344/1990 provided that subsidies from the Central Missionary Fund should be directed towards ecclesiastical entities within the eparchies that had scarce economic resources (Armand-Munteanu, 2003, 190). The following year, the Holy Synod by Decision no. 5835/1991 established that – regarding payment – the church staff should be equated to the teaching staff in public education, by level of education and teaching degrees. However, taking into account the lack of economic resources at national level, the supreme leading forum allowed dioceses to pay, temporarily, the minimum wage corresponding to the minimum wage positions.

The decision of the Holy Synod No. 4233/1993 suggested that regarding clergy and church and additional personnel there should be maintained the Decision of the Holy Synod nr.1759/1990 (Armand-Munteanu, 2003, 191). Also, the Decision of the Holy Synod No. 6031/1997 indicated that the approaches of the Romanian Patriarchate requesting State Authorities to provide payment of church personnel from state budget funds should be continued (Armand-Munteanu, 2003, 191).

Law no. 142 of 27 July 1999, including further amendments, published in Official Gazette 543 of 2001 established the system of funding from the sate budget. Law No 142 of 27 July 1999, was republished under the Emergency Ordinance no. 197/2000, GEO. 10/2002, GEO. 4/2003, GEO. 123/2003, OG. 9/2005, OG. 3/2006, OG. 10/2007, Law no. 132/2008 and GEO. 155/2008.

Thus, the bishops were treated as state officials. Diaspora clergy was assimilated to diplomatic and consular staff, while within national borders the clergy will be subsidized according to a grid found in the law's annex, according to their level of education and skills (Conovici, 2009, 251). To note is that the clergy will not be assimilated to public officials according to this law. They will retain their status of employee of the recognized religious denomination according to art. 1 para. 2 of Law no. 142 of 27 July 1999, republished, on the state's support for clergy salaries, published in the Official Gazette no. 375 of June 1, 2009.

The State's financial support granted to religious denominations take account of the proposals of "central units of recognized denominations in relation to the number of parishioners, according to the latest census, considering their real needs and the fund allocated for this purpose", according to art. 1, paragraph 3 of the Law. According to art. 2, para. 2, the number of posts for clerical staff working in the country may be increased annually by the budget law. The state, in all cases, grants an allowance or amount from the state budget "in a gross amount and taxable according to the law" as stated in Article 2., Para. 3 of the Law. Article 5 of the Law states that in addition to the rights contained in the mentioned Articles 2 and 3 there will be taken into account also contributions to the social security fund of the state, to the social health insurance fund, to the unemployment insurance fund and other compulsory contributions provided by the law for any employer.

Regarding the religious communities in the diaspora, "to support the Romanian religious establishments abroad there shall be allocated from the state budget, through the central unit of the denomination in Romania, a sum in lei equivalent to 200,000 euro per month", according to art . 6 paragraph 1 of the Law. The central unit of the denomination in the country is required "to justify these amounts", provided that it "submits to the Ministry of Culture and National Heritage the documents indicated in the laws in force", according to art. 6, para. 3 of the Law.

We emphasize the fact that this law did not include clerical staff employed in budgeted units. The clergy employed in these units receive remuneration in line with the remuneration due to staff employed in these units, as stipulated in art. 8 of the law.

Particularly important is the decision of the Holy Synod no. 4115/1999 which allows an additional 0,300 to the multiplier coefficient for all professional levels and also for clergy postitions included in Annex II of the Law no.142/1999. However, monasteries and hermitages could be granted this addition only from own funds. Also allowances for administrative staff referred to in Annex 1 / B of Law no.142/1999 will have to be granted at uniform level within the Romanian Patriarchate out of its own funds. Management allowances for priests who coordinate parishes can be maintained from the funds of the respective parishes, without the possibility of receiving additional funds from the diocesan centers across the country, where they were involved in the administration of churches. Under current statutory provisions, art. 105 para. (2) states that the clergy of the Diocesan Administration Office may be established by the parish, directly as ministering priests, by the Diocesan Bishop. Likewise, Article 109 para. (1) of the Statute states that within the Chancery and Diocesan Administration, clergy, monastic and non-clergy personnel is employed regarding executive functions. A delicate issue may be the efficiency of the body for inspection and control, in the case a cleric is simultaneously the administrator / pastor of a parish and member of the body of inspectors and control or member of the Diocesan Center. Article 201 establishes, among other incompatibilities for the Romanian Orthodox Church, under paragraph "E", that no one can be member of both the Church administration and control and member of the diocesan church discipline organizations, without including among incompatibilities the possibility that the clerical staff employed in diocesan church administrations should hold, at the same time, the function of administrator of a Church unit subordinated to an Archdiocesan center of whose body he is an integrative part, and administrator of the ecclesiastical entity subject to internal control.

In accordance with Law no. 284/2010 on the unitary remuneration of staff paid from public funds, ANNEX II OCCUPATIONAL FAMILY OF BUDGET FUNCTION "EDUCATION", Chapter III, Religious deniminations, points B, C, D and E, the State Secretariat for Religious Affairs provides financial support for the clergy salaries. Budgetary commitments regarding the state's contribution to religious personnel salaries allocated under the State Budget Law for the year 2014 published in the Official Gazette, Part I, no. 805 of December 19, 2013, add up to the amount of 270.016.000 lei (according to the website of the State Secretariat for Religious denominations, http://www.culte.gov.ro/detaliu-noutati/vrs/IDnews/ 15, accessed on February 28, 2014).

2. Remuneration of non-clergy staff

Remuneration of priests serving parishes in the diaspora, but also the non-clergy staff salaries (church singers and administrative staff from all Church-like organizations: parish, convent, deanery and diocesan centers) represent major concerns for the Holy Synod of the Romanian Orthodox Church (Conovici, 2009 249). The issue of priests' remuneration is of an important value because it requires the recognition of the role and social dignity of the Church personnel (ROC, 1996, 400). For non-clergy staff the Law. 154/1998 may find applicability taking into account every diocesan center in the country "which have knowledge of their own financial resources and the ability to employ the respective personnel according to a margin comprising the minimum and the maximum coefficients" (Armand-Munteanu, 2003, 193).

G.O. No. 82 of 30 August 2001, published in the Official Gazette 543 of 2001 provides double financing for the non-clergy staff. According to this decision, the parishes receive

from the local administration budgets the clergy salaries, at the level of the minimum wage, the remaining part coming from the state budget (Conovici, 2009, 250).

We note G.O. No. 38 of 1994 which was approved by Law no. 132 of 20 December 1994, published in theOfficial Gazette no. 354-21 December 1994 providing additional contributions from the state for some low-income religious units (ROC, 1996, 384). The review of the units of worship and the amount to be allocated was jointly decided between religious denominations and the State Secretariat for Religious Affairs.

Welcomed was the remark that only hierarchs and a small part of lower-level clergy personnel enjoy stable satisfactory incomes. The largest part of the clergy enjoys stable reduced incomes. The situation among people who took on the monastic robe is much more difficult because very few of them receive a salary or pension. Taking into account this situation, church bodies have taken steps to finance the construction of social centers capable of protecting various categories of disadvantaged persons. At the same time, the recovery of property that belonged to ecclesiastical entities is imperative (Conovici, 2009, 252).

According to a current press release of the Romanian Patriarchate, the Romanian State only provides a contribution (of approximately 60%) to the clergy and non-clergy staff salaries of religious denominations. The remaining part of the remuneration (comparable to those of school teachers), taxes, health insurance and social security contributions are paid from the funds of the church units. This is the consequence of the secularization of church assets by Prince Alexandru Ioan Cuza (1863), when the Church was stripped of its maintenance resources, and the Romanian State has undertaken a commitment to support staff salaries and the maintenance of places of worship out of public budget .

Currently, according to the information provided by the Romanian Patriarchate, of the 14.231 priests and deacons of the Romanian Orthodox Church, over 1.000 are remunerated solely from the funds of church units and nearly 1.500 of the estimated 17.000 non-clergy employees are paid entirely by the Church. It is shown that the clergy and the non-clergy staff are among socio-professional categories in Romania with the lowest wages.

In many communities in the country, especially in the rural areas, due to poverty and migration abroad, priests are no longer able to supplement their salaries out of own funds, for many of them the only secure income for the financial survival of the family being the remuneration from the state budget. To note is that the annual amount allocated from the budget for religious denominations is only 0,4% of the budget, i.e. 10 times less than the amount allocated to education and health (http://www.basilica.ro/ stiri/rspunsul-patriarhiei-romne-la-dezinformrile-asur_3609.html, accessed on February 6, 2013). Currently, according to the press release, most of the church properties have not yet been returned to their rightful owners. To note is that the amounts paid by the churches for taxes and of social security contributions related to staff salaries are approximately equal or exceed the amount of the contributions received from the state budget. For example, every month, the total contributions regarding the the patriarchal administration staff salaries amounts to 557.472 lei, and the amount paid by the Romanian Patriarchate to the state budget for the full payroll taxes, health insurance contributions and social contributions adds up to 575.087 lei. In conclusion, the Romanian Patriarchate mentions that it is easy for anyone to note that what is received from the state budget in the form of salary support is to return to the public budget through taxes and related social contributions (http://www.basilica.ro/ro/stiripatriarhie/

braspunsul_patriarhiei_romane_la_ultimele_dezinformari_asurb_1802.htm;http://www.zi arullumina.ro/articole;2088;1;75628;0;Raspunsul-Patriarhiei-Romane-la misinformation-ASUR.html, accessed March 1, 2014)

3. The social mission of the Romanian Orthodox Church clergy

The Church was actively and effectively involved in charity work. Known are the cases of asylums, homes for orphans and other charities. All these philanthropic institutions were put to the service of the perishioners. Unfortunately, many of these philanthropic institutions were abolished by the Communist dictatorship. In this respect, we mention the dreaded Decree 410 of 1959 (Moraru, 2006, 662). Noteworthy is the fact that the Church was involved in helping needy children who received scholarships based on its financial resources. Also, allocated was welfare for the sick, poor and disadvantaged families, from the financial resources of the church (Moraru, 2006, 595).

For the Romanian people the social apostolate currently developed by the Romanian Orthodox Church is noteworthy. For example, considering the activity of the Romanian Orthodox Church, we remember that the National Church Assembly took account of the social and philanthropic work of the Romanian Patriarchate in 2012. This activity was conducted through 679 social institutions. We note the following data:

> • 154 social diners and bakeries for 16 139 beneficiaries;
> • 44 medical institutions and pharmacies for 16.735 beneficiaries;
> • 61 day centers for children - 2,715 beneficiaries;
> • 34 educational centers for 1,199 beneficiaries;
> • 22 day centers for the elderly for 1,089 beneficiaries;
> • 34 residential centers for the elderly for 786 beneficiaries;
> • 20 community centers for 1,989 beneficiaries;
> • 37 family-type centers for 528 beneficiaries;
> • 34 social kindergardens and afterschool centres for 965 beneficiaries;
> • 14 protected homes for 126 beneficiaries;
> •105 information centers, for counseling and resources, for 35 563 beneficiaries;
> • 4 adult education institutions for 580 beneficiaries;
> • 18 emergency centers (for the homeless, victims of domestic violence and person trafficking) for 910 beneficiaries;
> • 12 encampments for 3,489 beneficiaries;
> • other 86 social institutions for 6,743 beneficiaries

The Romanian Patriarchate eparchies are currently running 767 projects and social programs, including:

• 561 - self-funded;
 • 22 - external financing;
• 24 - publicly funded;
• 160 with mixed funding.
within charitable and social establishments through social programs and projects were granted 895.350 social services for 211.495 unique beneficiaries, respectively:

• 105.717 social services for 166.397 children in social establishments of the Church and the State, having regard in particular poor families without financial possibilities or in the case of parents who found work in other countries;

• 40.987 social services for 19.143 persons with disabilities (impaired speech, vision and hearing, drug or other addictions, people infected with HIV / AIDS) –

• 640.694 social services for 4.752 elderly people in the churchly welfare establishments, in social centers and transit night shelters, lonely elderly, homebound, abandoned by their families and suffering from serious health problems;

• 47.272 social services for 11.883 victims of human trafficking, victims of domestic violence, freed prisoners, victims of natural disasters, unemployed.

According to the information provided by the Romanian Patriarchate, for the support ofsocial and philanthropic activities in 2012, the Romanian Orthodox Church has spent an amount of 69.474.776 lei (http://www.basilica.ro/stiri/ibadunarea-nationala-bisericeasca-ia-evaluat-si-aprobat-activitatile-bisericii-din-anul-2012-si-proiectele-pentru-anul-2013b_4284.html, Accessed February 27, 2013), the equivalent of 11.83% of the GDP, which meant 597.494,4 million.

According to a press release of the Romanian Patriarchate, grants from the state budget are not awarded for the social-philanthropic work of the Church. The approximately 55 million lei used in 2011 by the Romanian Orthodox Church to support the about 700 social and philanthropic institutions intended for all social categories that have consistently been close to a million poor Romanians derived solely from its own funds and donations from the parishioners. Meanwhile, the Romanian Patriarchate and other dioceses across the country successfully develops social and educational programs nationwide fbased on European funds (*Sharing Christ with children, Choose school*! etc.) whose beneficiaries are tens of thousands of children, adolescents and youth, and locally there were numerous social projects undertaken by dioceses in partnership with local authorities and other NGOs, according to the information provided by http://www.basilica.ro/ro/stiripatriarhie/braspunsul_patriarhiei_ romane_la_ultimele_dezinformari_asurb_1802.htm;http://www.ziarullumina.ro/articole;2 088;1;75628;0;Raspunsul-Patriarhiei-Romane-la-ultimele misinformation-ASUR.html, accessed March 1, 2014.

The Church helps society through the institutions subordinated to it (Calvez, 2009, 7). However, it is absolutely necessary that "the incomes of Orthodox dioceses should be reconciled with the large expenditures on the maintenance of places of worship, utility payment, additions to clerical and non-clerical staff salaries, taxes and social contributions on salaries, the social-philanthropic and educational work, the supporting of poor parishes and monasteries and of the Romanian communities from abroad, etc." (http://www.basilica.ro/stiri/dezinformare-pentru-defimare-_6186.html, accessed on April 2013).

Fully justified, the entire explanation offered in the release issued by the Romanian Patriarchate notes that "The Romanian Orthodox Church had admirable institutions for administering its wealth (The House of the Church, Trustees, Ephors, Foundations) before the communist regime, which enabled it to support schools, hospitals, orphanages, poor families etc. Therefore, the revenues gathered by the Dioceses of the Romanian Orthodox by capitalizing their own resources and by pursuing economic activities support a range of pastoral-spiritual, theological, social-charitable, cultura-educational activities, as well as parishes, monasteries and poor hermitages, and many church institutions, mostly set up after 1990. Only in 2012, in order to support the over 760 social-philanthropic and educational programs, of which benefitted about 1 million Romanians, the dioceses of the Romanian Patriarchy spent about 70 million lei" (http://www.basilica.ro/ stiri/dezinformare-pentru-defimare-_6186.html, accessed in April 2013).

Volunteering is regarded as one of the most important ways of strengthening solidarity at varios levels - family, community, national and international (Tomita, Predescu, Olteanu, Udroiu, 2012, 443). Another author (Harosa, 2011, 269) states that "the right of the parishioners to contribute to the needs of the Church is included in the area of religious freedom, being claimed by the civil society, and which cannot prevent a person from economically supporting the confessional part."

As far as we are concerned, volunteering within the church can reach several levels. In this regard, we recall various activities;

• the construction or restoration of places of worship;
• supporting expenditures on construction materials for cult units;
• supporting agricultural activities and the cultivation of land belonging to ecclesiastical entities;
• providing specialized services for cult entities in different areas. (Harosa, 2011, 269).

For example, in the UK, volunteering was estimated at the value of more than 65 billion / year, with a percentage of 7.9% of the GDP. (Barna, 2012, 424). Volunteering is able to provide social capital and bring added value to the economy (Barna, 2012, 426). Unfortunately, in Romania 82% of the population has not taken part in voluntary activities (Mateescu, 2012, 430).

However, by remembering its volunteers, its founders, benefactors and merciful, the Church managed to cultivate "a civilization of generosity or liberality, under the belief Romanian people, expressed concisely and wisely, that "gift giving out of gift leads to Heaven" (Daniel, 2012, 19).

TABLE NO. 3.1.

Expenses incurred for social philanthropic activities in the Romanian Patriarchate and the origin of necessary monetary resources

- mill. lei and %-

Nr.crt.	Specification		2010	2011
I	Total expenses, of which:		49.584,927	51.058,173
1	Maintenance and administration of social establishments	val. abs.	7.425,144	8.820,832
		share	14,97	17,28
2	Staff organizational expenses	val. abs.	13.430,574	11.824,951
		share	27,09	23,16
3	Financial aid	val. abs.	5.203,003	5.245,428
		share	10,49	10,27
4	Supporting the reconstruction and renovation of houses damaged by floods and the provision of furniture and appliances	val. abs.	5.988,598	-
		share	12,08	-

5	Goods donated for flood victims	val. abs.	5.389,106	5.565,000
		share	10,87	10,90
6	Supporting individuals and institutions in emergency situations	val. abs.	2.694,232	-
		share	5,43	-
7	Program development	val. abs.	9.454,270	19.601,962
		share	19,07	38,39
II	The total budget destined for supporting social-philanthropic activities stemming from:		49.584,927	54.322,124
1	Available at the beginning of period	val. abs.	1.630,136	-
		share	3,29	-
2	The "Philanthropy" Fund (collection from parishioners) and own funds of the dioceses	val. abs.	8.598,057	11.139,092
		share	17,34	20,51
3	External financing	val. abs.	8.492,215	15.738,198
		share	17,12	28,97
4	Public funding	val. abs.	8.128,354	10.988,692
		share	16,39	20,23
5	Sponsorships, donations and the "2%" campaign	val. abs.	11.358,441	16.32,037
		share	22,91	30,04
6	Money collection for victims of natural disasters	val. abs.	5.988,598	105,700
		share	12,08	0,19
7	Goods collected for victims of natural disasters	val. abs.	5.389,106	29,405
		share	10,87	0,05
III	Available at the end of the period (II-I)		-	3.263,951

Source: author's own calculation

A large number of parishioners who cannot overcome poverty are a real problem of the Orthodox Church, which faces the situation of not being able to manage an activity appropriate for the social needs, especially also for the fact that the Romanian Orthodox Church cannot boast with a higher financial status (Marga, 2002, 62). Even if some voices

were raised against the Church, it is noteworthy that according to surveys the Romanian Orthodox Church remains the most credible institution throughout society (Moraru, 2006, 201).

TABLE NO. 3.2.

Individuals and social establishments involved in the social mission of the Church

Nr.crt	Specification	2009	2010	2011
I	Number of people involved, of which:	3026	3492	12281
1	Diocesan advisers	29	29	28
2	Diocesan inspectors	33	33	35
3	People with higher education, theological and professional (doctors, psychologists, economists, lawyers, teachers, project managers, advisors, counselors)	273	433	676
4	Accredited social workers	-	148	285
5	Social workers	56	65	-
6	Volunteers and members of philanthropic committees	2192	2192	11257
7	Other people	443	592	-
II	Number of social and philanthropic establishments, including:	450	450	450
1	Establishments for children	83	83	83
2	Establishments for the elderly	58	58	58
3	Centre to support families and individuals in need	309	309	309

Source: author's own calculation

The recent economic crisis has not affected the social work of the Orthodox Church. It has actually registered a slight increase year by year. For example, as shown in the press release, in 2012, in order to support social and philanthropic activities carried out through the 679 social institutions and 767 social projects and programs, the Romanian Patriarchal dioceses have spent about 70 million lei, derived from the donations of parishioners and other incomes of the church.

In accordance with Article 4 Para (1) G.O. No . 82/2001 on the establishment of some form of financial support for religious establishments belonging to recognized religious denominations in Romania, republished in 2014 for the construction and repair of places of worship and for the support of the religious denominations' welfare activities by the

State Budget Law for the year 2014 published in the Official Gazette, Part I, no. 805 of 19 December 2013, there have been allocated 30 million lei. (the information was taken from the website of the State Secretariat for Religios Denominations, cf. http://www.culte.gov.ro/detaliu-noutati/vrs/IDnews/14 , accessed on February 28, 2014) .

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ROMANIAN ACADEMIC EDUCATION FUNDING TRENDS - CASE OF THE UNIVERSITY OF CRAIOVA

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Abstract: *Universities have an important role in the state because through them, it shall function in higher education. The old Romanian academic educational system foundation has been strengthened and modernized by adopting the National Education Law 1/2011, on which occasion universities have experienced a consistent reform with changes especially in financial issues. However, the percentage of gross domestic product allocation for education shows a downward trend. Moreover, despite the fact that the National Education Law provides for the allocation of at least 6% of gross domestic product to finance national education, these assumptions have not been observed so far, because in recent years the percentages were allocated around 3% of gross domestic product. In the external context of chronic underfunding extremely unfavorable for the Romanian academic education, this paper aims to identify current trends in the field, through an applied research carried out on the University of Craiova. University of Craiova stands out as the most prestigious institution of academic education in Oltenia, who is conducting a voluminous and complex activity about ensuring quality standards and efficiency in the educational process The current investigation is the extension of a research initiative launched in 2013, through the paper entitled "The Current Status of Financing Public Higher Education Institutions in Romania - The Case of the University of Craiova" and brings further developments on the topic, aiming to highlight the evolution of the funding structure of the University of Craiova in the range 2011-2013, based on the latest information disseminated through the financial statements and the annual reports on the status of the institution. In this paper we try to bring more research in this area by diagnosing the current state, providing answers to questions such as: How does the financing structure of the University of Craiova stands? How did the University of Craiova funding evolve since legislative changes in 2011?*

1. Introduction

Today, academic education in our country is still marked by the legislative changes in 2011, as part of the alignment with the requirements of the Community space.

As a public institution, the University of Craiova is a high education institution specialized in providing educational services to meet the collective needs, with main objective: the educational welfare of the community it serves.

Like all Romanian universities, the higher education institution subject of our study faced lately with strong budgetary pressure caused or exacerbated by chronic underfunding, which is an obstacle in the process of modernization and convergence to EU requirements, making more difficult to achieve objectives.

In the context of the significant reduction of allocations from the state, in order to maintain and enhance the quality of education, University of Craiova was required to identify and

exploit new sources of funding.

This paper is part of a larger research that will result in the development of the PhD thesis entitled "Financial and accounting management of higher education public institutions."

2. Objectives

In this paper we intend to identify the current trends in the Romanian academic education funding, following the example of the University of Craiova, as a public institution of higher education. To this end, we will proceed to study and diagnose the evolution of its funding structure between 2011 and 2013.

3. Methodology

In order to achieve the objectives set, we used the techniques of scientific research. To identify trends in the field of research, we used special methods specific to applied research, such as: documentation, observation, analysis, synthesis, induction, deduction, and comparison.

As stated, the interval analysis covered three consecutive years (2011-2013) and the numerical information used in the investigative approach have been extracted from the information disseminated by the financial statements and the annual reports on the status of the institution.

4. The reference pillars of the Romanian academic education funding

Public institutions of academic education in our country function as universities financed entirely from own revenues (*Government Decision on the organization and functioning of the Ministry of National Education, 2013***).**

Figure 1 – Scheme of funding public institutions of academic education
Source: Own processing after the *National Education Law no. 1/2011*

At present, as can be seen in Figure 1, public institutions of higher education funding is based on two reference pillars: allocations from the budget of Ministry of National Education and extra-budgetary revenues. Under financial autonomy, the academic education institutions are entitled to manage these resources, in compliance with the regulation in force.

Budgetary financing consists of the money allocated from the Ministry of National Education and includes: institutional funding that is received under the institutional contract and complementary funding that is received under the complementary contract. The forms of institutional funding are: core funding, additional funding and the money allocated to the institutional development fund.

Core funding is the most important component of academic education financing from budgetary funds and it is allocated on the three university cycles (bachelor, master and PhD) according to the number of unitary equivalent students and the number of doctoral grants. Core funding is granted to cover the main expenses related to teaching: staff costs, material costs, but also expenditures to support educational projects and overhead expenses (*The Current Status of Academic Education Financing in Romania*, 2013: 839). *Additional funding* is one of the main innovations of the National Education Law no. 1/2011 on the financing of higher education and it is granted to stimulate excellence, in the amount of at least 30% of the amount allocated as core funding, at national level to the national public institutions of academic education.

The amounts allocated by competitive criteria through the institutional development fund are for the most advanced academic education institutions and grant to support the institutional development projects such as the promotion of new study programs, enhancing institutional capacity, improving the quality of teaching, research infrastructure development, cultivating connections with the local community and/or regional community, social inclusion and/or internationalization of the academic education activity. In turn, complementary funding is granted under the complementary contract to cover the related costs to teaching process through funds for: capital repairs, consolidations, rehabilitations, facilities and other investment expenses and subsidies for food and accommodation. Also, the complementary funding includes the sums allocated to: funding student transportation, funding scholarships and other forms of social protection, financing of the investment objectives.

Regarding the extra-budgetary incomes of public institutions of academic education, they may come from multiple sources such as: tuition fees, donations and sponsorships, rental of premises, provision of services, EU funds, research and also from accommodation fees in student hostels.

5. Trends in funding of the University of Craiova, as public institution of academic education

In our study we approach the case of an academic education institution fully financed from own revenues whose annual budget consists of: budgetary financing and extra-budgetary revenues.

In our country, in 2011, the classification of the universities was made under the new National Education Law which refers to three groups of universities: universities of advanced research and education, universities of education and scientific research and universities focused on education (*The National Education Law*, 2011).

Following this process, the University of Craiova was classified as B category, education and research, which has mainly resulted in drastic reduction of the budgetary funding allocated to it, as can be seen from the tables below.

Table 1 - Budgetary funding allocated to the University of Craiova between 2011 and 2013

Type of funding	2011		2012		2013	
	Value (lei)	%	Value (lei)	%	Value (lei)	%
Institutional funding	68.431.334	83,03%	57.293.418	78,43%	58.259.415	81,06%
Complementary funding	13.981.843	16,97%	15.760.580	21,57%	13.610.925	18,94%
BUDGETARY FUNDING	82.413.177	100,00%	73.053.998	100,00%	71.870.340	100,00%

Source: The annual reports of the Rector of the University of Craiova regarding the institution's status for the years 2012 and 2013

Table 2 - Dynamic analysis of budgetary funding allocated for the University of Craiova in the range 2011-2013

Type of funding	Change 2012/2011		Change 2013/2012		Change 2013/2011	
	Absolute	Relative	Absolute	Relative	Absolute	Relative
Institutional funding	-11.137.916	-16,28%	965.997	1,69%	-10.171.919	-14,86%
Complementary funding	1.778.737	12,72%	-2.149.655	-13,64%	-370.918	-2,65%
BUDGETARY FUNDING	**-9.359.179**	**-11,36%**	**-1.183.658**	**-1,62%**	**-10.542.837**	**-12,79%**

Source: Own processing after the annual reports of the Rector of the University of Craiova on the institution's status for the years 2012 and 2013

A dynamic analysis of budgetary funding allocated to the University of Craiova in the period under study (Table 2) highlights its systematic reduction from year to year, by 11,36% in 2012 compared with 2011 and by 1,62% in 2013 compared with 2012. Per whole analyzed period (2011-2013) we found a decrease in budgetary financing by 10.542.837 lei which means 12,79%.

To justify this trend we performed a dynamic analysis of the budgetary financing components, leading to the following assessments:

- during 2011-2012, the decrease of the budgetary funding was driven by the reduction of the institutional funding (-16,28%) at a higher rate than the increase of the complementary funding (12,72%);
- instead, during 2012-2013 one may notice a decrease in complementary funding by 13,64%, very sensitive mitigated by the institutional funding increase by 1,69%;
- between 2011-2013 budgetary funding reduction was due to the conjugated decrease of the institutional funding by 10.171.919 lei, respectively by 14,86% and complementary funding by 370.918 lei, respectively by 2,65%.
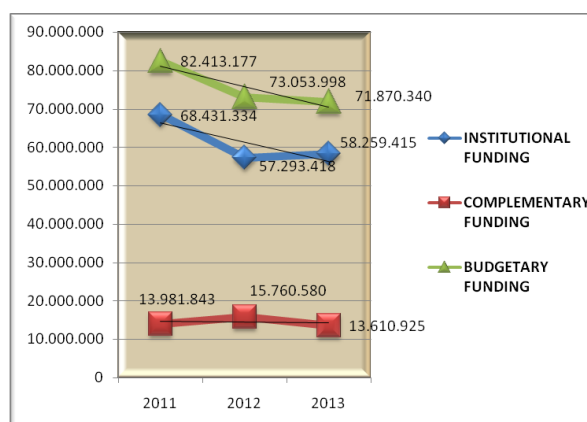
Figure 2 – The evolution of budgetary funding allocated to the University of Craiova on components within 2011-2013
Source: Own processing after Table 1

Figure 2 allows us to observe the obvious regressive trend of budgetary funding allocated to the University of Craiova, especially on the background of the downward trend of institutional funding. Regarding complementary funding, we observe a growing trend to the peak point reached in the year 2012, followed by a decrease next year.

In the budgetary financing structure it can be easily observed an overwhelming share of institutional funding (over 78% in each of the three years analyzed), with a slight decrease in 2012 in favor of complementary funding.

The significant decrease of budgetary financing has generated pressure on the University of Craiova, emphasizing the efforts of persons with responsibilities in the university management in the purpose of judicious and effective distribution of the considerably reduced resources. Moreover, in this respect, the rector of the University of Craiova stated that "scarce resources from public funds generated cyclical reallocation of funds and a tendency to deviate from the priorities of the institution" (*The Annual Report of the Rector of the University of Craiova Regarding the Institution Status* 2012-2013, 2013). Finally, the crisis situation has imposed fortuitous unfavorable measures for the teachers, but especially for non-teaching staff.

Focusing our attention on the structure of institutional funding, we note differences in composition from one year to another, as can be seen from Table 3.

Thus, in 2012 compared with 2011, in addition to the basic component received for each of the three academic cycles (bachelor, master and doctorate), having into the consideration the number of unitary equivalent students and the number of PhD grants, appear two more elements, as the news brought by the National Education Law no. 1/2011, respectively: additional funding and the money allocated for the institutional development fund. The additional funding is allocated to encourage excellence in academic education institutions and it is autonomous used by them. Instead, in 2013, we find that there have not been allocated funds for institutional development fund but funding was received for final and irrevocable judgments. These sums are intended to cover the differences between not granted wages for the personnel who sued the university and to which it gave prevailed.

Table 3 - Analysis of institutional funding on components in the range 2011-2013

Type of funding	2011	2012	2013
Core funding	68.431.334	42.203.411	45.922.414
Additional funding		14.425.640	11.907.660
Amounts allocated to institutional development fund		664.367	
Funding for final and irrevocable sentences			429.341
INSTITUTIONAL FUNDING	68.431.334	57.293.418	58.259.415

Source: Own processing after the annual reports of the Rector of the University of Craiova on the institution's status for the years 2012 and 2013

A structural analysis of institutional funding for 2013 can be seen in Figure 3 and reveals significant core funding share (78,82%), followed by additional funding share (20,44%) and the least percentage of 0,74% owned by the amounts allocated for final and irrevocable sentences.
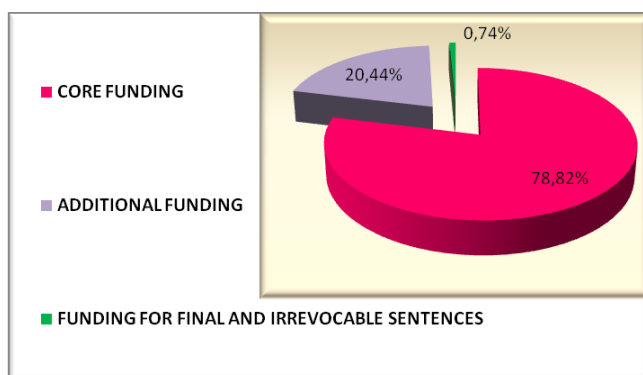
Figure 3 - Structural analysis of institutional funding for 2013
Source: Own processing after Table 3

However, structural analysis of complementary funding, plotted in Figure 4 shows reasonably the overwhelming share of the amounts allocated to finance scholarships for students (64,39%), followed by the share of subsidies allocated to support the activity of student hostels and canteens, more precisely subsidies for food and accommodation (22,67%), then the share of funds allocated to finance investment objectives (7,35%), and finally the extremely low share of students transportation funding (5,51%) and almost negligible share of the funds received to support the purchase of computers (0,09%) .
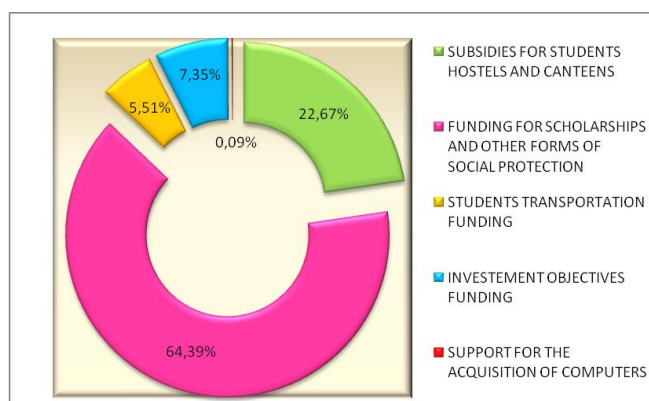
Figure 4 - Structural analysis of complementary funding for 2013
Source: Own processing after the annual reports of the Rector of the University of Craiova on the institution's status for the years 2012 and 2013

In the grim context of the underfunding, we consider appropriate to turn our attention to the extra-budgetary funds of the University of Craiova, analyzing them both structurally (Table 4) and dynamic in the range of 2011 to 2013 (Table 5).
The University of Craiova extra-budgetary revenues can be divided into the following main categories:
- own revenues;
- incomes from operational programs;
- incomes from research;
- micro production incomes;
- own incomes from student hostels and canteens.

Table 4 - Structural analysis of the extra-budgetary revenues by category in the range 2011-2013

Types of extra-budgetary revenues	2011		2012		2013	
	Revenues	Share	Revenues	Share	Revenues	Share
Own revenues	38.496.366	43,05%	35.273.618	43,72%	27.955.950	36,11%
Incomes from operational programs	26.824.452	29,99%	21.138.785	26,20%	32.418.618	41,87%
Incomes from research	12.445.232	13,92%	9.855.751	12,22%	5.979.866	7,72%
Micro production incomes	6.950.879	7,77%	9.009.756	11,17%	5.455.461	7,05%
Own incomes from student hostels and canteens	4.713.220	5,27%	5.405.513	6,70%	5.615.380	7,25%
TOTAL	**89.430.149**	**100%**	**80.683.423**	**100%**	**77.425.275**	**100%**

Source: The annual reports of the Rector of the University of Craiova regarding the institution's status for the years 2012 and 2013

Table 5 - Dynamic analysis of the extra-budgetary incomes by categories

Types of extra-budgetary revenues	Change 2012/2011		Change 2013/2012		Change 2013/2011	
	Absolute (lei)	Relative (%)	Absolute (lei)	Relative (%)	Absolute (lei)	Relative (%)
Own revenues	-3.222.748	-8,37%	-7.317.668	-20,75%	-10.540.416	-27,38%
Incomes from operational programs	-5.685.667	-21,20%	11.279.833	53,36%	5.594.166	20,85%
Incomes from research	-2.589.481	-20,81%	-3.875.885	-39,33%	-6.465.366	-51,95%
Micro production incomes	2.058.877	29,62%	-3.554.295	-39,45%	-1.495.418	-21,51%
Own incomes from student hostels and canteens	692.293	14,69%	209.867	3,88%	902.160	19,14%
TOTAL	**-8.746.726**	**-9,78%**	**-3.258.148**	**-4,04%**	**-12.004.874**	**-13,42%**

Source: Own processing after the annual reports of the Rector of University of Craiova on the institution's status for the years 2012 and 2013

From the Table 5 we may see a drastic reduction of the extra-budgetary revenues obtained by the University of Craiova in the range 2011 to 2013 (by 12.004.874 lei in absolute size and by 13,42% in relative size) due to:
- significant decrease of the own revenues in absolute value by 10.540.416 lei, respectively by 27,38%;
- consistent reduction of revenues from research by 6.465.366 lei, respectively by 51,95%;
- the decrease of the revenues from micro-production by 1.495.418 lei, respectively by 21,51%.

At the same time the significant reducing of the extra-budgetary revenues was attenuated by the increase of the revenues from operational programs activities (by 5.594.166 lei, respectively by 20,85%) and by the increase of the own incomes from hostels and canteens (by 902.160 lei, respectively by 19,14%).
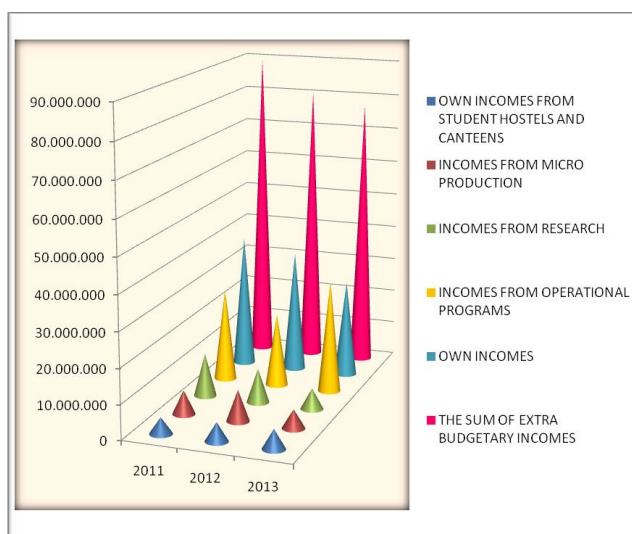
Figure 5 - Evolution of extra-budgetary incomes by types of incomes in 2011-2013
Source: Own processing after Table 4

The graphical representation of the analysis in dynamics of extra-budgetary incomes by type of revenues can be seen in Figure 5.

By processing the numerical data in Table 4 we may perform the structural analysis of the extra-budgetary incomes (plotted in Figure 6) which leads to the following assessments:

- within the total extra-budgetary incomes, own revenues held the overwhelming share (on average 41% of the total extra-budgetary revenues in the studied range);
- secondly, we find the revenues from the operational programs activity which are on average 33% of total extra-budgetary revenues, with an increasing trend in 2013;
- they are followed by research revenues with an average share of 11% of the total extra-budgetary funds;
- the following position is occupied by the micro production incomes, which hold a share about 9% of total extra-budgetary revenues;
- finally there are the own incomes generated from student hostels and canteens which mean an average of 6% of total extra-budgetary incomes.
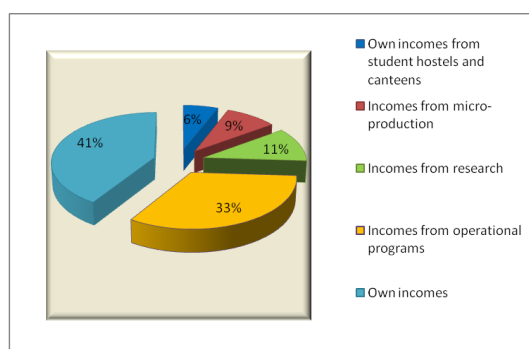
Figure 6 – Extra-budgetary incomes structure in the range 2011-2013
Source: Own processing after Table 4

Like all academic and educational institutions, for the University of Craiova their main source of incomes are the tuition fees charged to students, masters and PhD students which are not funded from the budget. The fees are set by the University Senate at the basis of the faculties' proposals. In addition to the tuition fees, additional fees can be charged for: admissions, registrations, and re-registrations, exceeding the tuition period provided by law, reviews and reexaminations. It is imperative to take into consideration that the approach of collecting tuition fees has been seriously affected by the global economic recession. For this reason, the university management was forced to focus on stimulating other own sources of financing, such as: income from sponsorships, revenues from services, interest revenues and other incomes (*The Current Status of Financing Public Higher Education Institutions in Romania – The Case of the University of Craiova*, 2013).

Another important source of extra-budgetary incomes is the amount obtained from operational programs (EU funds).

University of Craiova run until the end of 2013 a total of 54 projects, including 38 projects funded by the European Social Fund, 15 projects financed by the European Regional Development Fund and a project funded by the SEE Financial Mechanism, pursuing: diversification of the partners palette, increasing the added value of the implemented projects, diversifying areas of intervention and optimal allocation of effort especially financial, logistical and human resources needed for implementation (*The Annual Report of the Rector of the University of Craiova Regarding the Institution Status 2013-2014*, 2014).

As can be seen from Tables 4 and 5, the incomes related to the activity of operational programs have recorded in the second half of the period studied (2012-2013) an increase in absolute size of 11.279.833 lei and relative size of 53,36%, which contributed to the alleviation of the shortage of extra-budgetary funds. This trend was, however, against a bad precedent because in the first half of the studied period (2011-2012) the revenues for the operational programs activities had experienced a 21,20% decrease due to the severe temporary funding locking phenomenon resulted in non-reimbursement of the payments for the implementation and development of these projects.

These harsh conditions led to an increasing budgetary pressure, and the University of Craiova management was forced to restrain some of their own resources to support these projects in order to fulfill the objectives assumed by concluded financing contracts until the time of unlocking funding.

As such, on the background of allocating significant resources to support the projects financed from external grants and bearing in mind the fact that 2013 marked the end of the running for most projects, most of the sums collected in 2013 and of those to be charged will be advanced to cover the own incomes restrained in prior periods.

In what follows, we consider appropriate to address the issue of scientific research, as well as contribution to the development of high education as an integral part of the mission undertaken by the University of Craiova. Scientific research is carried out under research contracts without VAT (projects won national competitions) and research contracts with VAT (projects financed by third parties) (*The Current Status of Financing Public Higher Education Institutions in Romania – The Case of the University of Craiova*, 2013).

Analyzing the incomes from research, we find that they have recorded, in the period under study, a steep downward trend (by 6.465.366 lei in absolute size and by 51,95% in relative size) This drastic reduction was double-caused: so as a result of reducing the number of research contracts by the completion of the contract period, and under the impact of decline in funding allocated by UEFISCDI. The latter decided to carry forward a portion of the allocation for the year 2013 to 2014, through the current economic reality.

Turning our attention to the activity of micro production, we must say that the University of Craiova obtains income from micro production through two subunits, respectively:

Agricultural Research and Development Station Caracal and Experimental Didactic Station Banu Mărăcine.

As we can notice from Table 6 and from Figure 7, the revenues resulting from micro-production registered in the period of the study a specific trend of Gaussian curve, acquiring the peak value at the level of the year 2012.

Herewith, we can easily find that the significant weight in the total of the revenues obtained from micro-production is held by ARDS Caracal revenues (over 85% from the total of the revenues from micro-production in each of the three years of the analysis interval). These registered a consistent increase in the year 2012, compared with the year 2011 (with 2.670.335 lei, respectively with 46,02%), followed by a drastic reduction in the year 2013, compared with the year 2012 (with 3.735.078 lei, respectively with 44,08%). During the period 2011-2013, the revenues from micro-production related to ARDS Caracal decreased with 1.064.743 lei, respectively with 18,35%.

In the case of EDS Banu Mărăcine, the revenues from micro-production registered during the period 2011-2013 an increase in absolute size of 96.953 lei, respectively 15,61% in relative size, attenuating in a sensitive way the reduction of total revenues from micro-production, determined by the regression produced at ARDS Caracal.

Table 6 - Analysis of micro production revenues, per subunits, between 2011-2013

	2011	2012	2013	Change 2013/2011	
Incomes from micro production - ARDS Caracal	5.802.287	8.472.622	4.737.544	-1.064.743	-18,35%
Incomes from micro production - EDS Banu Mărăcine	620.964	537.134	717.917	96.953	15,61%
MICRO PRODUCTION TOTAL REVENUES	6.423.251	9.009.756	5.455.461	-967.790	-15,07%

Source: Own processing after the annual reports of the Rector of the University of Craiova on the institution's status for the years 2012 and 2013
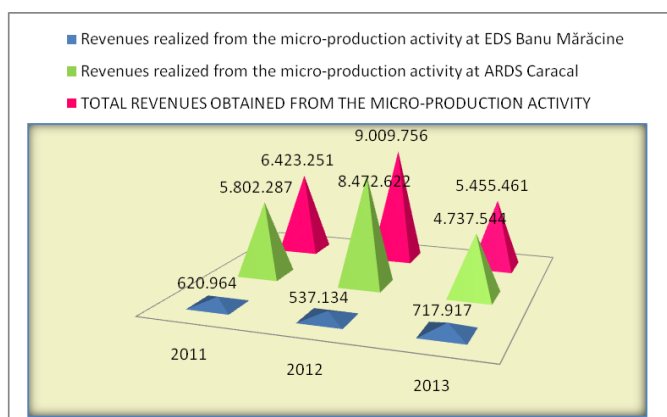
Figure 7 – Evolution of revenues from the micro-production activity for the period 2011-2013
Source: Own processing after Table 6

Another source of extra-budgetary revenues for the University of Craiova is represented by the own revenues from student hostels and canteens, but, as we previously mentioned,

these hold the lowest weight in the total of extra-budgetary resources of the institution (only 6% at the level of the year 2013, falling with 1% in respect to the previous year).

The own revenues obtained from the activity of student hostels and canteens are composed of: revenues obtained from the accommodation taxes in student's hostels, revenues obtained from the rental of spaces and revenues obtained from the sale of the food prepared in canteen (*The Current Status of Financing Public Higher Education Institutions in Romania – The Case of the University of Craiova*, 2013).

Table 7 – Analysis of revenues from student hostels and canteens on types of revenues during the period 2011-2013

	2011	2012	2013	2013/2011	
Own revenues from student hostels and canteens	4.713.220	5.405.513	5.615.380	902.160	19,14%
Subventions allocated from the state budget	3.684.559	3.032.755	3.085.427	-599.132	-16,26%
Total of revenues from student hostels and canteens	**8.397.779**	**8.438.268**	**8.700.807**	**303.028**	**3,61%**

Source: Own processing after the Annual reports of the rector of the University of Craiova regarding the status of the institution for the years 2012 and 2013

A very important aspect is the fact the own revenues from student hostels and canteens represent the only category of revenues to which was registered an increase from one year to another (with 14,69% in 2012, compared with 2011 and with 3,88% in 2013 compared with 2012), while de current context generates multiple degressive trends.

On the background of this increase trend from year to year, during the entire interval analyzed (2011-2013), the own revenues from student hostels and canteens increased with 902.160 lei, respectively with 19,14%.

In turn, the subventions allocated from the state budget for the support of the activity of the student hostels and canteens (which, as it was previously mentioned, are include to the complementary funding) were reduced during the period 2011-2013 with 599,132 lei, respectively with 16,26%.

The increase of the own revenues allowed the compensation of the reduction of subventions allocated from state, resulting per total a plus of revenues of 303.028 lei.

A structural analysis of the total revenues related to the activity of student hostels and canteens shows a growing share of own revenues in the first half of the interval studied (from 56,12% in 2011, to 64,06% in 2012), followed by an increase almost indistinguishable until the level of the year 2013 (64,54%). By analogy, the subventions allocated from the state budget decreased from 43,88% in year 2011, to 35,94% in year 2012 and 35,46% in year 2013.

6. Conclusions

From the numerical information previously presented, we can issue the conclusion according to which in year 2013, the University of Craiova obtained total revenues of 149.295.615 lei. These were used for the partial covering of expenses (staff expenses, expenses with goods, services and capital expenses) in the total amount of 154.665.547 lei. In order to cover the difference, it was needed the use of a part from the available

amount on 31.12.2012, more precisely the amount of 5.369.932 lei, after the approval received from the Ministry of National Education.

As a consequence of the resources allocated from the state budget, the extra-budgetary revenues should have represented the most consistent sources of founding for the University of Craiova. But, a comparative analysis between the evolution of the budgetary financing and that of the extra-budgetary revenues during the period 2011-2013, illustrates a decrease of extra-budgetary revenues in a superior rhythm of the diminution registered at the budgetary financing (-13,42% in respect to -12,79%), aspect that we appreciate as being unfavorable, under the conditions in which the chronic sub-financing of Romanian academic education obliges the universities to base on extra budgetary financing sources.

Moreover, the decrease of extra-budgetary revenues was due, for the most part, to the reduction of own revenues, which are obtained especially from the study taxes. Thus, during the period 2011-2013, the own revenues decreased with 10.540.416 lei, under the conditions in which, per total, the extra budgetary revenues were diminished with 12.004.874 lei, situation which shouldn't be omitted while the own revenues usually represent the main source of extra-budgetary revenues of public academic education institutions. The phenomenon is explained through the fact that, because of the economic crisis, the population cannot support anymore the study expenses, fact which generates a high rate of school abandon and thus significantly diminishing the number of students schooled at the type of education with tax. In order to prevent this phenomenon and to support the students, the University of Craiova started the negotiation with two credit institutions, facilitating the conclusion of lending agreements of students, in order to give them the possibility to pay the study taxes.

Also, the attempt to stimulate the revenues from rentals was countered by the effects of global economic recession and by the reduction of the financial capacity of companies. Thus, the university was obliged to ask the bankruptcy of several partners, economic operators, the auctions afterwards launched for the rent of respective spaces not being followed by any offer.

In respect to the scientific research activity, the university management succeeded to identify recently a way for stimulating and motivating the teaching body towards this approach, by creating a system financed from own resources, by means of the first internal competition for Romanian research grants. The funds came from the administration of research agreements (50% from its value) and from the reduction of the contribution of faculties to the centralized fund of the university (with 2,9%). The contribution to the centralized fund was also diminished with 1% in order to equip the libraries and to increase the research fund.

In respect to the projects financed from external non-reimbursable funds, we consider that it must be made all the efforts needed in order to unblock the amounts to be reimbursed, through the active involvement of the projects managers, together with an optimistic and coherent approach related to the financing opportunities 2014-2020.

Finally, we can conclude that, during the period 2011-2013, the systematic reduction of budgetary funding corroborated with the diminution of extra-budgetary revenues, under the effects of global economic recession, generated a considerable pressure on the University of Craiova and especially on its management, which was obliged to change its strategy, meaning to maintain an acceptable level of revenues, through the rationalizing of the allocation of available resources. In this context, extremely unfavorable, we shall remark the efforts of university management to permanently follow the stabilization and the consolidation of financial statement, in order to ensure the proper development of the activity of the institution under conditions of budgetary equilibrium.

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ANALYSIS OF THE FINANCIAL MANAGEMENT OF THE UNIVERSITY OF DEBRECEN

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Abstract: *Today, the general statement that due to the insufficiency of resources and the unlimited of user demands budgetary organisations have to act with strong, targeted rationalism becomes increasingly accepted. Hungary witnesses a full-scale transformation of the financing of its system of higher education, and therefore the management is required to monitor the changes of the environment continuously, and modify its objectives accordingly. A gradually emerging need is that these educational units have to frame operating structures that are suitable for flexibly following the changes occurring in their environment. This is a terrain where the management is supported by management control system, which is in fact means of regulating operations and driving preparations for decision-making. The purpose of this study is to examine to what extent the actual financial management data of the University of Debrecen coincide with the plans for the given budgetary year. The empiric research relies on the received reports, and embraces the years of 2008–2012; in this manner, a comprehensive view can be formulated in relation to the efficiency of planning in the past 5 years. To ascertain the correctness of operative management, mathematical, statistical and calculation methods are used. The study is conducted in view of the three major questions defined by the methodology of management control system; realistic grounds of the planned data, deviation analysis, identification of causes. The plan fulfilment indicator is used to present the efficiency of planning both on the institutional and the key budgeting levels. In the context of deviation analysis – supervision of the implementation of planned figures –, figures are prepared for better demonstrability. For the detailed identification of the underlying causes, structure analyses are performed for the income and expenditure sides alike. With respect to expenditures, it is examined whether there is any correlation between remunerations, tangible and other current expenses, because they are the two largest budgetary groups of expenditures, while the work of the personnel indeed necessitates the availability of tangible assets. My analysis has concluded that the obtained results confirm the University does not perform its planning operations appropriately. At the time of planning, historic experience and the available information are neglected. The completed analysis directs attention to the importance of the management control system, and the fact that by today this tool for the support of decision-making has become indispensable even for budgetary organisations.*

Keywords: University, budget, management control system

JEL classification: H80

Introduction

As a result of the irresponsible management of public finances and the incalculability, permanent changes of the economic environment, Hungary's institutions of higher education have had to face serious challenges these days. The funding of educational institutions is a scene of ongoing systemic transformations.

I have chosen the analysis of the financial management of the University of Debrecen as my research topics with the time interval under review being the years of 2008–2012. I have examined the financial management of the University to see whether it can comply

with its obligations from the available budget; both in terms of incomes and expenditures I have detailed where changes have occurred, and what the underlying reasons have been.

1. Materials and methods

To conduct efficient research activities, I contacted the director of finance of the University of Debrecen. At our meetings in person, I had the opportunity to raise questions in relation to the past and present of the finance management of the institution, as well as potential changes in the future. I have analysed the data included in the reports that were made available to me with the use of various methods of mathematical and statistical calculations.

2. Results
2.1 Analysis of data

Management control system (MCS) is deemed as a subsystem of the organisation with the principal function to ensure and enhance efficient system operation. (Boda-Szlávik,2005)

For the managers of the University of Debrecen handling budgetary amounts, it has outstanding significance to see the operating aspects of finance management and daily operations clearly. There is a need for the establishment of key indicators in order to have regular information in relation to the available proceeds of the institutions belonging to them, their types, as well as the operating and maintenance costs. For the deviation analysis of the planned and factual figures of strategic controlling, the frequency of factual data is 6-monthly or annual, or even scheduling for several years ahead can be characteristic. (Körmendi-Tóth, 2011)

The fundamental goal of comparing planned and factual figures is the identification of deviations; the control of implementation. In the conventional approach, the two end points of financial management are planning and the review of the implementation of the planned tasks on the basis of factual information. (Körmendi-Tóth, 2011)

The basic function of deviation analysis is the clarification of the reasons having caused the change. This activity promotes the improvement of planning work and timely responses to changes in the environment. (Subhash, 2011)

In order to conduct an appropriate study, 3 questions have had to be answered:
1. whether the planned data have been well-grounded,
2. establishment of absolute and relative deviation between the planned and factual data,
3. what the causes of the deviations have been.

2.1.1 Grounds of the planned data

Today, the general wisdom that due to the insufficiency of resources and the unlimited nature of user demands budgetary organisations have to act with strong, targeted rationalism becomes increasingly accepted. Leaders, managers are in charge of the determination of strategic objectives, the operative management and control of planning, decision-making, the implementation of decisions. MCS has an important role in meeting this requirement. My analysis has studied the quality of the planning activities with the use of the so-called plan fulfilment indicator. This indicator relates performance data to the original targets.

In view of the calculations performed, it can be seen how the plan fulfilment indicator changed from 2008 until 2012.

Table 1: Plan fulfilment indicator of the University of Debrecen, 2008–2012

Year	Target expenditure (HUF th)	Fulfilment of the target expenditure (HUF th)	Target income (HUF th)	Fulfilment of the target income (HUF th)	Plan fulfilment indicator, expenditure (%)	Plan fulfilment indicator, income (%)
2008	54729568	65801695	54729568	70365691	83.17	77.78
2009	54656510	65998073	54656510	69102211	82.82	79.10
2010	54194248	74462862	54194248	79716396	72.78	67.98
2011	58317284	77758509	58317284	83542561	75.00	69.81
2012	57735500	73523784	57735500	80653501	78.53	71.58

Source: own compilation on the basis of the data received

Planning is one of the determining functions of management. (Hanyecz, 2006) The point of planning is to have the management of the University systematically consider, and at the same time elaborate its objectives relating to the future. The outcome of the planning function is the plan itself. (Hanyecz, 2006)

The implementation of the budget takes the form of the collection of incomes and settlement of expenditures. Table 1 above relates the figures of actual performance to the original targets. The calculation relies on the following logic: if performance remains under the target, more has been planned than what should have been, i.e. some smaller level would have been sufficient; on the other hand, in case the value of the factual figure runs over the planned level, the excess part will be deemed as unplanned.

In the above calculations, it has been unnecessary to modify the initially entered formula (original target/factual data), as the planned data were always smaller than actual performance. The performed calculation of the ratios demonstrates that the planning and performance data largely deviate from each other. In the review of the five-year interval, the corresponding average values are:

- ~21.54% for expenditures
- ~26.75% for incomes

In association with the planned expenditures, it can be ascertained that there has been a permanent tendency of overspending. Similarly, incomes have consistently been subject to overperformance. It means that when realisation is monitored for recent years planning can be claimed to have been ungrounded on the institutional level.

2.1.2 Establishment of deviations

Below, as an important aspect, the absolute and relative deviations of the values are examined. The relative deviation can be calculated with the use of the plan fulfilment indicator. During the deviation analysis, the information obtained in connection with the correlations of the planned and factual figures needs to be arranged in order to make proper decisions and execute the necessary measures. This study has been conducted in the form of Table 2 and Figure 1.

Table 2: Relative deviations between the planned and factual data

Year	Expenditures (%)	Incomes (%)
2008	16.83	22.22
2009	17.18	20.90
2010	27.22	32.02
2011	25.00	30.19
2012	21.47	28.42

Source: own compilation on the basis of the data received

In my opinion, such tables and statements are demanded the most by managers. They reflect the necessary information clearly, and exactly show where and to what extent there are deviations. As it seems to be expedient to align incomes to expenditures even for a budgetary organisation, it is primarily the expenditures that have to be taken into account first. It is apparent from Table 2 that the degree of the deviation was the smallest in 2008, and came to be the largest in 2010. The process of planning cannot have been appropriate, which is confirmed by the 27.22% deviation. The same year witnessed the largest overspending in terms of expenditures, as well. Thereafter, a phase of gradual decrease could be seen, meaning that the efficiency of planning improved.

Incomes show the same tendency increase and decrease as the one observed for expenditures. The largest deviation falls on 2010 again, yet here the degree is ~32.02%. The subsequent years brought about a diminishing tendency for incomes, as well.

On the whole, it can be ascertained that for incomes the difference has always been larger than for expenditures, and therefore overspending has been covered by the overperformance of incomes.

First, efficiency should be measured on the expenditure side, which is to be followed by incomes in spite of the fact that they are strongly correlated with each other; incomes cover expenditures. The underlying reason is that every organisation needs resources for executing the associated activities. Strong correlation can be detected among outflow and inflow processes. The various information, feedbacks are the ones that help to maintain the appropriate relationship in between the two points.

The obtainment of inputs appears in the form of costs on the part of the institutions of higher education, and with respect to the available maximum budget to be expended it is essential to use liquid assets efficiently, while the income side may be difficult to regulate in the case of this market actor.

Economics can be defined as the science of decision-making and selection among various alternatives, and from the perspective of economy it cannot be deemed as a real cost when one has no option to decide on it. (Kopányi, 2009)
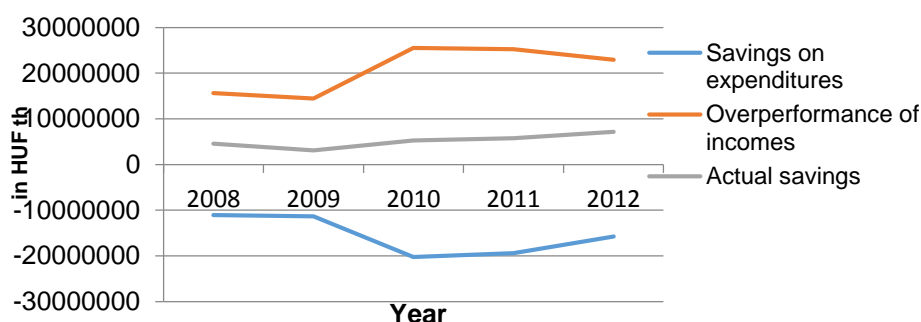
Figure 1: Deviation analysis, 2008–2012
Source: own compilation on the basis of the data received

Graphs tend to be much more informative than tables. It can be clearly seen without explanations where and when changes occurred, while graphs are also capable of presenting negative and positive changes more drastically.

The difference between the planned and factual figures is shown in Graph 1. In expenditures, the difference came in the form of overspending in each a year, with consistent increase until 2010, and then a decreasing tendency. The largest growth rate was recorded from 2009 to 2010: ~78.71%. Between 2010 and 2012, the rate of fallback was ~28.37%.

Concerning incomes, a temporary halt occurred from 2008 to 2009, but by 2010 the growth proved to be significant again. In comparison with 2009, the rate of increase in 2010 was ~76.67%. From this year on, the extent of overperformance reflected rather slow decrease.

In spite of these major deviations between actual performance and targets, the budget of the University shows surplus; it is indicated by the green line.

In summary, the deviations of expenditures and incomes can be presented in the form of lines that are mirror images to each other. In the years under review, the management of the University succeeded in making decision that always generated positive residual amounts at the time of the closing of the individual budgetary years. It is apparent that they have always tried to respond to changes in the environment in a timely manner. The income and expenditure targets have to be in line with each other at all times. As expenditures are typically over the planned level, they are to be covered from incomes, meaning that the original targets have to be modified. This is the reason why deviations can be presented as mirror images to each other. Yet, their extents are varied with the underlying reason being that the available budget is not always spent fully, and similarly there are occasions when it is impossible to collect all the incomes.

2.1.3 Causes of the deviations

Resources are scarce, and therefore every single use of resources needs to be paid for. In the case of organisations of higher education, the emphasis is on decisions concerning operations, while profit orientation surfaces only indirectly. While a company is active in the market, and among other things it has the option to expand or change its margin, an educational organisation that is maintained by the government does not have such potential prospects. It has a fixed budget from which it is required to ensure its operations. (Anthony-Young,2007)

In all the years under review, the University underplanned both expenditures and incomes. Planning does not seem to be efficient on the institutional level. Therefore, I have conducted a structure analysis to reveal the causes of the deviations.

2.1.3.1 Structure analysis on expenditures

Result-oriented control is one of the key elements of the regulation cycle. When it is executed, attention needs to be paid to the issued regulations, the implementation of instructions for both the subunits of the budgetary organisation and the organisation as a whole. It is true that in its entirety planning was not efficient, but the same has to be examined for the main targets for incomes and expenditures, too. Due to the huge number of figures to be included in the tables, only the main calculation results are presented here. In the management of budgetary organisations, the basis of planning from time to time is that in the light of the environmental impacts and the internal resources of the organisation the management should always set realistically feasible objectives. Planning involves the determination of the tasks needed for the accomplishment of the defined goals and the establishment of the set of conditions required for the execution of tasks. (Körmendi-Tóth, 2011).

The main components of the planning system are:
1. The University performs top down & bottom up planning
2. The time horizon of planning in MCS is one budgetary year
3. Financing is planned for a budgetary year.

The fundamental goal of determining budgetary targets is to ensure the balance between the income and expenditure sides of the budget. The University determines normative limits, and sends out these data to its individual institutions; by undertaking certain performances and the collection of own incomes, it also independently frames its budget. In case the anticipated expenditures exceed the budget, modification is carried out. MCS uses the available base data to support the appropriate compilation of budgetary targets.

Table 3: Grounds for the main items of expenditures

Year/Description	Remunerations and contributions payable by the employer (%)	Tangible expenditures and other current expenditures (%)	Provision of payments to the beneficiaries (%)	Accumulation expenditures (%)
2008	98.65	67.73	98.82	98.65
2009	98.35	70.14	92.63	85.18
2010	96.46	64.00	84.35	31.75
2011	98.61	66.42	92.54	30.67
2012	98.38	72.19	97.24	31.24

Source: own compilation on the basis of the data received
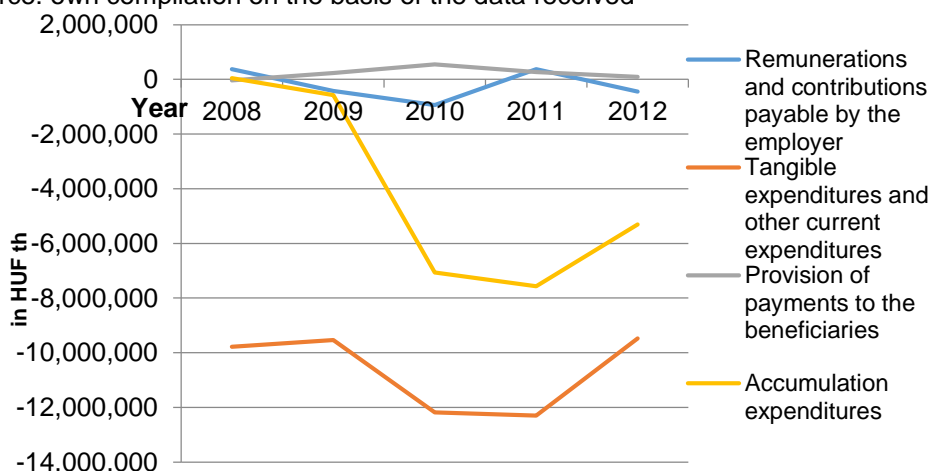
Figure 2: Savings on expenditures/overspending
Source: own compilation on the basis of the data received

Result-oriented control means the comparison of the planned and factual figures relating to one-yearly intervals in this case. The data of all the significant areas have to be reviewed. This activity is the precondition of active management over the operations, yet in itself it is not suitable for making the measures successful. For better demonstrability, Table 3 and Graph 2 have been analysed in parallel with each other.

In the case of expenditures, it is an interesting aspect that during my earlier studies (at the local government) it was remunerations that formed the majority of expenditures. In

this case, however, most of the expenditures have been associated with tangible and other current expenditures.

For remunerations and contributions payable by the employer, the performed calculations do not reflect significant deviations. Overspending has been witnessed only for 2009, 2010 and 2012, while the average extent of deviation for the three years has been HUF 604 873 th. For the years of 2009 and 2010, it can be claimed that the increase was caused by regular remunerations and allowances provided to persons not belonging to the headcount. Furthermore, in 2010–2012 the given growth can be obviously attributed to the new wage scale introduced in healthcare, changes in the base pays and the wage compensation scheme. 2010 saw the commencement of a research university project in the framework of which 1100 salary-type payments were executed.

With respect to tangible expenditures and other current expenditures, it can be ascertained that there is considerable deviation between the planned and factual figures: with the average rate of difference being ~32%. A discrepancy of such a scale suggests that the management of the University us not able to determine with the necessary efficiency what a level of tangible expenditures is necessary for operations in the given budgetary year. Until 2011, this expenditure category showed significant increase, and then came to an approx. ~7.42 % halt in performance. Every year reflects major overperformance, in an average amount of HUF 923 192 th. The main items of expenditures that have increasing weights include

1. purchasing of medicines and chemicals
2. other communication services
3. district heating and hot water supply charges
4. maintenance, repair servicing and other operating services

From 2011 to 2012, a HUF 2,529,910 th decrease was recorded in relation to performances. In that year, a cost-cutting program was introduced, in the framework of which reductions were focused at

1. purchasing of medicines and chemicals
2. purchasing of newspapers and journals
3. purchased public services
4. use of other operating services

The other categories of expenditures could not compensate for the planning inaccuracies in these items.

I have examined whether any considerable difference occurred between the two expenditure categories, and if there were identities in terms of standard deviation. I have made the following findings: significant discrepancies can be found among personnel expenditures and tangible expenditures, as well as other tangible type expenditures, and their dispersions are also different.

The financial allowances granted to the beneficiaries comprise the payments to the participants of intermediate and advanced level education, higher education, as well as other financial allowances provided. With the exception of 2008, savings were consistently achieved. However, they could compensate for the overspending in tangible and other current expenditures only to a negligible extent. The University involves more and more students in its EU grant application activities, which results in an increase in this category, i.e. growing amount of scholarships. It is rather interesting that it is the legal title where planning approaches the level of performance the closest.

Accumulation expenditures are not indicative of efficient planning, either. Within the framework of reconstruction works, the student hostel of the Medical and Health Centre was renewed. In 2011, the rate of overspending came to be ~69%. The underlying reason was the acquisition and establishment of real-estate properties, as well as the procurement, installation of machines, equipment and facilities. In 2010 and 2011, such investments were financed from grant funds.

2.1.3.2 Structure analysis on incomes

Table 4: Grounds for the main items of incomes

Year/Description	Governmental subsidies (%)	Own incomes (%)	Liquid assets received / Grant-type incomes (%)	Other liquid assets received (%)
2008	87.90	60.79	80.76	46.57
2009	94.03	58.48	88.07	52.97
2010	94.45	46.77	69.00	70.80
2011	94.52	61.26	65.95	42.32
2012	95.24	65.79	75.07	40.77

Source: own compilation on the basis of the data received
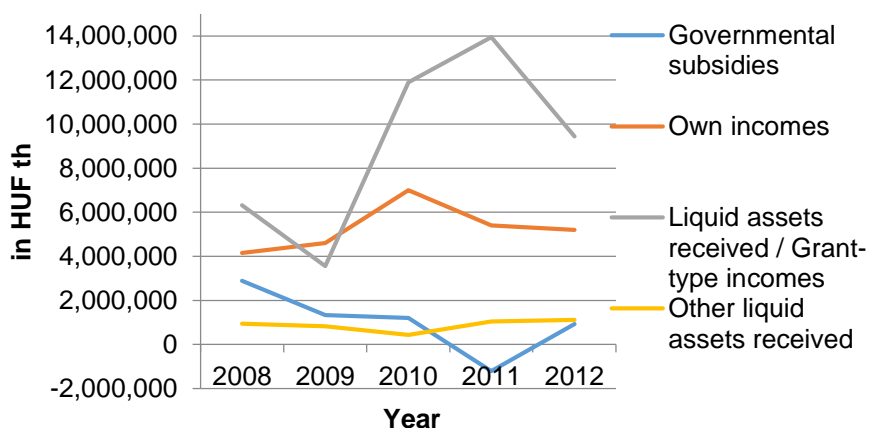
Figure 3: Income overperformance
Source: own compilation on the basis of the data received

Table 4 has been compiled to see in summary how well-grounded planning was. It is apparent that there are substantial discrepancies between the corresponding data. For an institution of higher education, the main source of incomes is grant-type incomes and governmental subsidies.

Grant-type incomes form by far the largest proportion of incomes. On the other hand, the amount of governmental subsidies in 2010 was reduced by more than HUF 2 billion in comparison with the base year (2008). Then in 2012, more than HUF 1 billion less was granted in comparison with the 2011 volume. The reason for this latter reduction was the modification of the earmarked amount provided by the government in its own scope of competence. The withdrawal of this amount of money meant a material cut from the available–utilizable budget of the educational institution. It affected the following areas:

1. subsidy granted for the payment of 13th monthly remuneration
2. subsidy granted for the increase of remuneration
3. coverage of the costs of headcount reduction
4. subsidy granted for the for supplementary salaries
5. public health tasks
6. education at majors with small student populations
7. subsidy granted for the PhD schools

When planning these target figures, consistently reduced amounts have been budgeted, which means that the management has become prepared for this change in the environment. The deviation between planning and performance figures has also been diminishing continuously. Still, the calculation performed indicates that the efficiency of planning is still not satisfactory.

Concerning changes in the original target figures of own incomes in the past 5 years, it can be seen that the associated data were nearly unchanged in the first 3 years, and then were increased by 38.87% from 2010 to 2011, and 62.52% to 2012. On the other hand, the volume of performance exceeded HUF 10,000,000 th in every year. Still, planning activities did not involve a review to see whether an appropriate amount was raised for the upcoming budgetary year. The substantial deviation can be explained by other incomes, including

- goods and inventory sales, counter-value of services.

In spite of the fact that the collection of incomes became more uncertain under the changed economic circumstances, the University succeeded in increasing the collected amount of the incomes from year to year due to the liquidity and willingness of the partners to pay. Calculated from performance figures, the amount of change was HUF 5,275,554 th on the average.

In the years under review, the targeted amounts of grant-type incomes changed just minimally, yet significant overperformances could be enforced in incomes. 2009 brought about an outstanding discrepancy due to the amounts of incomes received from domestic and EU co-funding resources. From 2011, the amounts of grants started to shrink; more and more grant schemes came to their ends.

The least accurate income category belongs to other liquid assets received. The largest amount was planned in 2010: HUF 1,037,021 th. Despite the fact that incomes are overperformed from year to year, the management remains conservative with their forecasts in relation to this income category.

Summary

In order to give appropriate and timely responses to changes in the environment, the management of the University needs to be aware of the tendencies in the deviations, discrepancies of planned and factual figures. The sooner the intervention is implemented, the more efficiently the available budget can be utilised. The performed analysis confirms the assumption that planning is far from being adequate. I think the management prepares a conservative budget in each year, and then rather applies modifying measures to shape the budget subsequently so that it could come as close as possible to the factual data. Still, it is not an appropriate process. Factual figures regularly and considerably exceed the planned levels. The management does not take historic experience into consideration, and the derived information is not incorporated into the plans of the following year. With respect to financial management, it is of outstanding importance that in spite of the ill-grounded nature of planning the budget is always closed with a surplus. There is a need for a more efficiently planning basis, because today decisions have to be made quickly, still with thorough circumspection. The current system does not support such an approach. Changes in recent years should be taken into account, and the utilizable limits could be raised for the future accordingly. It would be expedient to prepare regular deviation analysis wherein the differences found should be reported and classified, and then the proposed interventions could be executed.

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MODERN RISK MEASURES FOR INDIVIDUAL HIGHER EDUCATION INVESTMENT RISK EVALUATION

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Abstract: *One of the reasons why people get degree and participate in organized education is that they want to raise their human capital or signal their inner abilities to future employers by sorting themselves out. In both cases they can expect return to their investment, because they can expect higher life-time earnings than those who do not have degree. In this paper we will refer this activity as higher education investment or education investment. In this paper the investment of the state into educating their citizens will not be considered. The question of this paper will develop the findings of Vona (2014). I suggested to introduce modern risk measures because individual risk-taking became a serious question. It was considered that modern risk measures can help to solve some issues with the relation of investment and risk. However before applying some measures from a different field of science, namely investment finance and financial mathematics, to another, economics of education, there must be a very careful consideration, because there are debate over these measures applicability even on their field of science. Value at Risk is not coherent and Expected Shortfall is only one of a great deal of possible tail loss measures. For this reason it will be discussed in detail how should we should adopt the measures, what kind of data is necessary for calculating this risk measures and what kind of new insight they can bring. With the aid of a numerical example it will be shown that with expected shortfall measure we can reflect some large losses, and potential high value of diversification. We show the value at risk based measure is not coherent and this means it points out something different in this environment. It is can be an indicator of loss in opportunities for high end returns.*

1. Introduction

The use of variance in the rate of return to education investment as the measure of risk is commonly accepted in education economic literature both theoretically and empirically. The suggested quantile-based measures in the title focus on short-term large losses. Value at Risk for example answers the question: "what is the maximum of loss incurred in the 95% of best cases of our portfolio over the next two weeks?" (Acerbi et al., 2002) The economics of education question of the same sort would sound something like "What is the maximum of loss incurred in the 95% best cases of employment track record 5 years after graduation?" This paper will discuss the legitimacy of such a question and the data requirement for answering such a question.

2. Types of Risk and Measurement

Since Markowitz (1952) the general risk-return dilemma of portfolio selection is the part of every introductory course in finance. A risk avoiding investor are willing to allocate larger share of its portfolio value to a risky asset only if it offers greater expected return than equivalent risk alternatives or offers less risk than equivalent expected return alternatives. Markowitz measured risk with variance of return. In that case we

understand risk as the possibility of alteration from the expected value. It is intuitive because the larger is the variance the less precise we can predict the future outcome, for this reason the investment is more risky. However real life investors evaluate the differences from the expected return differently based on the direction of the difference. If the return become larger then it was predicted it does not bother the investor, it is welcomed, on contrary negative differences bother the investor more, because it is money loss. If the investor has scarce resources then loss of resources can make future investments impossible. For instance if a bank does not have enough reserves for an extreme scenario they can go bankrupt and lose the money of the owners and depositors.

Risk was very carefully analyzed in a financial environment, and multiple sources of risk was differentiated. We introduce them based on Duffie and Singleton (2003) and Gourieroux and Jasiak (2010).

- Market risk: It's due to unexpected price changes over time. It is experienced when the investor holds assets that have liquid markets. It can be underestimated in a market expansion period. This underestimation usually leads to a phenomenon called market bubble.
- Credit risk: It's due to the default of a credit. If a bank or any kind of investor lends money through a financial product for a future stream of cash flows, there is always a possibility that the borrower stops the repayment. It can be because the borrowing firm or institute goes bankrupt or a person has no income at the time to pay back the credit. If the business of the lender depend on the repayment cash flow than default can create huge harm in business.
- Liquidity risk: if an investor holds a financial asset in a portfolio it has value only when it can be sold. There is a risk in finding counterparty when the asset does not have a liquid market, which means there are low number and low volume trades on the market. In this case the investor has to wait long time to find a counterparty for a transaction. If the investor is in great need of cash it is a risk.
- Operational risk and systematic risk: The first is internal organization risks like fraud or system failures, and the second is the risk of an economic meltdown or in other words a risk of a market crisis.

If these risk categories can be interpreted for education investment then we have the possibility to apply the measures used in finance for them. We will use the human capital interpretation of education because it is the most commonly used interpretation in economic literature.

When people buy education with investing their time, effort or even money by paying tuition, they invest in their human capital. In financial terms they build a portfolio of special skills, knowledge, practice and expertise in hope they can sell this portfolio in the future on the labor market. Human capital and the individual cannot be separated so it is different than selling a stock in a way, that human capital can only be sold by working for a company for a longer period of time. If we interpret education investment this way the above mentioned risk categories can be easily interpreted, however the possible concerns with this interpretations will be mentioned as well.

One of the characteristic difference between a financial investment and human capital investment is time and complexity. For example buying a stock has very clear costs and the return can be very easy to calculate when it has realized. However in case of education things are different. Getting a degree take years, and building a career is even longer. There is great difficulty in telling the cause-consequence relations and

connecting the cash flows with investment. For this reason people evaluate education in a comparative manner. Do people with higher education earn more than people with secondary school education? Do people with economic degree earn more than those with degree in engineering? Universities usually promote themselves by telling how successful their alumni is compared to other universities.

Market risk of education investment can be easily interpreted. There can be an unexpected change in the price of acquiring a given knowledge or skill. Tuition can go higher, the education material could be proven more time consuming to process then it was expected and so on. The demand for a given profession or a portfolio of skills can change over time.

Liquidity risk is part of the market risk. If there is no demand for given profession then who was trained for that job will not find job opportunities. There are several reasons for unemployment but where unemployment rates are high it is very likely that there are people, who are not just waiting for a better job opportunity. However we have to strongly consider as market illiquidity when graduates work in jobs that does not require their obtained skills. The Office for National Statistics (2013) of UK reported that in 2013 47% of the recent graduates were employed in non-graduate job. Even 34% of those who are on the labor market for 5 years work in non-graduate jobs as well. This signals two things. It is takes time to sell the obtained skills, and there is a possibility that it cannot be sold. It is also a possibility that however the degree was not necessary for the job the employer choose the employee based on the assumption, that she will do a better job than a non-graduate, but this line of thinking leads us out from the human capital assumption we stated in the beginning of the paper

Credit risk of education investment are sensed by the student loan company. If the education investors experience illiquidity (unemployment or very low earnings) they can fail to repay their student loan. In the United States student loan default rates can reach 10-15% (Turner, 2012). Credit risk is crucial in financing because human capital cannot be a collateral, this could deter banks to give credit for education investment. Credit based financing is available for post-secondary education in most OECD countries (Chapman, 2006). In the United States the student loan household indebtedness reached 9% of total household debt (nyfed.org, 2013). However Lochner and Monge-Naranjo (2012) argues that this source of financial aid comes too late and there is credit constraints in lower level of education that hold back children from less fortunate families from education. Managing credit risk in their case could be a very important question for future economy.

Operational risk and systematic risk: Operational risk can be the health of the given individual, and systematic risk can be a labor market crisis.

In the rest of the paper we will focus on the market risk of education and liquidity risk as the possibility of large losses on education investment.

3. Comparison of financial investment and education investment data

Two main characteristic makes risk measurement more difficult in case of education investment. The first characteristic is that human capital, so as the elements of it cannot be directly measured. If we assume that every individual holds a portfolio of skills and expertise just as an investor holds a portfolio of securities, then the problem is that the value of the portfolio is very hard to calculate in any given point in time. We cannot tell an individual's productivity until he starts to work in a given job. Even than it is difficult to tell as we now from the principal-agent dilemma. Rate of return to education calculations rely on the notion that an individual would earn the average earnings of a level lower education level if she would not attain given credentials. It can serve well if we calculate rate of return for the whole higher education, but if we think on personal level it became more and more problematic. Is it plausible that a given individual has to

give up the average secondary school degree holder's wage? We have no better approach yet for foregone earnings.

If we put the puzzle in financial terms, it is like measuring a portfolio's risk when we does not know how much it had cost, but we can only proximate it, we have partial information on the cash flow it will generate for the individual, and we does not know the elements of the portfolio. If consider more features of the individual, like social background, we can have more information.

The second is that the investment takes way longer period and the market works in a completely different way. In labor market there are very few cases when professions has announced prices. In private sector wages differ company by company. There is no such quotation that for how much an informatics degree holder with 3 years' experience can be hired. This prices are outcome of individual deals and can be vastly different even in the same moment in time. After a job contract is settled the wage will not change for a longer period of time, unless it changes rapidly with to zero. When somebody gets unemployed he loses his regular earnings, and in case of graduates the difference between previous earnings and the unemployment welfare can be huge. However such institutions as severance pay can make a transition from job to job easier.

Income data and earnings are surrounded with large economic interest, so data are collected by statistical offices and labor ministries, student loan organizations or other institutions. Those are mainly yearly data. The capital market works completely differently, the products has only one price, one can buy and sell product immediately, the costs are immediate and easy to calculate and the data are public and available on large quantity. The differences are summarized in Table 1.

Table 1: Comparison of labor market and financial market

	Labor Market	Financial Market
Price	Only portfolio prices can be known, and prices change slowly, or rapidly drop.	One product one prices
Costs	Lot of indirect costs (for instance accommodation), foregone earnings, difficult to measure, few available data	Simple and easy to measure
Changes	Contracted wages change slowly, rapid changes can occur	Prices change constantly, rapid changes can occur
Data availability	Less reliably, yearly	Maximum reliability, high frequency

Based on table 1 and chapter 1 we can model the labor market as a slowed down version of the financial market. Setting up a portfolio takes long period of time, obtaining the full value takes even longer, but prices changes slower as well.

Accepting this approach would allow us to calculate for example a 5-year Value at Risk or 5-year Expected Shortfall for education investment even though these measures are calculated for very short period in time in financial practice.

If a graduate does not find job after graduation, or find a job that does not require a degree and ends up a below average wage, than counting tuitions and foregone earnings we can assume he suffered losses. A Value at Risk would measure this. For longer time period the possibility of larger losses is less likely because the life-time earnings are naturally an increasing function of time. The first years are important for student loan repayment and other life investments. If someone suffers that kind of losses on their education investment that hurts her long term human conditions, for example she has to

default on student loan and postpone investments, then it something like a portfolio faces huge negative positions that dues to pay.

Policymaker's, student loan organizations and academic researchers should have a clear picture on such a risk.

First we have to define the value of an education portfolio of a given time. Human capital cannot be sold, so it will be a hypothetical value. The idea is the following what would an average earner with one level less degree would pay or should be paid for to take over a graduated persons investment position in a given point in time *t* if no future income would be expected? It contains foregone earnings, direct net cashflows under the study period and earnings after graduation all with time value calculated as well. The is shown in a more formal way in (1)

$$E_i = (-\boldsymbol{w_{i-1}} - \boldsymbol{c_i} + \boldsymbol{w_i})\boldsymbol{\delta}^\mathsf{T} \tag{1}$$

Where:

- E_i is the value of an education portfolio in a given t point in time, and time starts when the graduate started i level of education
- $\boldsymbol{w_i}$ is the row vector of the yearly income with graduate level i up to t point in time
- $\boldsymbol{c_i}$ is the row vector paid yearly costs of earning a degree up to a point in time t
- $\boldsymbol{\delta}$ is a row vector of future value factors for each year up to t

In order for future calculation we define in (2) based on Artzner et al. (1999) a measure for education investment risk: Education Investment Value at Risk (EIVaR) for a given α.

$$EIVaR = -inf\{E_i | P[E_i \le E] > \alpha\} \tag{2}$$

Basically (2) tells us (loosely) we should consider the set of losses that will be experienced with less than a given probability, VaR is in fact a lower quantile of a distribution multiplied by minus one.

As we will see VaR can be criticized based on it does not valuates portfolio diversification as a risk management tool. We introduce another risk measure based on an existing financial risk measure. The α expected shortfall on education investment should be (3)

$$ESEI = -\alpha^{-1}\big(\mathbb{E}\big[E_i \mathbf{1}_{\{E \le q_\alpha(E)\}}\big] + q_\alpha(E)[\alpha - \mathbb{P}(E \le q_\alpha(E))]\big) \tag{3}$$

Where:

$q_\alpha(E)$ is the lower α quantile of E education investment distribution.

Expected shortfall is a coherent measure of risk and for this reason, it has a growing popularity (Acerbi and Tausche 2002).

4. Analysis of Coherence in Case of Education Investment Risk

Acerbi and Tausche (2001) go as far as that a risk measure should not be called a risk measure if it is not coherent. The authors might get a little bit rhetorical when they said that, because they wanted to pressure that the celebrated, and even used by Basel Committee, Value at Risk (VaR) measure is not coherent as we will see it here as well.

A risk measure is coherent when it is monotonous; sub-additive; positively homogeneous and translation invariant.

If we take a G set of random variables. Then ρ risk measure is a mapping from G into ℝ and it is coherent if it has:

- Monotonicity: *if X,Y ∈ G and X ≤ Y ⇒ ρ(X) ≥ ρ(Y)*
- Subadditivity: *if X,Y,X+Y ∈ G ⇒ ρ(X)+ρ(Y) ≥ ρ(X+Y)*

- Positive homogeneity: *if λ > 0 constant, X, λX ∈ G ⇒ λρ(X) = ρ(λX)*
- Translation invariant: *α ∈ R and X; X+α ∈ G ⇒ ρ(X)+α=ρ(X+α)*
- Relevance: *if X ∈ G; X ≤ 0 and X≠0 ⇒ ρ(X) > 0* (Artzner et al 1999)

Coherence should be an important feature of an education investment function as well, however we should see that the most well known risk measure VaR is not significant because it is not subadditive.

We have think about what are these criterions mean for higher education investment. We will assume that G is the possible risky obtainable human capital portfolios. For easier discussion we will refer X and Y as two different person with two different human capital portfolios. Monotonicity means that if one type of human capital owner faces at least as good earnings possibilities as the other for every possible outcome in the future then the risk of the former should be less. Positive homogeneity means if something multiplies the earnings outcomes in every possible case, for instance inflation, or taxation, than it effects the risk measure with a same rate. For example if wages grow 1% every year no matter what, then we can expect that the risk measure will change with 1% as well. Translation invariance means that if an individual receives a constant money transfer, this will decrease with equal value the value of the risk measure as well. Relevance is simple means that if losses occur the risk measure must have appositive value.

Subadditivity is the most interesting axiom for education investment. We stated that the elements value is impossible to measure. However we can have an intuitive approach to human capital diversification. If two person combine their income, for example by getting married and dividing their costs and earnings equally, then the risk measure should measure less risk for their combined household income than the sum for their individual incomes. Economics of marriage has a significant literature see for example Grosstbard-Schechtman (2003). Education investment risk diversification is not likely to be the strongest economic motivation but it can appear on a long list of other motivations. We will use this idea in the next chapter for a numerical example.

5. Example

In closing this discussion an example will be shown. Let's assume there is an individual "A" who attended a 4-year collage, and had an annual net cost of $20.000 paid upfront every year, and after graduation, and from the moment he graduates he has to pay back his student loan in fix amount of $5.000 in every year. "A" starts to work immediately after graduation and earns the first paycheck after the end of the first year. Assume there's two possibilities. I possibility G, "A" finds a graduate job that pays $120.000 annually with a growth rate of 10%. If "A" would have not attended college, he would have started tow work in a non-graduate job were "A" would have earned $50.000 annually with 5% growth rate. "A" has 3% probability for not finding a graduate job and would have to take a non-graduate job with the current starting salary. 3% interest rate can be earned on risk-free deposits. Figure 1 shows the assumptions.

If we want to calculate the EIVaR for 5 years and 5% for "A" it would be $24.908, because by using (1) "A" would has that value in 95% of time. However if that worst 3% of cases happens "A" has an education portfolio of -$723,731 because the for year of collage cost are lost, the earnings and their potential interest is lost as well, and he has to pay back the student loan. The ESEI is -$424,275. Table (2) summarizes the calculations.

Let's assume "A" married "B", when they started college together and they split costs and earnings as well equally. This is a diversification for "A" because now for half of her own human capital she receives the costs and benefits of "B"'s human capital. It is the same for "B" if they share household income equally. Moreover assume that "A"'s and "B"'s employment status is independent.
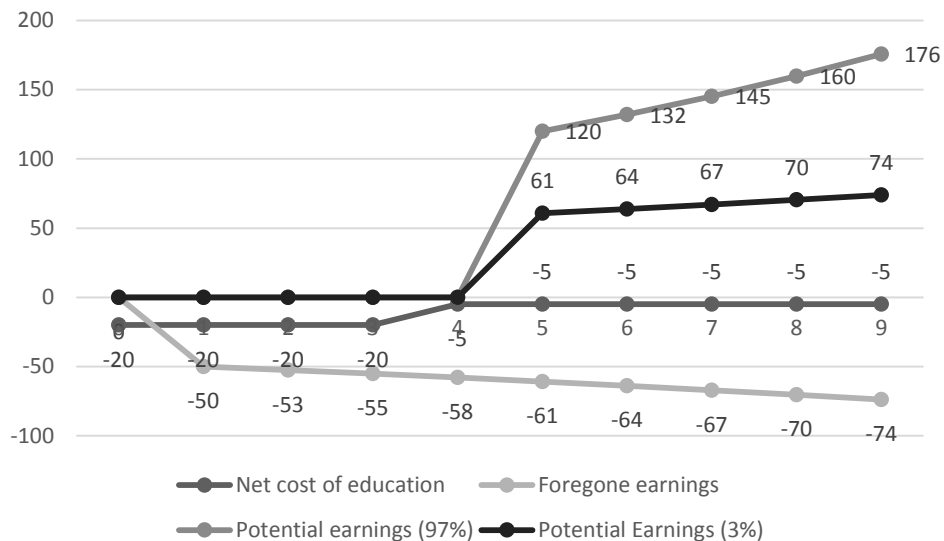
Figure 1: The data given in the example about "A"'s education investment

Let's look at the per person income in the household. We can see this way they decreased the chance of the worst case scenario, because it is very unlikely they both end up in a non-graduate job. However it is not very visible in the variance of portfolio value statistic which decreased only slightly, whereas the ESEI show this effect clearly by dropping from $424.275 to $193.800, less than half of its original value. EIVaR on the other hand did not decreased at all, infect it increased. The probability that one of them will lose on an education investment is more than 5%. This means according to EIVaR it does not worth to diversify the portfolio. Is that make EIVaR a bad risk measure? No, infect it points out something important. Diversification can decrease the probability of high end positive outcomes as well. Maybe this is one of the reasons we do not see extremely many couples getting married in their early collage years.

Table 2: Calculation for the example

In case of diversification		In case of no diversification	
Probability	E_i (in $1000)	Probability	E_i (in $1000)
0,0009	-723,731	0,03	-723,731
0,0582	-184,086	0,97	24,90828
0,9418	24,908		
Expected Value	12,093	Expected Value	2,449
Standard deviation	12,332	Standard deviation	12,600
EIVaR(0,05)	184,086	EIVaR(0,05)	-24,161
ESEI(0,5)	193,800	ESEI(0,5)	424,2751

6. Conclusions and Recommendations

This paper gave examples for different risk measures for individual investment then variance in return. The most important conclusion is that these measures put more emphasis on low probability high loss situations that variance for example

does not emphasis. This would interesting for those cases when higher education in more risky and can lead to default on student loan. This can be the case for those who come from challenging social background (Hillman, 2014). Education should help those people the most. The future task is to calculate these measures for different datasets to have more information on human behavior toward education and risk.

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THE IMPACT OF THE FINANCIAL CRISIS ON LONG MEMORY: EVIDENCE FROM EUROPEAN BANKING INDICES

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Abstact: *We have analyzed the impact of the financial crisis on the existence of the long term dependency for European banking indices. By estimating Hurst Exponent, ARFIMA and FIGARCH models we found that major financial crisis such as, Mexican, Asian and Russian, Argentine crisis and Global crisis from 2008-2009 had different effects on long memory. In the case of STOXX 600 Bank Index, when estimating an ARFIMA models by using Willinger, Taqqu and Teverovsky method, the H-estimate was higher than 0.5, highlighting the presence of long memory during Mexican and Global financial crisis from 2008-2009. In the case of MSCI Europe Bank Index we found evidence of long memory during Asian and Russian crisis and Argentine crisis. For both indices, during the Global crisis, the results of FIGARCH models reflected the presence of long term dependency in volatility with covariance non-stationary, but mean reverting, showing the likelihood of persistence of a shock for a long period. Moreover, during Argentine crisis, the results reflected evidence of stationarity intermediate memory process.*

Key words: long memory, banking indices, financial crisis

JEL classification: C13, C32, G01

1.Introduction

The long memory property is an area that has been capturing the attention of economists and econometricians since 1980. During time, a series of authors tried to develop a clear definition associated with this phenomenon (See Hurts, 1951, Mandelbrot, 1968). Baillie (1996) defines the long memory presence "*in terms of the persistence of observed correlation*".

The interconnection between the long term volatility and the dynamics of the stock markets has been a subject of considerable debate across the international economic forums and not only. The empirical literature related to this field implies a series of methodologies in order to investigate this issue, providing mixed results.

It is a well known fact the impact of the financial crisis generates great transformations across worldwide economies. The recent financial crisis is a strong argument in favour of this statement, being considered by many authors one of the most important tests of sustainability from the entire history. All sectors of the economies registered impressive shocks and the responsible authorities around the world faced the great challenge to develop strategies that would counteract the negative effects of the crisis. Taking into

consideration the interconnections of the global economies the exchange rate system was definitely reconfigured. Kohler (2010), Razin and Rosefielde (2010) investigated the interconnection between different financial crisis and the exchange rates. Kohler (2010) argues that during financial crisis capital flows into what in generally known as safe heaven currencies such the US dollar and Swiss franc.

Financial and monetary stability are considered to be the engines of the current global architecture. Financial development is a necessary condition for achieving high rates of economic growth, which is a main objective for every economy. The European Union, as a key actor in global flows, intensified its efforts in elaborating strategies that target the efficient management of the monetary and financial system. Despite all efforts, the financial crisis whether we refer to the recent one or the Asian, Mexican, Russian crisis happened frequently during history and no efforts will guarantee they will not appear in the future.

The main purpose of this paper is to assess the long memory property of European banking indices taking into consideration the impact of different financial crisis: Mexican crisis, Asian and Russian crisis, Argentine crisis, Global financial crisis from 2008-2009. In order to achieve this objective a series of methodologies were used: Hurst Exponent, ARFIMA models, FIGARCH models, Willinger, Taqqu and Teverovski method. This paper is structured as follows: Section 2 presents the literature review, Section 3 discusses the characteristics of the returns series, Section 3 analyzes the presence of long memory for the banking indices during major financial crisis and Section 4 concludes.

2.Literature review

A number of studies concentrated their research upon the long term property and the interconnection between the financial crises and this phenomenon. Han (2014) examines the impact of two well known financial crisis, namely the Asian crisis from 97-98 and the recent economic crisis from 2008-2009 upon the long term volatility of daily foreign exchange rates. In order to develop a comprehensive analysis of the correlation between the long memory dependency and the financial crisis, the author uses two complex methodologies such as FIGARCH and the Local White model. The results of the empirical findings argue the fact that during crisis periods the long term volatility dependency of the analyzed exchange rates (KRW-USD and JPY-USED) is higher than the one associated with the periods when no shock affects the markets. One main advantage of this paper, that also constitute the starting point of our own analysis is the fact that it provides strong basis for understanding the manner in which the financial crisis influence the dynamics of foreign exchange rates and furthermore it identifies the triggering factors of the long memory property.

Sensoy and Tabak (2013) analyzed the long memory of the European Union stock markets taking into consideration the adoption of the common currency, namely the Euro. The authors use a complex methodology implying a generalized Hurst exponent with a rolling window approach. The main conclusion of the study reveals the fact that all the member states of the European Union have different patterns in what concerns the time varying long memory, due to a series of internal characteristics of these economies. Furthermore, the empirical results argue the fact that there is a strong positive correlation between market efficiency and market maturity, therefore the most developed members of the EU have the most efficient markets such as Denmark, Italy, Finland while at the opposite pole we have some emerging economies from Central and Eastern Europe namely Lithuania, Estonia or Bulgaria. Moreover the recent financial crisis that determined

a reconfiguration of the European architecture, generate a negative impact across the Eurozone the most affected economies being France, Greece and Spain.

Caporale and Gi-Alana (2013) studied the existence of long memory for the Ukrainian stock market by using Whittle estimator. They concluded that the returns are characterised by a small degree of long memory. Also, the authors found evidence of long memory in volatility. The results obtained highlighted that the presence of long memory is influenced by the day of the week effect. Mondays and Fridays are characterised by higher dependency.

Dajcman et al. (2010) also analyzed the long term property across stock indices and return series of stocks across three Central and Eastern economies namely (Slovenia, Czech Republic and Hungary). In order to obtain accurate results the authors used a wide range of methodologies including the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test, the Geweke and Porter-Hudak (GPH) test or the method of local Whittle approximation. The main findings of the articles reveal the fact that the majority of the stock returns of the Slovenian market have the long term property while the stock returns from the Hungarian or Czech Republic stock markets may be characterized as being stationary.

Kasman et al. (2009) investigated the long memory across eight Central and Eastern european stock markets, by using a wide range of methodologies such as: ARFIMA, GPH, FIGARCH and HYGARCH. The obtained results indicate the presence of long memory across five analyzed stock markets.

Pamula and Grech (2008) analyzed the behavior of WIG Stock Index in the vicinity of crashes' appearance on the financial market. The results indicate that the evolution of the Hurst exponent is influenced by the signal to buy or by the signal to sell. Moreover the results obtained provide evidence of a relation between the rate of the Hurst exponent drop and the local correction the WIG Index gains after the crash. The authors consider that a nervous situation on the market should be characterized by the presence of anticorrelations in price returns of different assests and a decreasing trend of Hurst exponent before the appearance of the crash. The Fed intervention in 2007 drastically changes the Hurst exponent evolution, from its decreasing trend to a horizontal trend with the average value 0.5.

Cajueiro and Tabak (2006) using GARCH models assed the impact of high speculation and rational bubbles upon 39 banking indices from both developed and emerging economies, between 31 December 1994 and 6 October 2003. The main results of the paper suggest the fact that the rational bubbles strongly influence the banking equity indices. Furthermore the identifies nonlinearities should be considered by the investors when making a decision regarding their future investments.

3. Methodology
In order to analyze the impact of the major financial crisis on the evolution of long memory dependency we have used the following statistical methods: Hurst Exponent (1951), Willinger, Taqqu and Teverovski (1999), ARFIMA (1980, 1981) and FIGARCH (1996) models. The Hurst exponent (1951) was estimated by applying R/S statistics. The R/S statistic is the range of partial sums of deviations of time series of its mean rescaled by its standard deviation. The Hurst exponent is calculated using the following equation:

$$(R/S)_\tau = \frac{1}{s_\tau}\left[\max \sum_{t=1}^{\tau}(R_t - \overline{R}_\tau) - \min \sum_{t=1}^{\tau}(R_t - \overline{R}_\tau)\right]$$

where, s_τ represents the usual standard deviation estimator, $R_1, R_2 ..., R_\tau$ are continuously compounded returns, $\overline{R}_\tau$ is the sample mean.

In order to identify the presence of long memory, Willinger, Taqqu and Teverovski (1999) developed a new R/S analysis based on equally weighted returns. In this study, we have used EW series over blocks of size 20. In order to remove the "extra" short-range dependence and isolating hibriden „pure" long-range dependence effects, the authors proposed partitioning of time series into non-overlapping blocks of size m, e.g. $m = 10, 20, 30$, and „shuffle" the observations within each block, so that is a random permutation of the time indices. The effect of such a shuffiling experiment is to destroy any particular structure of the autocorrelation function below lag m, but to leave the high lags essentially unchanged. In this paper we used blocks of size 40.

In order to identify the presence of long memory in the returns series we have applied the ARFIMA model. According to Granger and Joyeaux (1980) and Hosking (1981) the ARFIMA model is given by:

$$(1-L)^d \phi(L)x_t = \theta(L)\varepsilon_t$$

where, $\varepsilon_t \sim iid(0, \sigma_\varepsilon^2)$, $\theta(L), \phi(L)$ represent the autoregressive and moving average polynomials of order p and q, L is lag operator.

The FIGARCH (1996) model is used to identify the presence of long memory in volatility.

According to Baillie et al. (1996) the FIGARCH(p,d,q) model is defined by:

$$\phi(L)(1-L)^d \varepsilon_t^2 = \omega + [1 - \beta(L)]\upsilon_t,$$ where $0 < d < 1$ denotes the long memory

parameter.

4. Data

The sample data contains daily returns of banking indices and covers the period from January 1995 to December 2013. The daily logarithmic returns are given by $R_t = \ln(\frac{I_t}{I_{t-1}})$,

where I_t, I_{t-1} represent the index prices at time t and $t-1$. In our analysis we have used two European Banking Indices: STOXX 600 Banks Index, which is a capitalization-weighted index and includes European companies that are involved in the banking sector and the MSCI Europe/Banks Index, which is a free-float weighted equity index.

The summary statistics is reported in Table 1 and indicates that banking indices are characterized by high volatility. Further, the distribution of returns series are skewed to the left with heavy tails. The results of Jarque Bera test highlighted that the normality hypothesis is strongly rejected for both indices.

Table 1: Descriptive statistics

	Mean	Min	Max	St.dev	Skew.	Kurtosis	JB
STOXX 600 Banks Index	0.0001	-0.109	0.161	0.017	0.128	8.217	2914.116 (0.000)
MSCI Europe Banks Index	0.0001	-0.113	0.159	0.017	0.127	8.317	2632.467 (0.000)

Source: Authors' calculation, st.dev – represents the standard deviations and skew. represents the skewness.

5.Empirical results

According to Pamula and Grach (2010) a financial crash change the behavior of the Hurst exponent. It is expected that Hurst exponent to have a downward traed before a financial crisis. Following, the question is what happens with long memory during financial crisis? During the financial crisis the investors may have different behavior, which has impact on how the financial information is incorporated in the price. Moreover, the financial crisis are characterized by the occurance of negative shocks which may lead to an increase in the level of volatility. The objective of this paper is to quantify the impact of the Mexican crisis, Asian and Russian crisis, Argentine crisis and Global financial crisis from 2008-2009 on the level of long memory dependency for the STOXX 600 Banks Index and MSCI Europe Banks Index. According to Chiang and Zheng (2010), the period of the Mexican crisis was during 12/22/1994-12/31/1995. Due to data availability, we have analyzed the period 1/2/1995-12/31/1995. Moreover, the Argentine crisis covered the period from 1/1/1999 to 12/31/1999 and the Global financial crisis was manifested during 3/1/2008 to 3/31/2009. Similar with the study realized by Syllignakis and Kouretas (2011), the Asian and Russian crisis were analyzed during the period 11/21/1997 to 10/30/1998. in order to estimate the impact of the financial crisis on the long memory dependency, we have applied Hurst Exponent, Willinger, Taqqu and Teverovski method, ARFIMA and FIGARCH models. Table 2 describes the values recorded by Hurst Exponent both for all period and for different crisis periods.

Table 2: Hurst Exponent

	Period	Hurst Exponent-R/S Statistics	Hurst Exponent-R/S with E/W returns	Hurst Exponent-R/S with shuffled returns
STOXX 600 Banks Index	All period	0.562	0.553	0.575
	Mexican crisis	0.586	0.698	0.672
	Asian and Russian crisis	0.645	0.747	0.714
	Argentine crisis	0.641	0.685	0.583
	Global crisis	0.615	0.618	0.697
MSCI Europe Banks Index	All period	0.557	0.558	0.600
	Mexican crisis	0.589	0.615	0.675
	Asian and Russian crisis	0.663	0.639	0.683
	Argentine crisis	0.677	0.659	0.683
	Global crisis	0.613	0.631	0.585

Source: Authors' calculation; EW-equally weighted,***,**,* Significat at 1%, 5%, 10% level, respectively.

Both for all period and for all crisis periods that we have analyzed, the value recorded by the Hurst exponent is higher than 0.5, providing evidence of long memory for banking indices. The impact of financial crisis has lead to a change in the Hurst Exponent evolution. During the financial crisis, there has been an increase in the value of the Hurst exponent. In the case of Stocks 600 Banks Index the greatest increase of Hurst exponent occurs during Asian and Russian crisis and in the case of MSCI Europe Bank Index, during Argentine crisis. According to Pamula and Grech (2008) big investors cash their profits when they estimates that the critical point in the uptrend is coming and triggers the same behavior for the small investors, which will cause a change in the market trend that can create the premises for the appearance of a market crash. Moreover, the authors considers that before a crash, the market is characterized by the existence of anticorrelations in price returns of different assets and downward trend of Hurst Exponent and the appearance of a crash will change the evolution of the Hurst exponent, having impact on the level of predictability.

Further, we test the existence of long memory in returns series by using ARFIMA model. Table 3 provides evidence of the estimation of the ARFIMA

Table 3: ARFIMA (1,d,1) model estimates using Willinger, Taqqu and Teverovsky method

	All period	Mexican crisis	Assian and Russian crisis	Argentine crisis	Global financial crisis
STOXX 600 Banks Index					
H	0.447***	0.798***	0.504***	0.241*	0.661***
ϕ	-0.723***	0.3010**	0.218	0.219*	0.316**
θ	0.782***	-0.644***	-0.432*	-0.128	-0.741***
IV	0.00008***	0.00001***	0.00012***	0.00005***	0.00037***
H (for EW=20)	0.568	0.538	0.630***	0.229	0.787***
IV (for EW=20)	0.001	0.00001***	0.00002***	0.00003***	0.00026***
MSCI Europe Bank Index					
H	0.458***	0.419***	0.650***	0.5132***	0.312***
ϕ	0.021	-0.286	0.276**	0.015	-0.332
θ	-0.003	0.403*	-0.602***	-0.211	0.538
IV	0.00009***	0.00002***	0.0001***	0.00005***	0.0003***
H (for EW=20)	0.423	0.487***	0.740***	0.236	0.761***
IV (for EW=20)	0.001	0.00001***	0.00005***	0.00003***	0.0001

Source: Authors' calculation; IV – innovation variance; EW – returns equally weighted; ***,**,* Significat at 1%, 5%, 10% level, respectively.

According to Fouquau and Spieser (2011), there is a relation between the Hurst exponent and the ARFIMA model developed by Hosking (1981) and Geweke Porter Hudak (1983) The relation between the fractional integration parameter d and the Hurst exponent is given by: $H = d + \frac{1}{2}$.

For all the period, both banking indices recorded Hurst exponents, lower than 0.5, the return series present an anti-persistent behavior, indicating that the performances from the past will change in the future.

Further, we will analyse the impact of financial crisis on STOXX 600 Banks Index. In the case of Mexican and subprime crisis, the Hurst exponent is higher than 0.5, indicating the presence of long memory, autocorrelations are positive and hyperbolically decrease towards zero, indicating a predictable behavior. The impact of those financial crisis led to the growth of Hurst exponent. The presence of long memory is sustained by the correlations of large lags. On the other hand, during the Argentine crisis, the Hurst exponent had recorded a very low value, indicating an anti-persistent behavior, high volatility and a mean reverting process. The series is mean reverting, indicating that the effects of shocks disapear in a long run. A particular situation can be observed in the case of Assian and Russian crisis, when the value recorded by Hurst exponent is very close to 0.5, corresponding to a Brownian motion, which means that index follow a random walk process and any predictions of the future evolution are impossible to be realized.

In the case of MSCI Europe Bank Index, when estimating an ARFIMA (1,d,1) by using Willinger, Taqqu and Teverovski method, the resulting H-estimate is greater than 0.5 in the case of Asian and Russian crisis and Argentine crisis, highlighting the presence of long memory. During Mexican and Global financial crisis, the Hurst Exponent is lower than 0.5, indicating an antipersistent behavior.

Table 4: FIGARCH model estimates

	All period	Mexican crisis	Assian and Russian crisis	Argentine crisis	Global financial crisis 2008-2009
STOXX 600 Banks Index					
μ	0.0006***	0.0009***	0.00258***	0.0006	-0.0026
d	0.567***	0.190	1.000***	0.211*	0.750***
ϖ	0.000002	0.0000***	0.0000***	0.0000	0.00002
β	0.527***	0.1072***	0.816***	0.151*	0.737***
$Q(20)$	47.806***	21.298	25.837	35.524**	25.352
$Q^2(20)$	20.440	19.908	16.897	8.488	14.049
MSCI Europe Bank Index					
μ	0.00059***	0.00065***	0.00207***	0.00084	-0.003*
d	0.5407***	0.204	1.000***	0.188*	0.776***
ϖ	0.0000	0.0000	0.0000	0.0000	0.0000
β	0.504***	0.0692***	0.875***	0.128*	0.757***
$Q(20)$	42.436***	22.502	31.785**	30.455*	25.446
$Q^2(20)$	22.407	13.678	8.576	9.435	13.177

Source: Authors' calculation; ***,**,* Significat at 1%, 5%, 10% level, respectively.

For all the sample, the long memory coefficient d is higher than 0.5, the series are not covariance stationary, but still mean reverting witch means that the effects of a shocks persist for a long run. The series exhibits long memory in volatility.

Regarding the impact of crisis on the evolution of long memory, both indices have a similar behavior. During the Mexican crisis, the long memory coefficient is not statistically significant. During the Asian and Russian crisis, the value recorded by the long memory coefficient is equal to one, which reflects that the model is transformed into an IGARCH, indicating that the effects of shocks are persistent. In the case of Argentine crisis, the value recorded by long memory coefficient is lower than 0.5, the series is covariance stationary. During the Global crisis from 2008-2009, the coefficient of long memory is higher than 0.5, which implies the existence of covariance nonstationary, but mean reverting, indicates that the effects of shocks will be observed for long periods. The indices exhibit long memory in volatility.

5.Conclusions

In this paper we have analyzed the impact of financial crisis on the evolution of long memory dependency for the European banking indices. In order to investigate the presence of long memory, we have applied different statistical methods: Hurst Exponent, Willinger, Taqqu and Teverovski method and ARFIMA and FIGARCH models. According to the estimates of Hurst exponent, we conclude that the financial crisis change the evolution of Hurst exponent. The estimation results indicate that the values recorded by Hurst exponent are higher during the financial crashes. When estimating an ARFIMA (1,d,1) by using Willinger, Taqqu and Teverovski method, the resulting H-estimate are different for the two indices that we have analyzed. In the case of STOXX 600 Banks Index, we found evidence of long memory during Mexican crisis and Global financial crisis from 2008-2009. In the case of MSCI Europe Bank Index, the results provides evidence of long memory during Asian and Russian crisis and Argentine crisis. Finally, we conclude that during the Global crisis for 2008-2009, both indices exhibit long memory in volatility. In order to properly manage their trading portofolios, the investors should consider the existence of long memory in returns and in volatility of banking indices and the impact of financial crisis on the evolution of long memory.

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APPLICATION OF LOANS AND THEIR IMPACT ON ECONOMIC DEVELOPMENT ASPECTS IN KOSOVO

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Abstract: *Studies on the functioning of loan management models in banking institutions are of special significance for the ascertainment of efficient credit disbursement modalities and policies, with the aim of ensuring strategic and financial development.*
In their monetary programs, banks among other make assumptions on the increase of the demand for cash from loans for their respective economies and businesses. Supporting the economy through loans represents one of the main tasks of any banking system, and this is especially applicable in countries with specifics similar to our country. During the last half of the previous decade, the structure of deposits in the banking system underwent severe changes, which were generally in function of the country's development, but also assisted in the development of the banking system itself. The overall tendency of the deposits in the banking system was positive, and charts and series matrixes show their ever growing tendencies. However, the vulnerability and problems of the first decade after the establishment of any banking system are reflected in crises and problems noted in the structure and level of deposits of such banking systems, which in the case of Kosovo was further reflected in external and internal factors affecting loans and their overall default.

Keywords: Loans, Credit risk management, banking systems of Kosovo.

1.Strategies and policies

Banks are supposed to develop strategies and policies for the purpose of managing credit risks. Credit risk management strategies and policies should be effectively communicated throughout the banking system. All relevant bank staff should clearly understand the bank's approach to credit provision and management and should contribute to the implementation of such relevant credit policies and procedures. The basic purpose of the credit risk strategy is to determine the bank's risk appetite. After the determination of the credit risk level, banks may develop an optimized repayment plan, thus maintaining the credit risk within the preset limits.

Credit risk strategies should comprise, at minimum:

- Statements on the bank's willingness to lend to different segments of borrowers and products, types of exposure (trade, production, consumption, real estate, etc.
- Targeted economic sectors, geographic regions, currency, maturity terms and profitability;
- Identification of targeted markets and overall characteristics banks wish to accomplish in their credit portfolios;
- Acquaintance with credit quality, profit and growth objectives;
- Ensure a constant approach that takes into consideration cyclical economic aspects and fluctuations which are reflected in credit composition, quality and portfolio.

2.Credit risk management organizational structure

Banks need to establish appropriate organizational structures for credit risk management, while clearly determining management responsibilities and competencies for such structures. Banks need to ensure that functions of credit sales, from the organizational and operational perspective, are clearly separated from operational support and credit risk control functions, including protection from possible impacts of senior management levels. Banks need to ensure necessary structures for assessment, measurement and control of the concentration of credit risk by sector, by geographic location, currency, loan type, etc.

3.Structure of loans disbursed in 2011

Household loans continued to show an increasing trend in 2011, with an annual increase of 17.7%, compared to the 24.6% increase in 2010. On the other hand, there is an accelerated growth of business loans in the last two years (12.5% in 2011 and 7.9% in 2010, compared to 4.8% in 2009). Contrary to growth acceleration, the increase of the credit rate for businesses loans continues to be lower than the level of growth for household loans. This is also reflected in the overall loan structure, which shows a slight increase in the rate of household loans and a decrease in the part of business loans (figure 1). The share of household loans in the total portfolio of loans issued in the banking system reached 30.1% by the end of 2011. Therefore, business loans continue to dominate the overall loan structure, comprising 69.9% of such structure.
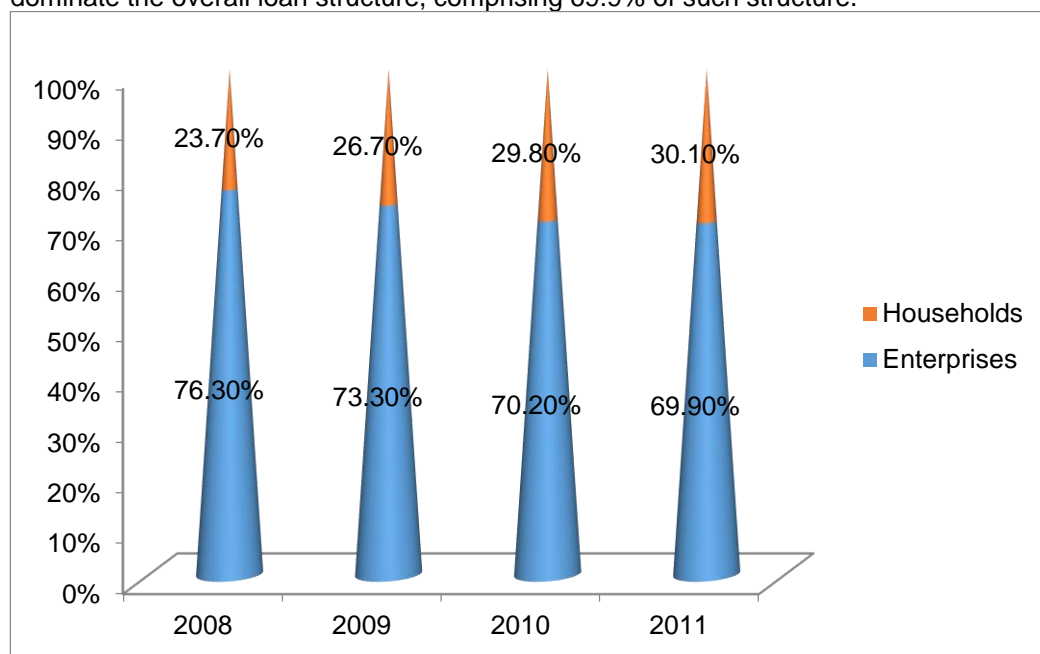
Figure.1 Loan structure in percentage

In 2011, the level of loans increased in all economic sectors, including the business sector (Figure 2). In 2011, the amount of loans for the commercial sector reached 606.2 million euro, thus noting an increase of 16.3% in comparison to the previous year (increase by 13.6% in 2010).

On the other hand, loans for the construction sector reached 116.3 million euro in 2011, thus diminishing by 6.6% (annual increase rate of 22.5% in 2010). Loans for the agricultural sector reached 40.5 million euro, rebounding from a 0.1% decrease in 2010 to a 6.1% increase in 2011. Loans disbursed for other services remain the only category of business loans that decreased (annual decrease by 12.1%). Loan structure by maturity date remains similar to the previous years, with the largest portion of loans with long-term maturity dates.
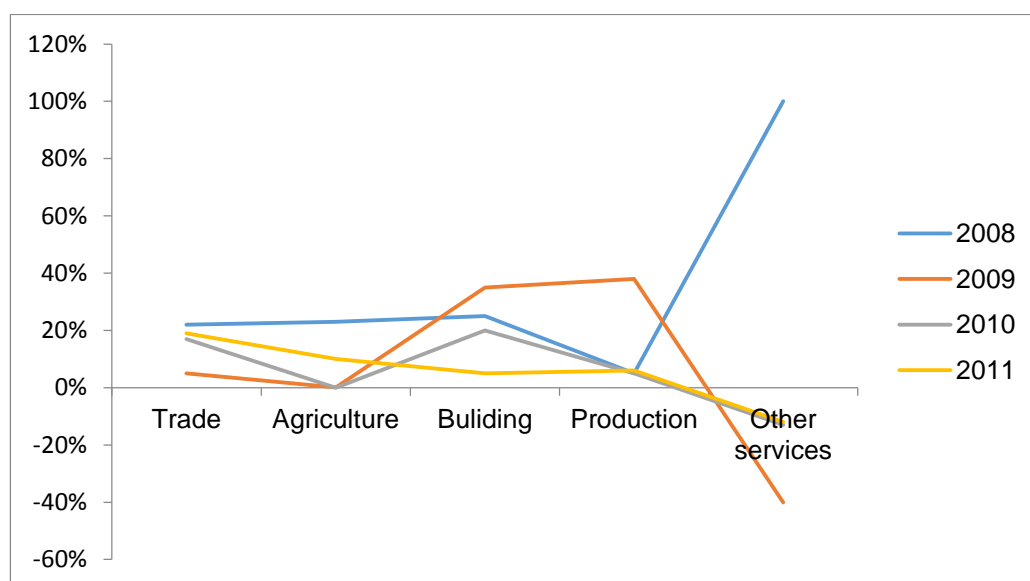
Figure 2. Annual growth rate by economic sector.

4.Loans disbursed between 2000 and 2011
Loans represent an important instrument for the development of any country, as they support new production capacities of the given economy, and enhance production, trade, services and other similar activities. In the last twelve years, loan-related activities in our country were assessed to have carried numerous risks, especially in the sense of default and suspicious loans, which forced banks to be very cautious in their lending practices.

Table 1: Loans disbursed in the industrial, services and agricultural sector

Description	Overall Total									
	Total	Agriculture			Energy and construction industry			Services		
		Agriculture	Up to 1 year	Over 1 year	Industry energy building	Up to 1 year	Over 1 year	Total Services	Up to 1 year	Over 1 year
12/2000	3.3	-	-	-	0.8	0.8	-	2.5	2.5	-
12/2001	25.9	-	-	-	3.8	3.8	-	22.2	22.2	-
12/2002	86.5	1.5	1.5	-	13.6	13.6	-	71.4	71.4	-
12/2003	232.8	4.7	3.9	0.8	22.2	12.6	9.7	205.8	119.7	86.1
12/2004	289.9	7.9	3.9	4.1	47.8	22.5	25.3	234.2	89.5	144.8
12/2005	387.9	12.5	4.1	8.4	74.2	24.5	49.7	3011	92.4	208.8
12/2006	490.5	16.4	3.4	13.0	97.7	28.0	69.7	376.4	120.6	255.8
12/2007	6915	29.0	4.1	24.9	144.5	32.8	111.7	518.0	149.5	368.5
12/2008	902.4	37.4	4.1	33.3	160.2	28.9	1312	704.8	126.4	578.4
12/2009	945.5	38.2	3.8	34.4	236.7	54.8	1819	670.5	113.2	557.3
12/2010	1,022.8	38.2	1.7	36.5	269.3	77.1	192.2	715.3	188.5	526.8
12/2011	1,149.5	40.5	0.8	39.7	284.7	82.3	202.4	824.3	220.5	603.8

The data presented in the table shows that during the abovementioned period, in average 95% of the loans were disbursed in these sectors. The structure of the loans shows that over 70% of the loans were disbursed in the services sector, 25% in the industrial sector, and 3% in the agricultural sector. Loans in the agricultural sector in 2000 and 2001 were at zero value, while beneficiaries from the energy industry, construction and services sectors were also scarce.

5.Interest rates
2011 was characterized with decreased interest rates in both deposits and loans. Subsequently, difference between interest rates in loans and deposits diminished from 10.9% in 2010 to 10.6% in 2011. The improvement of the overall business environment and increased bank efficiency are expected to yield in continuous decrease of interest rates. Average interest rates for deposits for the period January - December 2011 diminished to 3.5%, compared to the 3.7% interest rate for the period January - December 2010 (Fig 3).
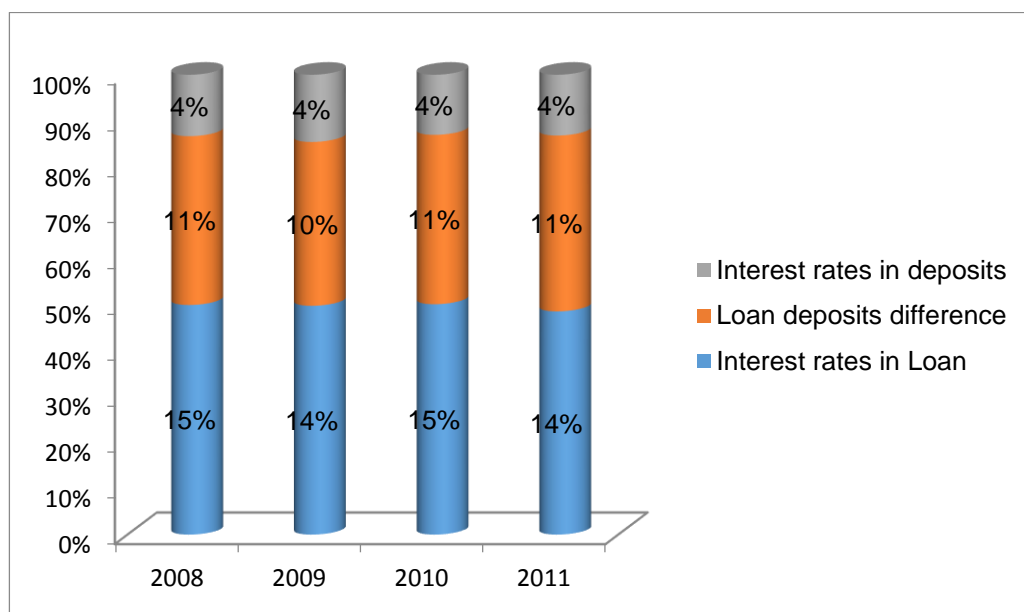
Figure 3 Average interest rates in percentage

Average interest rates in loans diminished from 14.6% in the period January - December 2010, to 14.1% in the period January - December 2011.

In 2011, average interest rates for household and business deposits were at a similar level. The highest interest rate average for businesses (5.25%) was noted in December 2011, for deposits over 250 thousand Euros with maturity terms of six months to one year. The highest average interest rate for household deposits was in December 5.36% (deposits with maturity terms exceeding two years).

6.Causes of increased loan rates

Numerous studies conducted during the last decade define Kosovo as a beautiful yet sleeping country. This determination is based on the fact that in the period between 2000 and 2004, the ratio between loans distributed in the country's economy and its gross domestic product was rather small - among the lowest in European transition economies. Meanwhile, credit provision changed after 2005 and showed a satisfactory increase patter until 2011.

An important factor for stimulating demand is productivity growth. Banking systems and other non-banking financial institutions represent the loan supply side, while the demand side encompasses individuals and businesses.

Increased loan demand is a result of stimulating policies followed by financial institutions in their credit-related activities, including decreased interest rates or lowering of crediting standards, such as, for instance, collateral requirements or practices for assessing the financial state of businesses. On the other hand, enhancement of the number of loans could be a result of increased demand among borrowers, i.e. on the demand side. Enhancement of the demand among borrowers could occur due to increased productivity, better projects or technological advancements, or based on a series of other factors related to their financial situation.

For a number of years, commercial banks have followed a conservatory business strategy. Funds collected from the public as deposits were mostly invested in governmental bond or similar instruments, with a high security and low return rate. Loans

disbursed in the economy to both businesses and individuals were limited, with high interest rates and subject to long and prudent procedures.

7.Results and conclusions

This paper analyzed the most recent developments in the banking system, with a special focus on credit risk policies and activities. Loan provision, as an activity that represents the foundation of any banking system development, has shown a significant increase in the recent years. It is envisaged that the macroeconomic stability and increased public trust in banking institutions, which operate under the watchful eye of responsible authorities, provided the necessary prerequisites for normal operation of the banking system. This fact supported the banks in developing their financial and human capacities, which, aided by increased competition, materialized in growing credit-related activity for the economy. Increased competition and loans, on the other hand, were accompanied with further deepening of banks' intermediary activities, which are characterized by products provided, expanded geographical scope, etc.

Developments in the banking system are expected to be transformed in economy's real sectors. By providing more products and services, banks support their clients in saving and investment processes, thus stimulating economic growth. Also, the banking system could improve the environment in which local and international firms operate and could stimulate the introduction of foreign capital in the country.

However, on the other hand, a large increase on the credit side also increases the risk level. Credit trends in general follow economic trends, and are high in expansion and low in recession, whereas performance indicators show a similar behavior but in the other direction.

Therefore, risks that banks are taking over during this phase, which is considered a phase of economic growth, will be fully evidenced at the moment when economic activities decelerate. In addition to this effect, uncontrolled credit growth can increase inflationist pressures, deteriorate trade balance and increase economy's exposure to impacts that may derive from developments in foreign markets, which are related to unfavorable fluctuations in savings, currency exchange and interest rate growth. The very banking institutions are also subject to individual crises, as a consequence of unfavorable choices and risk situations they face. In such circumstances, timely and mature interventions by monetary and supervisory authorities are necessary for maintaining control over negative consequences and for the mainstreaming of developments towards ensuring sustainable growth.

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THE HERDING BEHAVIOR ON SMALL CAPITAL MARKETS: EVIDENCE FROM ROMANIA

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Abstract: *The evolution of financial markets is influenced by the speculative bubbles and by the occurance of financial crisis. The speculative bubbles are formed on the markets when take place an unsustainable growth in the price of a financial asset, which leads to a high level of instability and to the rise of financial crashes. One of the cause of speculative bubbles is the herding behavior of investors characterized by trading in the same direction on the market, the same stocks, in the same period of time, or when they ignore the private information and trades similar with other investors, which may lead to incorrect trading decision. The aim of this paper is to test the existence of herding behavior on the Romanian stock market and the impact of the subprime financial crisis on the behavior of investors. We have analyzed the Romanian stock market on sector level by using firm level data. The statistical methodology used in this paper was proposed by Chang et al. (2000) and uses the cross sectional absolute deviation of returns (CSAD) as a measure of return dispersion. The results indicate the existence of herding behavior of investors in various sectors, both for upper and lower markets. We also conclude that during the subprime crisis, is no evidence of herding, due to the fact that the impact of the crisis was transmitted globally.*

1. Introduction

The evolution of stock markets is influenced by the occurance of financial bubbles and the manifestation of financial crisis. The bubbles are formed when there is an unsustainable growth in the asset prices, leading to financial instability and to emergence of the market crashes. The effect of a financial crisis persists over time and can take a long period of time for an economy to return to an upward trend, due to the impact of negative shocks caused by the bursting of speculative bubbles.

The history of financial crisis was marked by several speculative bubbles. There is evidence of financial crisis since Mesopotamia, when traders gave loans to farmers, but when the crops were below than expected, the farmers became too indebted, which caused more social protests. After a while, the traders canceled their debts and gave the farmers the opportunity of a new begining. Further, in Ancients Greece, by the Reform of Thessaloniki since 54 BC, were canceled the indebtedness and outlowed the enslavement for debt, in order to improve the situation of the indebted farmers (Brunnermeier and Oehmke, 2012). Moreover, the speculative bubble of the tulip bulbs formed due to the speculation that caused a strong growth of the tulip bulbs prices (Neal and Weidenmier, 2003). The eighteenth century was characterized by the occurance of two bubbles, Mississippi bubble and the Southern Sea bubble. Further, we enumerate the bubbles that led to the financial crisis, with a major impact on the evolution of stock prices: Latin America debt crisis of 1825, the international crisis of 1873, the Barings crisis in 1890, the stock market crisis of 1893, the panic of 1907, the Great Depresion of 1929, the

crisis loans in Mexico and other developing countries in the 1970s, the speculative bubble from the real estate and stock markets in Japan during the period 1985-1989, the speculative bubble from the real estate and the stock markets in Finland, Norway and Sweden during the period 1985-1989, the real estate and stock markets bubble of Thailnada, Malaysia, Indonesia and other countries from Asia during the period 1992-1997, the wave of foreign investment in Mexico in the period 1990-1993, the dot.com bubble in the United States during the period 1995-2000 and the stock market crash from 2007.

Kindleberger and Aliber (2005) defined the speculative bubble as an asset purchase, not because of the return on investment, but to the expectation that the asset can be sold later at a higher price. Further, it is essential to identify the causes which lead to the occurance of the speculative bubbles, the moment when a bubble is formed, to forecaste when will take place the sharp decrease in the stocks prices and the occurance of the stock market crash. But what are the causes that can lead to a speculative bubble? One of the causes of the speculative bubbles is the herd behavior of investors, which implies that investors trades in the same direction on the market (there is a high correlation between investors' behavior), the same stocks, in the same period of time, or when investors ignore the private information that they hold and trades similar with other investors, which could cause wrong trading decisions (Patterson and Sharma, 2007). This irrational behavior of investors lead to deviations of the asset prices from their fundamental value, resulting in a strong growth of the financial asset prices, often followed by the collapse of the prices and the occurrence of financial crashes (Claessens and Kose, 2013).

This paper comes to enrich the existing financial literature by analyzing the presence of the herding behavior of investors on the Romanian capital market at sector level, by taking into consideration several variables: market return, the absolute market return, the market evolution (upper trend, lower trend), the influence of the developed markets and other emerging markets on the Romanian capital market and the impact of the subprime crisis. The paper is structured as follows: Section 2 describes the literature, Section 3 presents the methodology, Section 4 examines the data, Section 5 analyzes the empirical results obtained and in Section 6 are mentioned the conclusions.

2.Literature review

The herding behavior has been the subject of several studies in the financial literature. Chiang and Zhend (2010) have studied the herding behavior for 18 capital markets: developed capital markets (Australia, France, Germany, Hong-Kong, Japan, UK, US), capital markets from Latin America and other markets from Asia, during the period 1988-2009. In order to identify the herding behavior, the authors have used CSSD model and CSAD model and they conclude the existence of herding bahavior in the markets analyzed, except US and Latin America. The investors from Latin America markets herd with US market, but do not herd with other investors from Latin America. For the Asian markets, the results indicate an assymetry in the herding behavior in the case of upper markets. Moreover, the results sustained that a financial crisis triggers the herding behavior in the country of origin of the crisis, and then produces a contagion effect that spreads the crisis in the neighboring countries. Another study was realized by Chaing et al. (2007) for the two phases of the Asian crisis. Using the DCC GARCH model to highlight the contagion between Asian market and US market, which was included in the model as an exogenous global factor, they concluded that the first phase of the crisis was characterized by a contagion evidenced by an increase in correlations and the second phase of the crisis was characterized by a herding behavior sustained by maintaining continuous the correlations at a high level. Moreover, Zhou and Lai (2009) have analyzed the herding behavior in the case of Hong Kong Composite Index, by using intraday

cotations. They concluded that the herding behavior is influenced by the geographical classification and the industry. Also, the results indicate a higher frequency of herding behavior on sales transactions than those on purchases. Also the results provides evidence of informational cascading through the important role of the fashion leaders, when the informed investors trade with noise. Demirer et al. (2009) have analyzed the herding behavior of the Taiwanese stock market, at sector level by using CSSD and CSAD methodology and the space based models proposed by Hwang and Salmon (2004). According to the CSSD method, the herding behavior has not been identified, except the electronic sector. This method can lead to incorrect inferences because do not consider the comovements between the returns of individual assets and the aggregate market returns. The results obtained by CSAD method, which has a nonlinear component and by the state space based models sustained the presence of herding behavior for all the activity sectors. By using CSSD and CSAD methods for both A-shares and B-shares from the Chinese stock market, Tan et al. (2008) found evidence of herding behavior both for A-shares and B-shares. Also, they observed that in the case of monthy data, the presence of herding behavior is lower, indicating that this behavior is much visible on short time horizons. Moreover the authors have studied the presence of asymmetry in the herding behavior depending on the trading volume and the volatility. The results showed the presence of asymmetry in the behavior of investors in Shanghai A shares, especially in periods of upper markets characterized by large trading volumes. For B-shares investors, the results provide no evidence of asymmetry, this market is characterized more by the presence of the institutional investors, compared with A-shares market that is characterized by the presence of individual investors.

Regarding the herding behavior for the Latin America stock markets, Cajueiro et al. (2009) analyzed the development of bubbles and crashes for the most liquid stocks traded on Brazilian Stock Exchange using intraday series during the period January 2008-March 2008. Using the log periodic power model of Sornette, they concluded that this method can be used to predict the end of asset bubbles and a large drowdawn in stock prices.

Regarding the herding behavior for the European markets, Kratunova and Kallinterakis (2007) analyzed the Bulgarian stock market by using the methodology proposed by Hwan and Salmong (2004). The results indicated that the thin trading cause an underestimation of the herding behavior. Another study was realized by Caporale et al. (2008) for the Greek stock market by taking into consideration daily, weekly and monthly data, during the period 1998-2007. By using CSSD and CSAD methodology, the results pointed out that the presence of the herding behavior is stronger for daily data, showing the short term nature of this behavior. Further, the authors concluded that during the crisis of 1999, the investors had a herding behavior, and following that, since 2002, they become more rational, because of the new institutional reforms and the presence of the foreign institutional investors. Pele et al. (2013) studied the herding behavior for the Romanian stock market by using log periodic power low models. Analyzing the evolution of the BET FI Index, they concluded that LPPL models can be used to identify the behavior of a stock market bubble. In the case of BET-FI Index, the LPPL models realized an accurate prediction of the stock market crash in January 2008. In iliquid markets the herding behavior involves expansions in trading activity.

3.Methodology

The analysis of the herding behavior of investors can be realized by using the statistical methods based on returns dispersions: cross-sectional standard deviation (CSSD) and cross-sectional absolute standard deviation (CSAD). In order to capture the return dispersions, Christie and Huang (1995) developed the cross sectional standard deviation model, which can be determined by using the following equation:

$$CSSD_t = \sqrt{\frac{\sum_{i=1}^{n}(R_{i,t} - R_{m,t})^2}{(n-1)}}$$

where, n represents the number of firms in the portofolio, $R_{i,t}$ is the observed stock return of industry i at time t, $R_{m,t}$ is the cross sectional average of n returns in the portofolio for day t.

Chang et al. (2000) proposed the cross-sectional absolute standard deviation (CSAD) as a measure of return dispersions:

$$CSAD_t = \frac{1}{n}\sum_{i=1}^{n}|R_{i,t} - R_{m,t}|$$

The authors considers that during extreme conditions on the markets, they expect that the linkage between return dispersion and market return to be nonlinear.

Similar with Chiang and Zheng (2010), in order to identify the herding behavior of investors for the Romanian stock market, we use the following equation:

$$CSSD_t = \alpha + \gamma_1 R_{m,t} + \gamma_2 |R_{m,t}| + \gamma_3 R_{m,t}^2 + \varepsilon_t$$

where $R_{m,t}$ is the cross sectional average of n returns in the portofolio for day t, $|R_{m,t}|$ is the absolute value, $R_{m,t}^2$ is the nonlinear component, if the coefficient of this variable is negative and statistically significant, support the presence of herding behavior on the market. According to Chiang and Zheng (2010) the introduction of the variable $R_{m,t}$ on the right side of the equation, compared to the original model proposed by Chang et al. (2000) is due to capture the asymmetric investor behavior under different market conditions.

4.Data

The data used in this study contains daily returns for 33 companies listed in the category I and II on the Bucharest Stock Exchange during the period January 2004 - December 2013. Also, we have analyzed the evolution of BET Index, Dow Jones Average Index, in order to see if investors from the Romanian stock market herd with the investors from US. The herding behavior of investors occurs if they behave uniform and take the same trading decisions. The herding behavior can be observed especially in a group where each member can see the transactions made by other members of the group (Demirer et al., 2010). The analyzed companies were divided into sectors of activities, such as: mining and quarrying, manufacturing, pharmaceuticals, trade, hotels and restaurants, financial intermediation and banking. We have applied the logarithmic return determined as: $R_{t=}\ln\left(\frac{P_t}{P_{t-1}}\right)$ where P_t , P_{t-1} is the stock price. The data source is BSE.

The table below provides the CSAD daily descriptive statistics related to each sector of activity. The highest mean is recorded in the case of manufacturing, trade and pharmaceuticals indicating significantly higher variations for these sectors. The highest values of volatility are registered for trade, suggesting that the market had unexpected variations due to unexpected news and market shocks. The lowest values of volatility are recorded for the financial intermediation, mining and quarring industry, hotels and restaurants and banking, indicating the possible presence of the herd behavior of investors, taking similar trading decisions.

Table 1: Summary statistics of cross sectional absolute standard deviations

	N	Mean	Min	Max	Std.dev	Skewness	Kurtosis
Mining	5	0.0165	0.0007	0.1839	0.0113	3.0075	24.2378
Manufacturing	6	0.0506	0.0004	0.4345	0.0525	2.4520	7.8846
Pharmaceuticals	3	0.0268	0.0001	1.1416	0.0597	8.8024	116.0103
Trade	4	0.0287	0.0000	9.0774	0.2563	35.0782	136.89
Hotels and restaurants	3	0.0240	0.0001	0.7710	0.0306	12.6484	274.9259
Financial intermediation	8	0.0146	0.0014	0.1399	0.0112	2.8457	13.9009
Banking	4	0.01453	0.0003	1.3311	0.0405	27.991	90.0635

Source: Authors' calculation

5.Empirical results

The table 2 provides the results obtained for the CSAD method. Due to the high variation in dispersion, the model was estimated by using the Newey-West consistent estimator (1997). When building the models, we consider the BET Index as the market index. The evolution of investor behavior is influenced by the evolution of market returns, which may lead to asymmetries in the herd behavior for different market conditions, both for ascending and descending periods (Tan et al, 2008).

The equation of the model has the following form: $\text{CSAD}_t = \alpha + \gamma_1(1-D)R_{m,t} + \gamma_2 DR_{m,t} + \gamma_3(1-D)R_{m,t}^2 + \gamma_4 DR_{m,t}^2 + \varepsilon_t$, where D represents a dummy variable which is equal to one, if the market return for the day t is negative, and zero, otherwise. The estimates regarding the herding behavior of investors in asymmetric market conditions can be seen in the table below.

Table 2: Herding behavior under up and down markets

Industry/Coefficients	Lower market / Upper market				
	α	γ_1	γ_2	γ_3	γ_4
Mining	0.013***	0.323***	-0.162***	-0.966	2.003***
Manufacturing	0.048***	0.262**	0.217	-0.419	2.486
Pharmaceuticals	0.022***	2.352***	-1.801***	-24.361***	-14.590***
Trade	0.022***	0.636***	-0.7707	-4.667	-5.288
Hotels and restaurants	0.017***	0.688***	-0.476***	-2.610	0.556
Financial intermediation	0.011***	1.207***	-1.004***	-10.964***	-6.175***
Banking	0.010***	1.131***	-1.095***	-9.314	-6.744

Source: Authors' calculation, ***Statistical significance at 1%, **Statistical significance at 5%, ***Statistical significance at 10%

The value recorded by γ_3 coefficient is negative and statistically significant for pharmaceuticals and financial intermediation, providing evidence of herding behavior of investors in an upper market. Further, the coefficient γ_4 recorded negative values and statistically significant in the case of pharmaceuticals, and financial intermediation, claiming this herd behavior of investors in a falling market. Financial intermediation and pharmaceuticals are sectors characterized by high liquidity and high volumes of trading, indicating that in the case of small markets, herding behavior determine the expansion in trading activity. Similar assumption were made by Pele et al. (2013) and Lee (2009) The herding behavior is manifested especially in a falling market. Similar results regarding the presence of asymmetry in herding behavior were obtained by Demir et al. (2010) for the Taiwanese stock market.

According to the results obtained from the literature, the herding behavior is more persistent in the periods characterized by extreme events(Chiang and Zheng, 2010; Tan, 2008). To highlight the impact of financial crisis on the herding behavior we have included in the model a dummy variable. In order to quantify the impact of the subprime crisis on the behavior of investors from the Romanian capital market, we have estimated the following model:

$$CSAD_t = \alpha + \gamma_1 R_{m,t} + \gamma_2 |R_{m.t}| + \gamma_3 (R_{m,t})^2 + \gamma_4 (R_{US,t})^2 + \varepsilon_t$$

Table 3: Herding behavior during crisis periods

Industry	α	γ_1	γ_2	γ_3	γ_4
Mining	0.015***	-0.005	0.308***	-0.482***	0.616
Manufacturing	0.051***	-0.085***	0.289**	-0.341*	0.317
Pharmaceuticals	0.031***	-0.656***	0.308	-1.696***	-0.607
Trade	0.027***	0.009	0.304***	-0.478***	0.360
Hotels and restaurants	0.024***	-0.023*	0.460***	-0.764***	2.833***
Financial intermediation	0.013***	-0.016*	0.367***	-0.581***	1.705**
Banking	0.009***	0.002	0.424***	-0.415	-0.571

Source: Authors' calculation, ***Statistical significance at 1%, **Statistical significance at 5%, ***Statistical significance at 10%

Further, similar with Chiang and Zheng D(2010), we have analyzed the impact of the subprime crisis by taking into consideration the period March 2008 - March 2009, on the herding behavior of investors from the Romanian capital market. The value of the

γ_3 coefficient is negative and statistically significant for mining, manufacturing, pharmaceuticals, trade, hotels and restaurants and financial intermediation, indicating a decreasing and nonlinear relation between return dispersions and market return. The negative values of γ_3 coefficient sustained the presence of herding behavior for all the sector mentioned above. Further, the γ_4 coefficient captures the impact of the subprime crisis on the returns dispersion. No negative value recorded for this coefficient is statistically significant, indicating that there is no evidence to support that in the context of financial crisis, the investors from the capital market in Romania herd to those from the U.S. stock market. The results sustained that the return dispersions are independent from the evolution of financial crisis. These results are similar to those obtained by (Chiang and Zheng, 2010), which concluded that this results may be due to the fact that subprime financial crisis manifeted globally. The values of the variable $R_{US,m,t}$ were already reflected in the values of the variable $R_{m,t}^2$, which determine the estimated value of the coefficient γ_4 to be insignificant.

6.Conclusions

In this paper we have analyzed the herding behavior of investors from the Romanian stock market, at a sector level, by using firm level data of 33 companies, classified in 7 different sectors of activity. Firstly, we have tested the herding behavior both for upper and lower markets, moreover we examined the impact of the financial crisis and the global role of US stock market on the evolution of the Romanian stock market. Using the CSAD method which contains a nonlinear component, developed by Chang et al. (2000), we have concluded that the Romanian stock market is characterized by the existence of the herding behavior of investors. In the case of financial intermediation and pharmaceutical, the results obtained provided evidence of herding behavior, both for an upper an lower market. Analysing the impact of the subprime crisis, we have concluded that investors' behavior is independent toward the financial crisis, due to the fact that the impact of the crisis appears to be global.

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BACKTESTING VALUE AT RISK MODELS IN THE PRESENCE OF STRUCTURAL BREAK ON THE ROMANIAN AND HUNGARIAN STOCK MARKETS

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Abstract: *Transactions on financial markets are associated with variability, risk and uncertainty, so quantification of risk has a great importance. Beside Standard Deviation and Variance, one of the most involved risk measure methods is Value-at-Risk (VaR). In this study, we use daily return for the stock index from Romania (BET) and Hungary (BUX) for the 01:2007 - 02:2013 periods in order to test the influence of structural breaks on the VaR metrics. We find out that the ARCH phenomenon is present, so we use the GARCH family models. The structural breaks in the series mean and variance are identified using the Zivot-Andrews test and PELT algorithm, the structural break dates are captured using dummy variables in the GARCH models (struc-GARCH), the selection of models is done using the informational criterion [Akaike, Schwarz, Log-likelihood]. The results of present research show a greater volatility associated with a higher risk level in case of Romanian stock index. The stock market indices return follows a negatively skewed and leptokurtic distributions forms either in two cases, so is unspecific a normal distribution. After applying above mentioned tests we can conclude that there are eight structural breaks in BET index returns variance and there are five breakpoints in case of BUX. The breakpoints in mean show very closely results in time, for BET in February 2009 and for BUX March 2009. Backtesting VaR models are done by measuring the number of times the loss is greater than the VaR forecast. The first step for unconditional coverage testing consists in comparing of fraction of VaR violation for a particular risk model. The independence testing it is very important tool in back-testing, because it is not the same that the VaR violations are differentiated in time or there are clustered in some certain period. By checking the independence test, we have the possibility to discover and reject the model with clustered hit sequence. Testing the influence of structural breaks on VaR we find that incorporating structural breaks in the GJR-GARCH models generates lower violations when comparing with the plain GJR-GARCH or RiskMetrics methodology.*

Keywords: stock market, structural break, Value at Risk, GARCH

JEL classification: G17

1. Introduction

Nowadays, economic and financial environment most dominant characteristics are instability, variability, risk and uncertainty, but a well known economic principle says: *"no risk means no gains"*. When we deal with risk, uncertainty and volatility, first it is essential to treat the main difference between these three concepts. According to Keynesian approach, there isn't a significant difference between first two concepts, Knight considers the contrary that there is a sharp distinction between risk and uncertainty in his famous work *"Risk, Uncertainty and Profit"* (1921). He considers that the most important difference between risk and uncertainty consists in the possibility of quantifying, so in case of risk we could make measurements but in the case of uncertainty we can't. What about variability? In some cases, the concept of variability is considered to be the main

component of risk besides uncertainty (*Molak*, 1997; *Cullen–Frey*, 1999). Others consider the essence of this represent the temporal and spatial heterogeneity of values (*Molak, 1997*).

Risk cannot be completely avoided for the financial markets participants, but there are many ways for managing and minimizing it. This paper aims to present the principal risk categories which are specific to financial markets products, how they affect the stock market participant's behavior and also the choosing of risk management alternatives. The main objective of this paper consists in quantification of risk with VaR method for two neighboring countries main stock index returns: BET for Romania and BUX for Hungary, and testing the influence of structural breaks in mean and variance on the VaR metrics.

The remaining of the article is organized as follows: in section 2 we review the literature with the main steps of risk management and the most used risk quantification methods, concentrating on Value-at-Risk method and on his advantages and limits. In Section 3 we present the research methodology, consisting in mathematical background of Value-at-Risk, the main characteristics of GARCH models and used tests for validation of structural break points. The data analysis part contains the evolution of returns in the analyzed period and the main statistics of it, we also presented in this part the results of stationary test and the dates of structural breaks in means and variance for studied stock market index. The next part shows the results of study, exactly the equation of mean. The last part of study show the main conclusions after analyzing these two stock market index risk.

2. Literature review

According to *Horcher* (2005) the risk management is a very broad concept, which includes more steps. First and the most important step represent the identification and quantification of the internal and external risk factors, and the specific risk categories which could affect expected gains and returns; the second is ranking of risks by priority and possible losses; next step define a risk tolerance level, which can be supported; the last one and also the most consistent step is developing the risk management strategies, which includes also risk minimizing methods. In the risk management process, we try to concentrate in this paper to the first step, on risk and risk factor identification process and especially to risk quantification methods.

One of the most used methods in financial markets risk exploration is *Value at Risk (VaR),* which was developed in the '90 years by *J.P. Morgan*. In this period the method was used with great success by central banks, and after that becomes more popular among financial institutions (*Chen, 2007*). In our days, this method it's also used at company level in financial risk quantification like market risk, credit risk, liquidity risk etc. The VaR method is often used to estimate the level of exchange rate risk, but is also suitable for portfolio risk measurement. Based on statistical probability estimations, the essence of VaR method consist in quantification of maximum potential loss, which result from market factors variability. Therefore, the VaR determine the level of maximum expected loss, for different time periods from 1 day to 100 days, at specific confidence level 95%, 97, 5%, or 99%. The VaR is the only one method which characterized the level of portfolio, investment risk by a number. So, one of a great advantage is that characterized risk with a number. Another big advantage is that could be well completed by other risk measurement methods, such as scenario analysis and stress testing and sensitivity analysis methods. Manganelli & Engle, (2001) classify the Value-at-risk models in three categories: parametric (RiskMetrics, Garch), nonparametric (historical simulation, hybrid model), semi-parametric (Extreme Value Theory, CAViaR, quasi-maximum likelihood Garch). In practice, the application of VaR knows three methods: first based on historical data, second the method of variance and covariance or parametric based

method, and the third based on Monte Carlo simulation *(Horcher, 2005)*. The advantage of the first method is that permits quick and easy usage, but the last two methods provide much more accurate results and have a wider range of applications. The VaR calculation based on historical data assumes that past data and events also characterized the future events. The VaR estimation based on Monte Carlo simulation is the most flexible method, which basically consists in random number generator, which is often used in financial modeling. The success of this method is determined by the success of used valuation method, but also depends on the used parameters in the simulation (*Ray, 2010*).

The major disadvantage of VaR risk measurement method is that it couldn't be applied in the extreme, shock conjuncture, such as financial crisis. The abrupt and significant fluctuations of risk factors greatly deform the efficiency VaR method. To eliminate this problem, Artzner et al. (1997, 1999) developed the *Expected Shortfall* (ES) concept, which characterized the conditional expected loss which exceeds the value of loss received by using of VaR method (*Yamai et al, 2002*). The ES method is closely related to the VaR, because we could obtain the Expected Shortfall value from VaR value by attaching probability levels to expected loss. The great advantage of ES method is that take into account the possibility of extreme situations *(Kerkhof, 2003)*. Artzner et al. (1999) considers Expected Shortfall (ES) method a more coherent risk measure method than Value at Risk (VaR). *Cuoco, He, Issaenko* (2001) in their research, conclude that the multiple uses of VaR and ES methods generate equally results*.*

2. Methodology

The Value-at-risk is defined by (McNeil et al, 2005) as at "... some confidence level $\alpha \in (0, 1)$ the VaR of the portfolio at the confidence level α is given by the smallest number *l* such that the probability that the loss *L* exceeds *l* is not larger than $1 - \alpha$". Mathematically we can write VaR as probability:

$$P_{VaR} = P(l \leqslant VaR) = \int_{-\infty}^{VaR} P_t * l \, dl \qquad (1)$$

Engle (1982) in his seminal paper proposed the autoregressive conditional heteroskedasticity models which view the variance as being dependent of the errors, the ARCH model was extended in the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) by Bollerslev [1986] which has the following form:

$$y_t = \beta_0 + e_t \qquad (2)$$
$$e_t | I_{t-1} \sim N(0, h_t) \qquad (3)$$
$$h_t = \alpha_0 + \alpha_1 * e_{t-1}^2 + \beta_1 * h_{t-1}, \alpha_0 > 0, 0 \leqslant \alpha_1 < 1 \qquad (4)$$

Because GARCH model treats the shocks symmetrically while on the financial markets bad news generates more volatility than the good news. Glosten, Jagannathan and Runkle [1993] proposed Threshold GARCH which treats differently the bad-good news influence on the assets prices. It is an asymmetric model in which the conditional volatility is:

$$h_t = \alpha_0 + \alpha_1 e_{t-1}^2 + \gamma d_{t-1} e_{t-1}^2 + \beta_1 h_{t-1} \qquad (5)$$

where: d_t = 1 if $e_t < 0$ or d_t = 0 if $e_t > 0$.

The detection of breakpoints in time series can be posed (Killick, Fearnhead, & Eckley, 2012) as a hypothesis test where H_0 is the null hypothesis where there is no changepoint (m=0) and the alternative hypothesis H_1 where we have at least 1 changepoint (m>=1). Killick et al. (2012) developed the Pruned Exact Linear Time (PELT) method which test for changepoints using the following statistical criteria: penalized likelihood, quasi-likelihood and CUSUM; the breakpoint analysis is carried in the mean, variance and both mean/variance of the series. The PELT method is implemented as an R packaged (changepoint package). The test statistics used in the PELT method implementation (Killick et al., 2012) has the following null hypothesis H_0: no breakpoint and alternative hypothesis H_1: one breakpoint т₁, with т₁ {1, 2,..., n-1}. By rejecting the null

hypothesis H_0, a changepoint is detected and it is estimated by maximizing the log-likelihood.

We apply the following unit-root test: Augmented Dickey–Fuller test (ADF) and Phillips–Perron (PP) and the Zivot and Andrews (1992) which extended the Dickey–Fuller test by allowing for a break in intercept, trend and both (model C). The structural break will be introduce in the GARCH model equations using a dummy variable, also in order to eliminate autocorrelation lags of dependent variable will be introduce in the main equation, the model will be as follows:

$$y_t = \beta_0 + \beta_1 y_{t-1} + \beta_2 y_{t-2} + \cdots + \beta_n y_{t-n} + d_{m1} D_{m1} + \cdots + d_{mi} D_{mi} \qquad (6)$$
$$h_t = \alpha_0 + \alpha_1 e_{t-1}^2 + \beta_1 h_{t-1} + d_{h1} D_{h1} + \cdots + d_{hi} D_{hi} \qquad (7)$$

where D_{mi},..., D_{hi} are dummy variables which take the value 0 before the breakpoint and 1 after the breakpoint until the end of the period.

Backtesting VaR models is done by measuring the number of times the loss is greater than the VaR forecast, the number of VaR violations can be define as:

$$I_{t+1} \begin{cases} 1 & loss > VaR \\ 0 & loss \leqslant VaR \end{cases} \qquad (8)$$

For an improved risk model it is necessary to predict the probability of VaR violations, noted with *p*. The VaR violation probability depends on the coverage rate of VaR, the hit sequence from a correctly specified risk model looks like a sequence of random tosses of coin (Christoffersen, 2012). The first step for unconditional coverage testing consists in comparing of fraction of VaR violation for a particular risk model. The independence testing it is very important tool in back-testing, because it is not the same that the VaR violations are differentiated in time or there are clustered in some certain period. By checking the independence test, we have the possibility to discover and reject the model with clustered hit sequence. The first step consist in assuming that violations are dependent over time, which could be described better by Markov transition probability matrix. The Markov property refers to the assumption that only today's outcome is determinant for tomorrow outcome, the evolution from the past doesn't matter, where π_{11} is the probability of tomorrow being a violation given today is also a violation and π_{01} is the probability of tomorrow being a violation given today is not a violation. For checking the independence $\pi_{01} = \pi_{11}$, a likelihood ratio test is used. After using the independence test, the next step for correct coverage is the conditional coverage test, which checks that $\pi_{01} = \pi_{11} = p$. The test is computed by summing of unconditional coverage and independence test.

3. Data analysis

The analyzed series are two stock exchange index: BET for Romania and BUX for Hungary, the analyzed period is between 01:2007 - 03:2013, daily series; the data are obtained from www.bvb.ro and www.bet.hu ; the econometrics software used are Gretl and R package *strucchange*, in order to obtain returns from the daily series we apply the following transformation:

$$r_i = ln\left(\frac{price_{i,t}}{price_{i,t-1}}\right)$$ where i= BET, BUX.
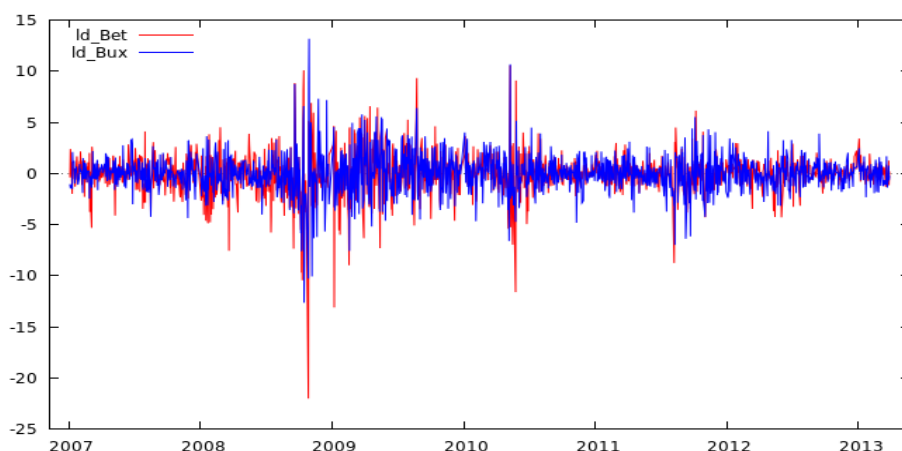
Fig. 1 The evolution of r_BET and r_BUX

Table 1. Descriptive statistics

Series	Mean	SD	SK	KT	Q(12)	Q²(12)	JB
r_BET	-0.0259	2.00	-1.19	17.40	48	290	13605
r_BUX	-0.0212	1.88	-0.03	9.27	62	1088	2515

Notes: SD, SK, KT, and JB denote standard deviation, skewness, kurtosis, and Jarque-Bera statistic, respectively. The Ljung–Box statistics, Q and Q² stat checks for serial correlation of returns and squared returns up to the 12 order, the critical value for the Q(12) respectively are 26.21, at 1% significance level. The critical value for the Jarque-Bera (JB) test is 5.991 at 5% significance level.

Table 1 presents the descriptive statistics of the returns on daily series of closing prices of two stock exchange indices: BET for Romania and BUX for Hungary. For the analyzed period, 01:2007 - 03:2013 both returns are negative, the lowest value is observed in case of Hungarian stock index, -0.0212; the standard deviation, reveals a higher volatility in the case of Romanian stock index, BET. The stock market indices distributions are negatively skewed, the kurtosis value is higher than the normal distribution kurtosis value, which is 3, so we could see for the both analyzed series, that the series have leptokurtic distributions. The Jarque-Bera test indicates that the normality of distribution for r_BET and r_BUX is rejected, also the Q-statistics indicates serial correlation of returns which will be removed using lag terms and the serial correlation of squared returns Q^2 suggests the existence of the ARCH effect. Testing for the ARCH effect is done using the LM test, the LM value for the r_BET, r_BUX are 148.19, respectively 381.40, which compared with the critical values shows the presence of ARCH(1) effects, so the series will be modeled using the GARCH family models.

Table 2. Unit Root/stationarity test

Series	ADF	PP	KPSS
r_BET	-9.0041	-37.419	0.27484
r_BUX	-16.197	-36.523	0.088335

MacKinnon's 1% critical value is -3.46 for the ADF and PP tests, the critical value for the KPSS test is 0.739 at 1% significance level, * denote significance at 1% levels.

Table 2 present the result for the unit root test, where ADF and PP test has the null hypothesis that the series is integrated of order 1, while KPSS null hypothesis is that the series is stationary, and Zivot-Andrews test allows for a break in intercept, trend or both. We find that for r_BET and r_BUX we reject the unit-root hypothesis based on the ADF test, PP test. We find that the returns don't have a unit-root, the KPSS accept the stationarity of returns for both countries. Based on the results from the ADF, PP and KPSS tests we apply the Zivot-Andrews test and breakpoint analysis in order to capture any break in mean, variance or both.

Table 3. Breakpoint dates

Series	Mean breakpoint	Zivot-Andrews	Variance breakpoint
r_BET	2009-02-13	2009-02-24*** (-11.01)	2007-12-19, 2008-09-11, 2008-10-27, 2009-08-19, 2010-04-30, 2010-07-01, 2011-07-29, 2011-10-28
r_BUX	2009-03-11	2009-03-11*** (-12.51)	2008-09-12, 2008-11-21, 2010-06-03, 2011-07-28, 2012-01-19

Test statistics in parenthesis, the critical value for Zivot-Andrews test is -5.34 at 1% significance level.

Table 3. and Figure 2. presents the estimated breakpoints, and in order to capture the changes in mean and variance dummy variables will be introduce in the GARCH model equations. We find for the r_BET series there is two breaks in the mean equation both of them in February 2009 and eight breaks in the variance: 2007-12-19, 2008-09-1, 2008-10-27, 2009-08-19, 2010-04-30, 2010-07-01, 2011-07-29, 2011-10-28; for the r_BUX series there is one break in the mean equation in March 2009 and five breaks in the variance: 2008-09-12, 2008-11-21, 2010-06-03, 2011-07-28, 2012-01-19.
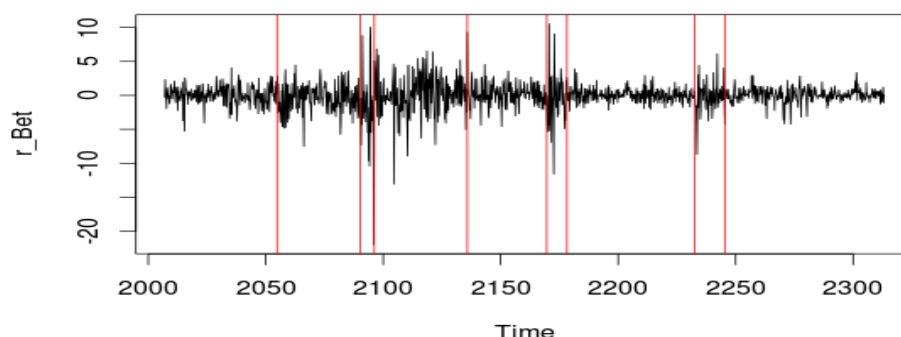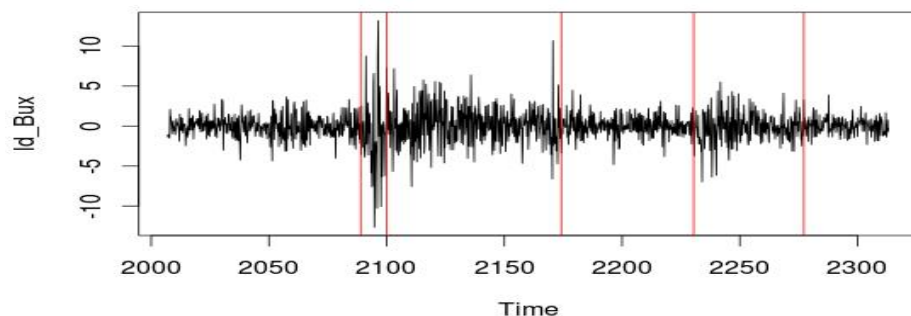
Fig. 2. Variance breakpoints in BET, BUX

4. Results

The GARCH model will incorporate the non-normality of BET and BUX return, the Jarque-Bera test indicates that the series follow a non-normal distribution, by using the normal and student distribution for the errors, also threshold models will be tested due to the asymmetries of financial series, the r_BET and r_BUX series are skewed to the left (negatively skewed); in order to eliminate the serial correlation autoregressive lags will be used in the mean equation.

Table 4. GARCH models

	r_BET	r_BUX
constant	no	no
AR lags	**1**, 13****	**2**, 4****
Mean breakpoint (1)	no	no
Zivot-Andrews	no	no
Variance breakpoint	**2007-12-19**, 2008-09-11*, 2009-08-19**, 2010-04-30*, 2010-07-01**, 2011-07-29**, 2011-10-28****	**2008-09-12** 2010-06-03****
GARCH (p,q)	**(1,1)*** GJR**	**(1,1)*** GJR**
Q(6)	3.80	7.01
Q(12)	11.21	10.52
$Q^2(6)$	6.05	2.77
$Q^2(12)$	14.00	5.25

Where p is the number of lagged h terms and q the number of e^2 terms. *, **, *** denote significance at 10%, 5%, and 1% levels.

The GARCH models are selected based on their information criterion, not presented here, and the stability of the models. Based on the results of GARCH models estimation, we can observe in Table 4., with bold, the significant breakpoints, we find no breaks in the intercept and we find 7 structural breaks in the variance term in the case of Romanian stock market and 2 structural breaks in the variance term for Hungarian stock market.

Backtesting the Value at Risk is done on the RiskMetrics model, the vanilla GJR(1,1) and the variance break GJR model, the GARCH in mean model is not representative for the analyzed series.

Table 5. Number of hits

BET	RiskMetrics 1%	RiskMetrics 5%	GJR(1,1) 1%	GJR(1,1) 5%	GJR(1,1) 1% with breaks	GJR(1,1) 5% with breaks
hits	2	14	2	9	1	6
consecutive hits	0	2	0	0	0	0
β	0.13%	0.92%	0.13%	0.59%	0.07%	0.40%
BUX	RiskMetrics 1%	RiskMetrics 5%	GJR(1,1) 1%	GJR(1,1) 5%	GJR(1,1) 1% with breaks	GJR(1,1) 5% with breaks
hits	1	5	0	3	0	1
consecutive hits	0	0	0	0	0	0
β	0.07%	0.33%	0.00%	0.20%	0.00%	0.07%

5. Conclusion

We can observe from the analyzed times series that neither BET or BUX indices don't follow a normal distribution, in both cases we can see negatively skewed and leptokurtic distributions of daily returns. Analyzing standard deviation we can conclude that a greater risk and volatility is specific for Romanian stock market index return. Because the normality and LB tests reveal that the ARCH effect is present in case of BET and BUX we applied GARCH models. After we applied the breakpoints analysis we find out that structural breakpoints are present in both cases. For BET index we observe eight structural breaks in variance, while in the case of BUX only five breakpoints are present. The Zivot-Andrews and PELT method shows that the mean breakpoints are very close for the two markets, February 2009 for BET index returns and March 2009 for BUX index

returns, which could be related with the consequences of economic and financial crisis which debuted in Central and Eastern Europe region in October 2008.

Testing the influence of structural breaks on VaR we find that incorporating structural breaks in the GJR-GARCH models generates lower violations when comparing with the plain GJR-GARCH or RiskMetrics methodology.

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SUB-SECTION: CORPORATE FINANCES

MODALITIES OF FINANCIAL STRUCTURE ANALYSIS IN ROMANIAN ENTITIES IN THE POST CRISIS ERA

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Abstract. *In this paper the authors analyze the financial structure on two levels, namely time for charging and funding sources. For each tier financial structure is analyzed with a correlated indicators including overall indebtedness and financial autonomy.*

Keywords: financial structure, capital structure, financial autonomy indebtedness

JEL Classification: G17, G32

1. Literature Review

The financial structure of the company is determined by the structure of the entire balance sheet liabilities and highlights our opinion, the role of capital in financing entity.

Compared to capital structure, financial structure also comprises short-term borrowed capital. From these references result how the financial structure includes capital structure of the company. In this respect, the financial structure means the ratio between short-term financing and long-term financing and medium enterprise.

Table 1: Financial Structure

Financial structure of the entity	**Short resources**	**term**	***Tresaury resources***
	Long resources	**term**	***Permanent capital***

Need funding for both operating activities appears that production and operations that are not specific operational activity

Cash resources as part of the financial structure consist of short-term bank loans and commercial loans which together cover a part of current assets.

Permanent capital consists of equity of the enterprise and mid -and long- term loans, which together cover assets and part of current assets that takes the form of working capital and medium and long term financing. In order to increase activity requires investment firms. Financing growth company requires the existence of permanent resources, and for this purpose may be used either equity or borrowing of the company.Leverage enterprise can take place either through the use of loans from banks and other specialized financial institutions or the bond loan .

In a simplified form, the financial structure of the entity can be appreciated after Total Debt and equity financing share and reflect on borrowed resources compared to their own resources, the ratio being called the global debt ratio. Analysis of the financial structure of the main aims assessing the company's financial policies and strategies, training on how financial resources maturity and source categories.

2. Methods and Results

2.1. The analysis of financial resources maturity
Structure maturities of financial resources is evidenced by a system of indicators including financial stability and the current funding level.

a.   Financial stability analysis
Rate reflects the financial stability of the connection between the permanent capital of the company has a stable (over a period of 1 year) and total assets. It is calculated as a percentage ratio between permanent capital and total liabilities.
The predominance of permanent capital in the total financial resources reflects the permanent financing activity conferring a high degree of safety with stability in funding.
Table 2: Financial stability

No.	Indicators	MU	2010	2011	2012	2013
1	Capital permanent	lei	9.432.879	21.500.371	84.085.591	102.604.432
2	Passives	lei	16.839.194	34.237.986	98.255.799	149.439.945
3	Financial Stability Ratio	%	56,02	62,80	85,58	68,66
4	Minimum value acceptable	%	50,00	50,00	50,00	50,00

It is noted that throughout the period of analysis businesses have a high degree of financial stability. The situation is favorable even in the last year they recorded a higher discount rate due to increase in total liabilities (152%) than the growth rate of permanent capital (122%). In the last year of analysis finance their businesses over 68.66% of its capital resources permanent, with a good financial stability.

b.   Analysis of the current financing
Current funding level reflects the extent to which current resources participating in the form of resource and financing activities and is calculated as the ratio of short-term debt and total liabilities.
For enterprises the situation is analyzed below.

Table 3: Current funding level

No.	Indicators	MU	Year			
			2010	2011	2012	2013
1.	Short term liabilities	lei	7.406.315	12.737.615	14.170.208	46.835.513
2.	Passives	lei	16.839.194	34.237.986	98.255.799	149.439.945
3.	Current financing	%	43,98	37,20	14,42	31,34
4.	Maximum value acceptable	%	50,00	50,00	50,00	50,00

In the first three years of the indicator is decreasing trend analysis, that current resources total weight loss of funding. In the last year of analysis, however, the indicator increases sharply. However the indicator recorded an acceptable level, which ensures high undertakings financial stability.

2.2. The Analysis of Sources of Financial Resources

On sources, the financial structure covers two components: financial autonomy and indebtedness.

 a. *Analysis of financial autonomy*

Global financial autonomy ratio shows how heritage is funded enterprises based on own resources and is calculated as a percentage ratio of total equity and liabilities.

Analyzed companies rate the following values:

Table 4: Global financial autonomy ratio

No.	Indicators	MU	Year			
			2010	2011	2012	2013
1	Equity	lei	9.432.879	21.500.371	75831664	81676656
2	Passives	lei	16.839.194	34.237.986	98.255.799	149.439.945
3	Global financial autonomy ratio	%	56,02	62,80	77,18	54,66
4	Minimum value acceptable	%	33,00	33,00	33,00	33,00

In the last year the company finances its activities in a proportion of 54.66% from own resources ie 22.52% less than the previous year. This was due to the faster growth of total resources (152%) than own resources (108%). In the first three years the trend has been the growth analysis, then decreases in the last year, but without going below the minimum acceptable level.

Global financial autonomy index report shows funding from own resources and foreign. Show the extent to which total debt to equity may be covered. This index is calculated as a percentage ratio between equity and total debt.

Table 5: Global financial autonomy index

No.	Indicators	MU	Year			
			2010	2011	2012	2013
1	Equity	lei	9.432.879	21.500.371	75.831.664	81.676.656
2	Liabilities	lei	7.406.315	12.737.615	22.424.135	67.763.289
3	Global financial autonomy index	%	127,36	168,79	338,17	120,53
4	Minimum value acceptable	%	55,00	55,00	55,00	55,00

During the whole period of analysis, firms were able to cover more than the full total debt on the account equity. In the last year equity were 20.53% higher than the loan and raised, due to:
- Increase equity by 7.71%;
- Increase total debt by 202.19%.

In the first three years the trend has been to raise rates because last year the situation to present a downward trend, which leads to the conclusion that the continued trend indicator will have negative consequences for the global financial autonomy.

Term financial autonomy reflects the proportion of the equity part in the formation of permanent capital, and are calculated as a percentage ratio of equity capital and permanent.
Minimum allowable value of the indicator is 50% below this limit businesses are in an unfavorable situation in terms of risk of insolvency. The indicator values are listed below:

Table 6: Term financial autonomy

No.	Indicators	MU	Year			
			2010	2011	2012	2013
1	Equity	lei	9.432.879	21.500.371	75.831.664	81.676.656
2	Permanent capital	lei	9.432.879	21.500.371	84.085.591	102.604.432
3	Term financial autonomy	%	100,00	100,00	90,18	79,60
4	Minimum value acceptable	%	50,00	50,00	50,00	50,00

Throughout the period under review businesses fall into a high degree of financial autonomy, although the trend indicator in the last two years of decline. Thus, last year, the equity of companies representing over 79.86% of permanent, 10.58% less than the previous year. This was due to a faster rate of permanent capital (22.02%) than own (7.71%), which means that the medium and long term debts were more dynamic than own resources.

Term financial autonomy index reflects the extent to which mid-and long-term debt can be covered on account of equity and is calculated as a ratio of equity and debt in the medium and long term.

Table 7: Term financial autonomy index

No.	indicators	MU	Year			
			2010	**2011**	**2012**	**2013**
1	Equity	lei	9.432.879	21.500.371	75.831.664	81.676.656
2	Long and medium liabilities	lei	0	0	8.253.927	20.927.776
3	Term financial autonomy index	%	-	-	918,73	390,28
4	Minimum value acceptable	%	100,00	100,00	100,00	100,00

In the last year of analysis equity firms covering more than 3.9 times the medium and long term debt, this value being business friendly. On the other hand, financial autonomy index trend recorded over the past year is significant (135.4% in relative values), indicating a potential problem. This was due to very rapid growth in the medium and long term debt (202.19%) to equity (7.71%). Businesses are in a comfortable situation, but must pay special attention to high debt fast pace.

b. *Analysis of borrowing*

Overall leverage ratio measures the proportion of total debt to assets of businesses and show how attracted borrowed sources participating in the financing of and are calculated as a percentage ratio between total debt and total liabilities.

Maximum allowable value of this indicator can be 66%, although it is considered that a value of 50% is safer. Removing the safety value means a reduction in borrowing firms, an increase of financial autonomy.

Table 8: Overall leverage ratio

No.	Indicators	MU	Year			
			2010	**2011**	**2012**	**2013**
1	Liabilities	lei	7.406.315	12.737.615	22.424.135	67.763.289
2	Passives	lei	16.839.194	34.237.986	98.255.799	149.439.945
3	Overall leverage ratio	%	43,98	37,20	22,82	45,34
4	Maximum value acceptable	%	66,00	66,00	66,00	66,00

From this point of view, companies are in a favorable situation for the entire period of analysis being under the maximum allowable value of the indicator. The trend was favorable indicator (reduction) in the first three years, as the last year of the analysis to, seen a sharp increase (98.69%), which is a warning on the trend of borrowing.

The index of global debt and leveraged attracted (total debt) and equity.

Maximum allowable value is 200%. Above this level, businesses are in danger of insolvency.

Table 9: The index of global debt

No.	Indicators	MU	Year			
			2010	2011	2012	2013
1	Liabilities	lei	7.406.315	12.737.615	22.424.135	67.763.289
2	Equity	lei	9.432.879	21.500.371	75.831.664	81.676.656
3	The index of global debt	%	78,52	59,24	29,57	82,97
4	Maximum value acceptable	%	200,00	200,00	200,00	200,00

From this point of view, businesses are safe for the entire period being analyzed under the maximum allowable value of the indicator, showing the first three years of a downward trend in its growth due to a faster rate of total debt to equity. In the last year of equity analysis are only about 17% higher than the total debt, the indicator increased by 180.56% (in relative values) over the previous year.

Term borrowing ratio reflects the extent to which the medium and long term debts participate in the formation of permanent resources and are calculated as a percentage ratio of medium and long-term debt and capital potentiometers.

Maximum allowable value is 50%. Above this level businesses are in danger of insolvency.

Table 10*:* Term borrowing ratio

No.	Indicators	MU	Year			
			2010	2011	2012	2013
1	Long and medium liabilities	lei	0	0	8.253.927	20.927.776
2	Permanent capital	lei	9.432.879	21.500.371	84.085.591	102.604.432
3	Term borrowing ratio	%	0	0	9,82	20,40
4	Maximum value acceptable	%	50,00	50,00	50,00	50,00

Throughout the period analyzed enterprises registered a low term debt, standing at the maximum limit allowed. In the last year about 20.4% of permanent resources came from medium and long-term debt, that is 10.58% more than the previous year. This was due to very rapid and long-term loans, rising much higher than the increase permanent capital.

Term indebtedness index reflects the ratio in which the medium and long term debt to equity. The maximum allowable value is 100%.

Table 11: Term indebtedness index

No.	Indicators	MU	Year			
			2010	2011	2012	2013
1	Long and medium liabilities	lei	0	0	8.253.927	20.927.776
2	Permanent capital	lei	9.432.879	21.500.371	75.831.664	81.676.656
3	Term indebtedness index	%	0	0	10,88	25,62
4	Maximum value acceptable	%	100,00	100,00	100,00	100,00

Throughout the period under review businesses have benefited from low term debt (high degree of financial autonomy time). In the last year and long-term debt accounted for 25.62% of the equity value of approximately 14.74% less than the previous year. This was due to faster growth, the pace of medium and long term debt to equity growth.

3.Conclusions

From the point of view of financial structure ratios, reflecting the formation of sources and time-acceleration of financial resources, it can be concluded that businesses are in a favorable situation characterized by a high degree of financial autonomy, low debt and high safety. However, lately the trend indicators was unfavorable, a sign that the financial structure of the company has deteriorated.

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RETURNS OF PRIVATE EQUITY – COMPARATIVE ANALYSES OF THE RETURNS OF VENTURE CAPITAL AND BUYOUT FUNDS IN EUROPE AND IN THE US

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Abstract: *This paper focuses on the returns of two segments of Private Equity (PE) market in Europe and in the US; Venture Capital (VC) and Buyout (BO). Contrary to the publicly traded stocks where information about the trade of securities is public, the measuring of the returns of these asset classes is not unambiguous. The returns of PE investments are considered as confidential information therefore we only have estimations about the real characteristics of the financial performance of the PE industry. Although it is impossible to observe the whole industry it is important to chart its performance because PE plays an essential role in the financing of firms, especially firms at special stages of their lives and the more information the investors and companies have, the more effective PE market can be therefore it can contribute to economic growth, employment, innovation etc. In the literature PE, VC and BO are not distinguished properly and they are often used as synonyms. Despite their similarities, there are significant differences in the features of these types of investments. In this paper the authors present the return characteristics of the PE industry of Europe and the US with regard to the stage-focus of PE funds. The key findings of this paper are that in average the returns of BO funds exceeded the returns of VC funds in the US as well as in Europe. Not just according to the absolute value of the returns, but also according to its risk-return tradeoff BO seems to be a preferable investment. The same statements can be made in case of the European market. The US returns are higher than European VC returns, because compared to the US VC industry the European is undeveloped. On the other hand the gap between the performances of BO funds is not as significant as the difference of VC funds. While in the 90's US BO funds outperformed the European ones, after the millennia European BO returns were higher. The analysis of returns reveals the sensitivity of these asset classes to economic cycles. The 'dotcom' boom of the millennia affected greatly the PE industry as well as the recession of 2008. The first section of this article describes the different subsets of PE, than it shows the differences in terms of returns of the US and European market, than in the third part the paper compares the characteristics of the different classes of PE.*

Keywords: venture capital, buyout, private equity

JEL classification: G24

1. Introduction

Private Equity (PE) firms have become very important financial intermediaries. PE industry was born in the United States in the second half of the twentieth century than later appeared in Europe. PE firms are intermediaries who collect capital from investors and invest the accumulated capital into portfolio companies. The features that make these PE firms special among financial intermediaries are the focus and the type of their investments. As far as the type of investment is concerned these firms provide hands on investments, which means that they are actively involved in the operation of the companies they invest in and they also offer management assistance hence they can

provide non-financial value-added services. (Becsky-Nagy, 2013) The focus of PE had changed during the evolution of the industry that makes necessary the defining of its subsets. In the beginning, PE offered financing mainly for innovative technology-oriented firms in the early stages of their life via raising their capital. This is the traditional venture capital (VC). The focus of the industry became wider and nowadays buyout (BO) is also a subset of PE. Buyouts mean the financing of later stages of enterprises. These are larger-scale investments. Contrary to the traditional VC, in case of BOs the company's' assets can function as collateral. In many cases the BO firms take loan to buy the firms' shares with the portfolio company itself as the collateral. This is the so called leveraged buyout (LBO). The functions and the relevance of these subsets of PE are different hence the differentiation of these types is important.

The special features of PE must reflect in the returns of these investments. Investing into PE funds mean a long term commitment for the investors, the life of funds is limited in 10-12 years. As investors prefer liquidity they need to be compensated for the illiquidity of their investment. As a result of their personal involvement and their active role in the operation of portfolio companies the managers of funds also expect higher returns (Cochrane, 2005). These compensations for fund-managers are fixed management fees and carried interests (Sahlman, 1990).

The PE firms can realize their profits via exiting their portfolio companies therefore the procedure of the exit plays a crucial role in PE investments (Becsky-Nagy, 2006) The problem is, when we want to measure the financial performance of these firms, that they primarily aim companies whose shares are not listed hence the transactions cannot be observed. Furthermore the returns of PE investments considered as confidential information. We only have estimations about the performance of the whole industry based on voluntary supplying of data by PE firms and on the data gathering of researchers therefore in the interpretation of our results we have to take into consideration that our estimations about the returns can be biased (Cochrane, 2005 and Phalippou and Gottschalg, 2009).

2. Comparison of the PE returns in the EU and in the US

2.1. Comparison of the VC returns in the EU and in the US

There are significant differences in the risk and return characteristics of VC industry in the US and in the EU. Figure 1. shows the 5-year rolling horizon IRRs of BO and VC funds in Europe and in the US from 1992 to 2012. Horizon IRRs is calculated using the net asset value of a fund in the beginning of the given period as an initial cash-outflow and the residual value of the fund as a terminal cash flow modified by the cash in- and outflows in the given time horizon. In case of the five-year rolling IRR the time horizon is a five-year period. (Up to the writing of this article annual returns of Europe available only up to 2012.) As we can see the dot-com boom had huge effects on the returns of the industry. The highest returns were reached in 2000 in the US as well as in Europe; however the US returns were twice higher. This peak in the millennia was followed by a sharp decline. In the US the returns of financing of innovative technology-oriented enterprises with high growth potential decreased more rapidly than in Europe from 2000 to 2005, when they reached their minimum. While the peak was higher in the US, on the other hand the minimum of returns was also lower. Figure 1. shows 5-year rolling IRR-s, which lessens the decline compared to the returns measured on a yearly basis, where the magnitude of the decline would be even higher. As a result of the 5-year basis measurement, the returns reach their minimum in 2005, where the positive bias of the dot-com boom does not influence the results.
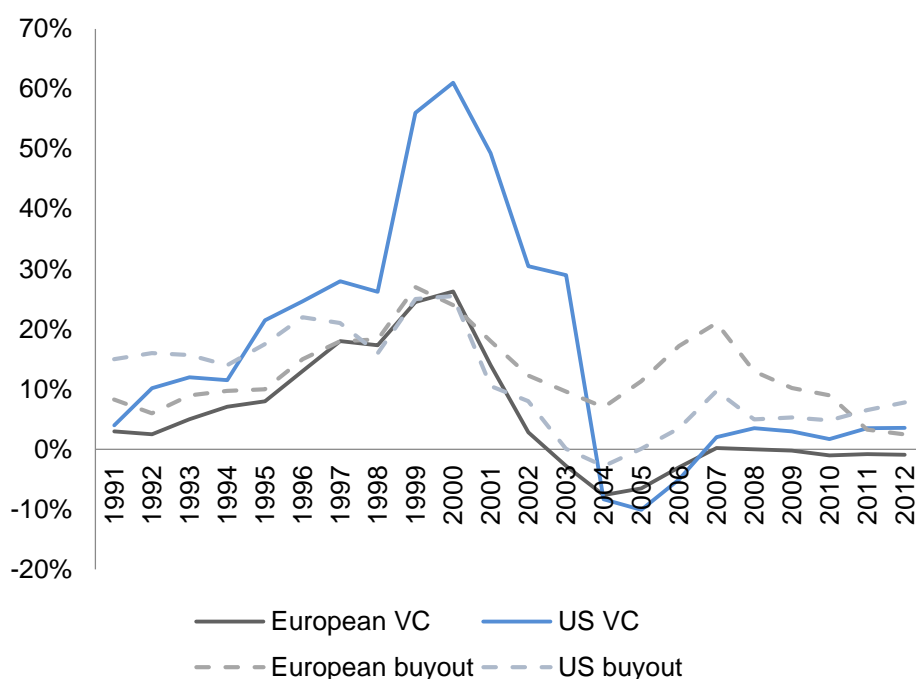
Figure 1: The 5-year rolling horizon IRRs of BO and VC funds in Europe and in the US from 1992 to 2012 (%)
Source: EVCA (2013)

The recovery of VC industry from the downturn after the millennia was hindered by the global recession in 2008. In Figure 1. the effects of this recession is not so conspicuous as a result of the smoothing effect of the 5-year basis measurement, the relatively higher returns before 2008 balance the lower results of the post-recession period.

Concerning the dynamics of the returns in the US and Europe in the last two decades we can see that the internet-boom was a turning point. In the 90's VC returns were high especially in the US, but after the peak of the dot-com boom VC returns could not came back to the previous level as a result of the slow recovery of the post-boom period and the effects of the recession of 2008. This dynamics is also reflected in the comparison of publicly traded assets and VC. Kaplan and Schoar (2005) introduced the PME (Public Market Equivalent) what is a relative return index that compares the returns in a given time period of the market portfolio of publicly traded assets and VC. Harris et al. (2012) examined the PME index in the US and according to their results VC performed better in average in the 90' than the publicly traded assets, while after the dot-com boom the performance of VC was lower.

The profits gained by VC investments were lower consistently in Europe. This is not a surprising result if we take into consideration the stage of the development of the two areas' VC industry. Kelly (2011) examined the reasons of the different return characteristics of the US and Europe and found that European VC industry has not reached its maturity yet and it lacks the critical mass where the market could operate effectively. As a result of this relative underdevelopment and the spurring effect on economic growth of VC the economic policy in Europe turned towards the promotion of this asset class (Karsai, 2013).

2.2. Comparison of the BO returns in the EU and in the US

The net pooled IRR for 1,416 independent private equity funds from 1980 to 2012 reached 9,26%, for BO funds it was 11,61%, and for VC funds it was 1,27% (EVCA, 2013). While the VC funds in the US clearly over-performed the returns of European ones, on the other hand the evaluation of the profits of BO funds is not so unambiguous. As we can see in Figure 1., the US BO funds' returns were slightly higher in the nineties but after the millennia this changed for the benefit of European BO funds. 2008 was a turning point in case of BO funds as well as in case of VC funds. While the VC returns were stagnant BO returns declined more rapidly than VC returns and it also fell below the US BO returns. This decrease is influenced by the credit crisis. LBOs are credit-intensive and the recession affected deeply the credit-market, which worsened the prospects of European BO funds.

Table 1. Horizon IRRs to 31.12. 2012 for Europe and US (%)

Fund stage	Region	1-year IRR	3-year IRR	5-year IRR	10-year IRR
Venture capital	Europe	11,12	2,04	-1,13	-0,52
	US	5,87	8,56	3,61	2,95
Buyout	Europe	16,10	11,69	2,48	10,85
	US	12,66	14,81	7,42	8,45
Private Equity	Europe	15,02	9,17	1,64	8,09
	US	11,18	13,44	7,03	7,39

Source: EVCA (2013)

Table 1. also confirms that the 10-year IRR European returns were higher, but in the medium-term, 3-, and 5-year IRRs were higher in the US. In the interpretation of these results we have to take into consideration, that the short- and medium-term results are influenced by unrealized investments that are investments in portfolio companies that PE firms have not yet exited.

3. Different characteristics of returns of BO and VC

The table below shows the European VC and PE funds' performances raised after 1980, more precisely the returns yield by the investors of the funds. Either the return indexes of classical VC or the ones of PE financing later stages recorded higher rates based on the three-year index, than on the five-year indexes, but the highest rates were recorded by the ten-year index. That means that either the PE or the VC funds are recovering from the crisis (EVCA 2013).

The survey of Murray and Lott (1995) carried out in the United Kingdom has already confirmed in the eighties and nineties, that buyouts created between 1980 and 1990 and closed until the end of 1994 reached more than 23% return, while the technology-intensive, early stage investments yield only 4%. According to the effective return indexes the BOs have already led the PE market compared to the start-up and early-stage investments.

Table 2: Net pooled IRRs of private equity classes in Europe in 2012 (%)

Fund stage	Top quartile			Top-half			Pooled average net IRR for the quarter	Threshold net IRR
	No. of funds	Top-quarter pooled IRR	Overall upper quartile IRR	No. of funds	Top-half pooled IRR	Overall median IRR		
Seed/Early-stage	107	12,41	2,16	214	7,35	-2,52	21,19	9
Later-stage	27	17,46	7,95	57	12,63	-0,11		
Balanced	36	17,84	6,11	82	10,32	-0,23	5,76	0,49
All venture	112	18,49	4,41	267	11,33	-1,28		
Buyout	196	20,96	15,99	331	15,07	7,11	-1,27	-3,97
Mezzanine	12	18,71	13,57	27	12,74	7,15		
Generalist	29	38,03	4,65	71	10,82	-0,16	-10,41	
All private equity	354	21,19	9	708	13,4	0,49		

Source: EVCA (2013)

Pooled IRR takes together the cash flows since inception with the residual values of all funds and aggregating them into a pool as if they were a single fund. The pooled IRR of the European VC and PE funds raised in the 1980-2012 period was 9,26% in 2012, that meant 1,27% for the VC funds and –more than nine times more - 11,61% for BO funds.

Examining the overall upper-quartiles it is clear, that the BO funds show the highest values (15,99%), here nearly four times more than venture capital funds (4,41%). That means that returns of three quarters of the VC funds of were under 4,41%. This rate is much higher at the BO funds, it is 15,99% (EVCA 2013).

The top quarter pooled IRR of all PE funds were 21,19%, while the BO funds' top quarter pooled IRR was 20,96%, and the ones of VC funds was 18,49. These figures are closer to each other than in previous years.

The top quartile pooled IRR was the lowest at the seed and early stage funds among the funds specialized for different lifecycle periods.

Comparing the returns of the BO and VC funds led to the same result in the US as in Europe. Phalippou and Gottschalg (2009) and Harris et al. (2012) concluded the same comparing the returns of VC and BO funds.

There is a significant difference between the European and the US market. Since the first years of the nineties the BO funds' five-year rolling IRRs have always outperformed the VC funds, in the period 1991-2012 with an average 7,8%. In contrast from 1995 to 2003 in the US the five-year rolling IRRs of VC funds were higher with an average 18%.
The five-year horizontal IRR's lower measures in Europe show that from 2004 the performance of funds was significantly shaped by the unrealized investments.

Table 3. Short-, medium- and long-term net horizon IRR in Europe (1980-2012) (%)

Fund stage	1-year IRR	3-year IRR	5-year IRR	10-year IRR	20-year IRR
Venture capital	19,07	5,99	2,63	6,64	1,22
Buyout	32,55	17,76	6,54	21,31	12,01

Source: EVCA (2013)

Furthermore, according to Becskyné Nagy (2008) from 1991 to 2007 the horizontal IRRs of BOs outperformed the ones of VC funds either in the short-, medium- and long run, while the standard deviation and the relative standard deviation of BOs' all indicators exceeded the ones of VC funds. It does not mean only that the BOs have better risk-return combinations, but also that they realized higher returns and lower risks at the same time, as not only the relative standard deviation was higher.
On the other hand in the US the five-year IRR of the VC funds was 18,9%, and for the BOs it was 13,27%. The VC funds had a 19,07% standard deviation, and buyouts had 7,02% with relative standard deviations orderly 0,85% and 0,53%. So the picture is not so clear in the US as it is in Europe, as the venture capital investments had higher risks but at the same time they produced higher returns. That's the reason of the smaller deviation of the risk-return compromise index.
Based on these indexes the BO funds produced much better risk-return combinations for the investors in Europe than the VC funds in the medium run. In the European market the BOs were less risky but more profitable according to the medium- and long-term return rates and the indexes of risk related to the 5-year index of the VC funds is still in the negative zone in 2012.
The reason of relatively low risk of BO according to Aernould (2005) is that the rate of falls for the BOs was 3%, while for the seed and early stage finance around 50%.
There are not available data for funds investing in Central and Eastern Europe or Hungary, therefore the returns of funds financed by the EBRD is examined. The EBRD is the biggest investor of the fund investing in Central and Eastern Europe, and the one-year net return realized by the EBRD reached 39% in 2004 and 55% in 2005 (Karsai 2006), that exceeded the one-year horizontal net return of European investors that was 44,9% (EVCA 2006).
In this region VC industry is in its infancy, the lack of information end the lack of empirical evidences increases the risk and cost of VC transactions, hence the return expectations are higher as well as to compensate the higher costs of monitoring and screening activities (Wijbenga et al., 2003). The PE firms of Central and Eastern European countries could realize high exit multiples during their exits from portfolio companies. On the other hand the development of PE industry would bring increased competition in the market therefore the value added by PE firms must also increase to maintain this level of exit multiples.
Mason and Harrison (1999) examined the return expectations of the investors of technology-oriented small enterprises and found that they expected 30-60% returns on their investments, while according to the earlier study of Plummer (1987) the investors with early-stage focus could have even 50-70% profit expectations. There is a significant

difference between the realized and expected returns and their convergence is necessary to the increased role of VC compared to BOs especially in Europe.

The role of BO within PE industry has become more and more important. An explanation of this phenomenon is the preferable risk-return ratio of BOs compared to the financing of technology-oriented innovative firms. It is true especially in Europe where the traditional VC in average is not a profitable industry. PE funds focus unambiguously to larger-scale BOs rather than the seed and early-stage investments. Higher returns would be possible in a more developed VC ecosystem, but without adequate profit level there is not enough capital in the industry that could lead to the rapid development of the industry. On the other hand larger-sized funds generated higher profits (EVCA, 2013) that will probably result in the increased demand for these types of funds by the investors of funds and in the creation of larger funds.

In the US in average the BOs performed better, but VC market was more developed in the period of the dot-com boom. Although VC in the US suffered the consequences of the post-boom periods' decline the role of VC was still important and started to recover to the recession of 2008.

In conclusion

The valuation of PE as an investment class is rather problematic as a result of that most firms handle this information confidential and we have to take into consideration the limits of our estimations and consequences in the interpretation of the results. We presented and compared the return characteristics of two subsets of PE with a geographical perspective and found significant differences.

First of all we analyzed the differences between the US and the European PE markets with regards to the stage of funds. Traditional VC financing is more developed in the US and still immature in Europe. This relative underdevelopment also reflects in the performance of European VC funds that are lower than US market returns. In case of BOs the difference was not so obvious, in the nineties the US returns were higher but in the previous decade European BO funds' returns exceeded in average the US ones.

The last two decades showed two different faces of PE market. In the nineties PE reached its peak and it proved to be a very profitable investment, especially the VC investments before the dot-com boom reached extremely high profits. On the other hand after the millennia PE industry generated moderate or even negative returns and it was influenced by the post-boom decline and also by the recession in 2008.

Comparing the two asset classes the BO in average seems to be a more preferable asset class according to the risk-return tradeoff. In Europe the higher returns are combined with lower risk. In case of US PE market the result is more complex. The risk of BOs is lower but the higher risk of VC is associated with higher returns. VC is a very risky asset class but the best-performing VC funds can achieve great premium that can compensate high risks.

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GROWTH AND VENTURE CAPITAL INVESTMENT IN TECHNOLOGY-BASED SMALL FIRMS – THE CASE OF HUNGARY

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Abstract: *Venture capital backed enterprises represent a low proportion of companies, even of innovative ones. The research question was, whether these companies have an important role in innovation and economic growth in Hungary compared to other countries. In the first part of the article I present the theoretical background of technology-based small firms, highlighting the most important models and theories of the economic impact and the special development of innovative technology-oriented small firms. In the second part of the article I present the status of the most important indicators of innovation in connection with entrepreneurship, than I elaborate on the measures of start-ups, mainly the high-tech ones with high-growth potential. I describe the current position of venture capital industry, detailing the venture capital investments, with particular emphasis on classical venture capital investments that points out the number and the amount of venture capital investments financing early stage firms with high-growth potential. At the end I summarize the status of Hungarian technology-based small firms and their possibilities to get financial sources form venture capital investors, with regards to the status and the prospects of the JEREMIE program. In Hungary the number of internationally competitive firms, ready and willing to obtain venture capital, is much lower than in the US or Western European countries. Hungary could take advantage of its competitive edges in some special fields of innovation. The efficiency of information flow would reduce the information gap between the demand and the supply side of the venture capital market and more Hungarian firms could be internationally successful through venture capital financing. The recent years' policy and special programs like JEREMIE generated more transactions, that helped to inform the entrepreneurs about venture capital and helped to co-invest public resources with private equity more efficiently, but the global crisis had negative impact on the industry. The venture capital backed small firms are more likely to create relatively higher economic growth, but because of their low number and the inadequate number of potential companies that are ready to receive venture capital, they can hardly have a high impact on total economic growth in the short run, even with the help of the JEREMIE program.*

Keywords: technology-oriented enterprises, venture capital

JEL classification: G24, M13

Venture capital as an alternative financial source – Special development of small and innovative technology-oriented firms

Innovative technology-oriented small and medium sized enterprises represent a very low proportion of small and medium sized enterprises, but they can become the accelerator of the economy, through their high growth potential, job-creating ability and innovation activity, and they can bring technological breakthrough to the economy. Hence the technology-oriented small firms have drawn the attention of economic policy in the 70's and 80's.

Defining innovative technology-oriented enterprises has difficulties. Innovative small and medium sized enterprises, knowledge based enterprises, spin-off companies, new

technology-oriented companies are all used terms in the literature. Although these are similar phrases, all of them emphasize different characteristics of the companies. The most important features of the mentioned enterprises are summarized below.

The entrepreneur; the founder and owner of the company is usually highly qualified, but does not have entrepreneurial and business expertise. The company uses advanced or high technology, but usually focuses on developing only one product, enters into a new market, has high risk level compared to other companies, and the access of internal and external sources is limited for them. The inherent novelty raises the question, whether its market potential is high enough. On the other hand the opportunity of taking advantage of the innovation's benefits is limited in time *(Makra 2007c, Storey-Tether 1998, EC 2001).* The knowledge based companies' most important competitive edge lies in their innovation activities, the majority of their assets are intangible assets, but evaluation of intangible assets causes difficulties.

Storey and Tether (1998) grouped the definitions used in the literature and separated them into a narrower and a wider interpretation. The narrower one contains new and independent companies that create a new industry. The more general interpretation contains those companies that take significant technological risks, in order to utilize an invention or a technological innovation. The definition used by the EU describes these enterprises as new or very young companies, and their key activities are developing, marketing and using new technologies *(European Commission 2001, 11. o).*

The new technology-oriented enterprises are companies that have not reached the stage of maturity. There are two types of these enterprises which types are science-oriented and technical-oriented. The first ones develop technologies, using results of basic research, the second ones develop further the basic technologies in order to adapt them to consumer demand. *(Makra 2007c)*

The phrase spin-off is used for a special segment of the technology-oriented small firms, referring to the fact that, these enterprises utilizing and marketing research results attained at universities and research institutes, which are generally patronized by technology and knowledge transfer offices *(Buzás 2004).*

The economic impact of innovative, technology-oriented small firms
The empirical researches in the field of small businesses' focuses on their impact on economy, like their stimulating effect on economic growth or their ability of generating jobs. According to the recent researches the development stage of the company is the most determinant factor in creating jobs: with the development of the enterprises their role in employment also becomes more important, their net new job creating ability decreases. According to the research of *Autio and Parhankangas (1998)* about technology oriented small firms' role in employment in Finnland, the technology-intensive enterprises created much more jobs than companies of traditional industries. The research of *Almus and Nerlinger (1999)* about West German enterprises led to the same results. *Storey and Tether (1998)* identified that the number of the technology oriented firms' employees is low, but the growth rate of the number of employees is high. In addition to this we have to take into consideration their indirect effects on employment and the high quality of the created jobs *(Makra 2007c).*

The special development of innovative technology-oriented small firms
The innovative technology-oriented small firms have a special evolution, their failure rate is high as a result of their high risk level, but the successful ones can reach extremely high growth rates.

The determinants of the development path of these enterprises are subjects of many theoretical and empirical researches.

According to the traditional linear innovation models about the small firms' growth *(Autio 1997)* the development of small firms is the result of a process that has many stages. The creation of idea is followed by the establishment of a company, then human and financial resources are collected for developing the prototype, and in case the idea is viable, the firm enters into the stage of rapid growth.

According to *Greiner's (1972)* organizational growth model the development of all types of the companies has five stages: growth through creativity, growth through direction, growth through delegation, growth through coordination, growth through collaboration. At the end of all evolution-revolution stages occurs a problem that has to be solved in order to get to the next stage. Therefore the growth is highly depends on the management's skills, the past of the organization and the external industrial environment. Greiner tried to develop a general model, but precisely for this generalization it became the target of many critiques, mainly because not all the firms are growth oriented, the early stage is not detailed properly, the categorization of the firms according to their size is not correct, and the development stages are predetermined. *Churchill and Lewis (1983)* modified the five stage model by taking into consideration the characteristics of small enterprises. Their model contains the possibility of ceasing activity, changing strategy and devolution. The stages of development are existence, survival, success, rising and resource maturity. Each stage is characterized by an index of size, diversity, and complexity and described by five management factors: managerial style, organizational structure, extent of formal systems, major strategic goals, and the owner's involvement in the business. The model of *Kazanjan (1988)* is specially applied for new technology enterprises based on empirical organizational lice-cycle research unlike the theoretical research of Churchill and Lewis. *Kazanjan* created a four-staged life-cycle model, which contains the stages of conception and development, commercialization, growth and at the end the stability.

In the eighties and nineties the theory of innovational systems replaced the linear growth theory, which places the innovation into a system influenced by external and internal factors in an institutional approach.

The resource-based (competence-based) growth model based on *Penrose's (1959)* theory considered the growth of the company as a dynamic process that is determined by unforeseeable events. The development of the company is formed by related internal mechanisms. An organization is the sum of the internal competence and knowledge created by the firms' members. The model concentrates on the early growth of the companies, where the criterion of survival is to be able to solve the resource problems through competence building. In the later stages follows the increase of growth, decline or accumulation of resources. There are several ways of development, so a general linear growth path for all companies does not exist.

Technology-based small firms, as a target of venture capital

The global financial and economic crisis has drawn the attention to entrepreneurship as an important source of innovation and economic growth. By the process of innovation ideas are generated and commercialized. University technology transfer utilizing state-financed research is a possible form of commercializing innovations. Innovative technology-oriented small firms with high growth potential could be possible targets of venture capital, so in this way they can be a potential source of economic growth.

The institutional venture capital and private equity investments are professionally managed capital investments into firms not listed on stock exchange, where the professional management is provided by specialized intermediaries. General partners raise funds, collect capital from individuals and institutional investors (from limited partners) to invest into portfolio companies not listed on stock exchange. These are typically hands on investment, which means that investors (general partners) play an important role personally in the management of the portfolio companies. The primary goal

of this long-term investment is to gain profits via exiting portfolio companies, selling stocks on a higher price (Prowse, 1998; Karsai, 1997; Becskyné, 2008).

The status of innovations
The Hungarian innovation system has developed progressively despite the crisis. In the Global Innovation Index (GII) Switzerland, Sweden and the United Kingdom were ranked as the first three most innovative countries. Hungary was positioned by the Global Innovation Report 2013 as an innovation learner, an efficient innovator, and is among the eighteen[15] emerging, high- and middle income economies, as a high income one. These economies improve rapidly their innovation capabilities, demonstrating a 10% or even higher level of innovation compared to other countries with similar income level as a result of good policies of institutions, skilled labor force, innovation infrastructures, integration with global markets and linkages to the business community. Hungary ranked first in the world in the Audiovisual &Related services exports index, and is among the first ten in FDI net outflows (%GDP) (ranks 5th), Knowledge absorption (rank 6th), Creative goods exports (%) (ranks 7th), and as a total index of Knowledge & technology outputs it ranked 13th. The indexes also shows what has to be learned or developed in Hungary: in the Market sophistication index Hungary ranked the 87th spot, because of the low rankings of Microfinance gross loans, Investments, the Ease of protecting investors and the Market capitalization, where the country ranked around 100th (Cornell University, INSEAD, and WIPO, 2013).
In Hungary some special innovation factors are among the bests in the OECD countries, e.g. the Audiovisual & related services exports, FDI net outflows, Knowledge absorption etc., but it has to learn more in the fields of Microfinance gross loans, investments, ease of protecting investors and market capitalization. So if the financial environment were more developed, by taking advantage of their special competitive edges, there would be more innovative venture capital backed firms. The changes in financial situation concerned the parameters illustrating the management of the enterprises, influenced the competitiveness, profitability, effectiveness, etc. (Herczeg, 2009, Fenyves-Tarnóczi, 2011).
In this learning process innovation hubs would mean an important supporting role. Innovation hubs can help in creating a differentiating capabilities system that offers a sustainable competitive advantage. In innovation hubs, like Silicon Valley, hundreds of ideas are generated, and as a result of high concentration of prospering companies, more and more amounts are invested in research and development, accelerating the process of new product creation. Public and private sectors have important roles in developing an appropriate innovation ecosystem, in order to support innovations (Cornell University, INSEAD, and WIPO, 2013).

Entrepreneurship as a source of innovation
According to the survey Flash Eurobarometer Entrepreneurship in the EU and beyond published by the European Commission in 2010 87% of respondents answered, that the appropriate business idea was important, during the decision making of starting a business. 84% of the respondents answered, that it was important to have the necessary financial resources.
The survey examined the reasons for preferring self-employment. The reason "personal independence, self-fulfillment and the chance to do something of personal interest"

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[15]The eighteen countries are: the Republic of Moldova, China, India, Uganda, Armenia, Viet Nam, Malaysia, Jordan, Mongolia, Mali, Kenya, Senegal, Hungary, Georgia, Montenegro, Costa Rica, Tajikistan and Latvia

ranged from 43-45% in Iceland and Japan, to 83% in Hungary. The "better income prospects" was the second most popular reason among Hungarian respondents, reaching the highest rate ranking from 4% in Finland to 60% in Hungary. The "freedom to choose their own place and time of work" ranged from 18%-21% in Greece and Germany to 68% mentioned in Luxemburg. In Hungary 48% of respondents chose this reason. Hungarian respondent were the most likely (26%) to say that they would prefer self-employment to be able to realize a particular business opportunity (European Commission, 2010).

According to this survey, Hungarian respondent's entrepreneurial motivations are mostly defined by the personal independence, self-fulfillment and the chance to do something of personal interest and better income prospects. The freedom to choose their own place and time of work is also an important reason to become an entrepreneur. In this interpretation, innovation is not among the motivators of most entrepreneurs, but entrepreneurs founding high-growth potential firms can create a special segment of companies.

Status of start-ups especially for high growth potential

The recent crisis, characterized by tighter credit restrictions, has arguably hampered new start-ups and impeded growth in existing start-ups as well as their ability to survive in tough market conditions. The significant rise in business closures, especially in case of micro and small enterprises, in recent years, bears stark witness to these difficult conditions and highlights the need for statistics on entrepreneurship that can support policy makers. Entrepreneurship at a Glance contains a wide range of internationally comparable measures of entrepreneurship designed to meet this need.

According to the survey made on behalf of the OECD (Entrepreneurship at a Glance 2013), the start-up rates still remain below pre-crisis levels in most Euro area economies, but tentative signs of stabilization are emerging. The high-growth enterprises generally represent on average only a small share of the whole enterprise population, ranging from 2% to 4% for most counties, measured on the basis of employment growth. On the basis of turnover the shares were twice as high, but both measures were still lower than in 2006 in almost all counties. The share of high-growth firms were higher in the service sector, than in manufacturing, in all counties for the measures based either on employment or on turnover. The rates of Hungary were around average (OECD, 2013).

Status of venture capital investments especially for classical ones

Initial studies found, that venture capital investors prefer financing founders with higher qualification (Macmillan-Siegel-Subbanarasimha 1985, Birley-Lelelux, 1996, Shepherd-Ettenson, Crouch, 2000). According to the empirical evidences provided by Ortin-Angel and Vendrell-Herreto (Ortin-Angel – Vendrell-Herreto, 2009) young university spin-offs attract more venture capitalists than other technological start-ups, explained mainly by the lack of managerial skills among these firms' founders. Others found that founders of university spin-offs have higher formal education levels (Siegel-Waldman-Link, 2003), but fewer managerial skills than founders of other start-ups (Shane 2004, Vohora-Wright-Lockett, 2004).

In the majority of OECD countries, venture capital investments represent a very small percentage of GDP, e.g. often less than 0.03%. Israel and the United States have outstanding rates, 0.5% and 0.2% of GDP respectively, that indicates a mature venture capital industry in these two countries. In a parallel way the crisis has affected the venture capital industry in all OECD countries, and the level of venture capital investments was around 60% of the levels measured is 2007 in most counties, only Ireland and Luxemburg exceeded the pre-crisis level.

40% and 30% of venture capital investments in the US and in Europe were made on the field of life sciences. Investments target companies in their start-up and later-stage ventures; and only a very small number of companies are backed by venture capital (OECD, 2013).

Zhang (2008) found that university spin-offs have higher survival rate, but in terms of the amount of venture capital raised university spin-offs do not show significant differences, such as the probability of IPOs, making profit or the size of employment.

According to the size of the Hungarian venture capital and private equity industry (VC&PE industry) measured as "a percentage of the value of investments into companies headquartered in Hungary as a proportion of the country's GDP" (Karsai, 2013, pp. 25) Hungary had a prominent rate among the EU and even among the OECD members (OECD, 2013), although for the investment/GDP the ranking of Hungary has dropped from the fifth in 2006 to the 22nd in 2010. Although the size of the venture capital and private equity market had high rankings, usually it was influenced by high value individual buyouts (Karsai, 2013).
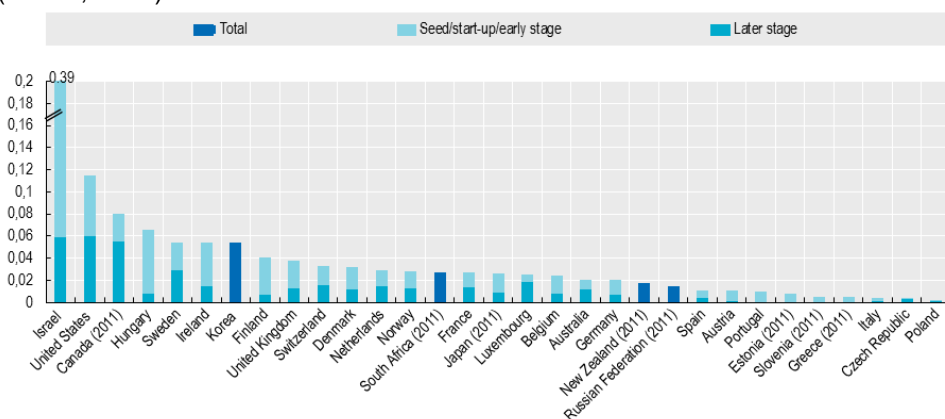
Figure 1: Venture capital investments as a percentage of GDP (US dollars current prices), Percentage, 2012
Source: Entrepreneurship at a Glance 2013 - © OECD 2013

The Hungarian classical venture capital market, financing small and medium size enterprises with a high growth potential, has usually got the lowest rankings in Europe, typically below 10% of the EU average. In the period 1989-2010 approximately half thousand investments were made in classical venture capital investments in Hungary. The number of enterprises getting venture capital during the twenty year period was only 0,2% of the double entry bookkeeping enterprises in Hungary, though in the EU 6% of the small and medium sized enterprises got venture capital investment. According to the OECD survey the number of venture capital backed company rate per 1000 enterprises was 0,02, though the OECD rate was around 0,28. These low rates are because of the relatively young venture capital market and less developed capital market. According to Hungarian researches the barriers of the classic venture capital investments are not deriving from the supply side, but the demand side (Karsai, 2013).
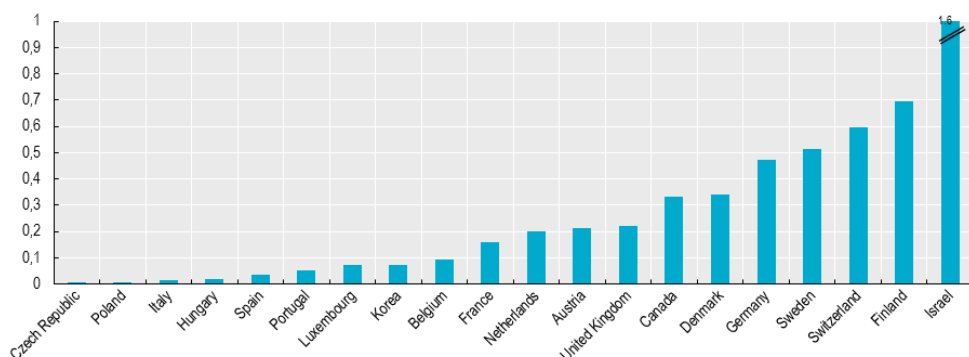
Figure 2: Venture capital backed company rate, Per 1000 enterprises, 2010
Source: Entrepreneurship at a Glance 2013 - © OECD 2013

According to a survey made in 2008 (Szerb, 2009) only 0,25% of Hungarian SMEs, are suitable for VC investments, and the potential targets of institutional and venture capital investors are around 400 to 600 firms. Before the dot.com bubble the lack of these investments were caused by low quality management. According to the recent surveys, the barriers of the investments are not only the information gap between the demand and the supply side, and the lack of the supporting organizations, but also the poor competitiveness and low level of innovations and still the low quality of the management, so the enterprises are not ready for venture capital investment (Karsai, 2013).
The venture capital backed enterprises were more competitive than others, and showed higher differences on the field of the individuality of the product, quality of technology and the continuity of innovation (Szerb, 2009).
So the innovative, technology-based small firms with individual product have high growth potential, and in this context automatically become potential targets of venture capital investors.
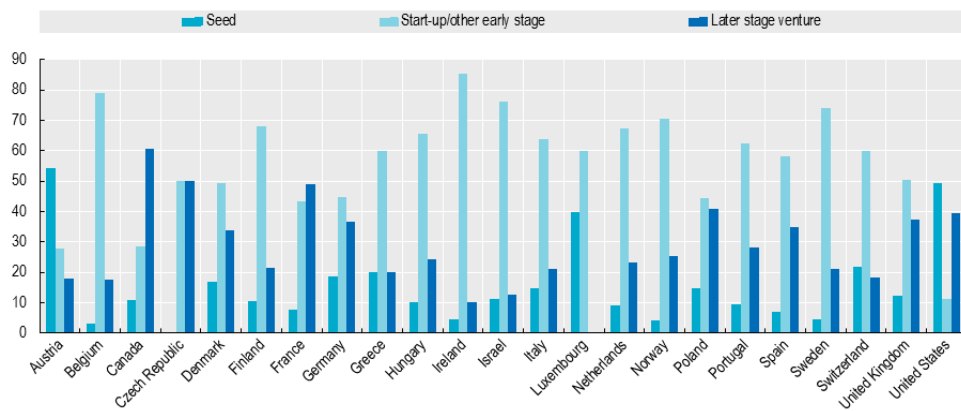
Figure 3: Venture capital backed companies by stage, Percentage, 2011
Source: Entrepreneurship at a Glance 2013 - © OECD 2013

According to a survey about Hungarian spin-off companies (Becsky-Nagy, 2013) the founders of spin-offs find that the involvement of venture capital investors restricts their freedom in decision making and it can remain an important obstacle for venture capital financing. The creation and growth of university spin-offs can be stimulated by lowering information asymmetry and facilitating contact and trust between venture capitalists and entrepreneurs, especially in cases where the lack of managerial skills of entrepreneurs

occurs. The founders generally do not have enough managerial skills and they are not able to write high quality business plan.

Conclusions

For the entrepreneurs the most important challenges of starting a business are the appropriate business idea and the necessary financial resources. The Hungarian entrepreneurs are mostly motivated by personal independence, freedom and better income prospects and not by innovation. In case of venture capital investments the entrepreneur has to give up a part of the independence and needs to cooperate with the investor to create companies with high-growth and the possibility of international business success. In Hungary the number of internationally competitive firms, ready and willing to obtain venture capital, is much lower than in the US or Western European countries. Hungary could take advantage of benefits in some special fields if innovation, as the country has the best rates in some indicators of innovation. The increased efficiency of information flow between the venture capitalists and entrepreneurs would lead to more transactions and more Hungarian firms would reach international successes. The recent years' policy and special programs like JEREMIE generated more transactions, that helped to inform the entrepreneurs about venture capital and helped to co-invest public resources with private equity more efficiently, but the global crisis had negative impact on the industry. The venture capital backed small firms are more likely to create relatively higher economic growth, but as a result of the low number of occurring and potential venture capital backed companies, they can hardly have a high impact on total economic growth, even with the help of the JEREMIE program.

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DEVELOPMENT OF DECISION MAKING BY MANAGERS WITH FINANCIAL AND ACCOUNTING INFORMATION

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Abstract. *The quality conditioning of an accountant's job corresponds thus with the competitive level in the company. The operationalization of the used specialty language, on the one hand and on the other hand the efficient management of the financial situation acquire a significant role regarding a strategic partnership at the micro and macroeconomic level in business as long as the managerial structures of understanding the economic reality are put in correlation with the accountant's socio-professional training in the firm/concern. Even if the professional accountant is paid by a determined client, which is the final beneficiary of the development service or audit financial statements, the information drawn from these financial statements are used by those who form the public. In this way, the accounting profession is distinguished from the other profession by accepting its responsibility to the public. There are numerous studies on an international level, dealing with various methods of improving the decision making process. The most competitive multinational companies have already considered the opportunities favored by financial adjustments, directed at streamlining the accounting functions and they have also trained professionals in the field of accounting that would successfully perform as business partners, thus assisting the decision making process within the organization. The financial adjustments have become essential for many companies that have thus gained a significant competitive advantage. The plan for improving the efficiency of the financial function is very clear, but the training of the business partners who would provide assistance in making decisions still remains a challenge. The economic perspective on the account reality highlights a pragmatic materialization, at the company's level, of some specific skills designed to support the important role that the financial situations have. So, the individual significations of the accounting practice generate inside society different attitudes of the economic actors. Moreover, a pragmatic accounting model allows the development of some strategies that can be made in accordance with the analysis-diagnosis services. This situation is that the accounting profession has an important role in the society.*

Keywords*:* strategic partner, analysis-diagnosis service, consultancy

JEL classifications: G 34, M 14

1. Introduction

Professional accountants have an important role, their attitude and behavior in connection with provided services generating social and economic effects both at micro and macroeconomic level. Investors, creditors, employers and other socio-economic actors from different sectors of the financial community, including the government relies on the professional accountants to prepare accurate financial accounting and accurate reports, for an efficient financial management and competent advice on a variety of business and tax issues. In this sense, the public, at large, should have confidence in their ability to put

in place rigorous systems of management and information, able to provide an effective financial management and offer informed advice over a large amount of issues, over business management or fiscal. In order to understand the social role, it should be taken into account that parasitized balances at the profits to be taxed (as a result of improper accounting services) can lead administration to a number of tax implications to the conclusion of establishment of new taxes to the taxpayers. (Istrate, 2000)

When making decisions aimed at meeting the objectives of the company, the management team must know the exact situation the company is in. As managers are interested in knowing the actual state of the company, they wish to find an answer to the following questions:

- Is the company viable? The balance Sheet allows one to assess profitability if the asset accounts are structured according to the ascending liquidity criterion and if the liability accounts are structured according to the ascending contingency criterion. This traditional approach of the capital and of the company solvency tends to be replaced by another, based on the functional structuring of the balance sheet and on the use of the financing panel.

- What is the performance of the company? In order to assess the performance of the company, one must compare the input used to the resulting output. This is highlighted by the output indicators, especially by the intermediate inventory balance, detailed in chapter three.
- What is the development stage of the company? One should know how much the activity of the company has increased during the financial reporting period.
- What are the risks the company is facing? One should identify the bankruptcy risk, following a payment default, for instance, or the purchase ceasing risk, the contraction risk or the risk of losing the outlet markets, etc.

In order to attain the objectives of the scientific research, we have oriented our research on two directions, using both methods of fundamental research and applied research. The research strategy follows the approach staging, comprising methodological elements specific to particular stages of the research in question:

- data search and collection (scientific observation): methods, techniques and instruments of observing and investigating the reality;
- data processing: preliminary analysis (methods, techniques and instruments of data processing, of logical analysis and interpretation); hypotheses formulation (construction devices of the proposed enunciations and solutions, of a provisional nature, with a purpose to be checked);
- construction, hypotheses checking and model testing: qualitative and quantitative techniques, formal and logical principles of model construction and solving;
- generalisation and theoretical construction (the conclusive part of the research)

Accounting is a support, an aid for management. Accounting is not a purpose in itself, but a method of collecting and processing the economic and financial data, thus being of use for the general and the financial management of the entity. The accounting information is built gradually, as the entity develops its activity, while the management, in all its forms, needs a portfolio of data collected throughout the activity and even before the actual occurrence of the operations with the aim of making decisions that would oversee the production, commercial and financial activities, adjusting them according to present circumstances, new or currently developing formal phenomena.

2. The accounting profession and its role in society

This approach does nothing but to highlight a judicious understanding regarding the relationship between the public interest and the accounting profession. In other words, the mentioned correlation does nothing but to highlight a review of managerial nature, through which the accountant is seen as strategic business partner. It is visible in this context, the important role that the accountant can play at the enterprise level in the moment when it is brought into discussion the relationship between the public interest and the accounting profession in conjunction with the analysis-diagnosis service. In conclusion, we support the idea that, the public interest sends to the idea of welfare of the community and of institutions served by a professional accountant. In this context it is about the understanding of the conceptual context that finds itself in the National Code of Ethics for Professional Accountants, where there are established rules of conduct for professional accountants. In this context we find the following basic requirements: credibility, professionalism, service quality, trust. Moreover, the standards of the accountancy profession are heavily determined by how economic actors relate to public interest (Law nr.477/2004).

This is due to the fact that almost all users make economic decisions for:
- deciding when to buy, keep or sell securities;
- evaluating the ability of the company to distribute and pay its employees' benefits;
- finding out the profit level and how much of it is distributed as dividends;
- developing various statistics;
- regulating the activity of companies.

Social context in which the accounting profession is required at the enterprise level can be understood to the extent that the instrumental value of the management approach is reflected in its structure. In this way, the economic innovation relates to the requirements of social community. However, as a fundamental activity in an enterprise, the accounting profession must be sustained given its pragmatic nature.

The high technology made that a part of an accountant's work to be taken over by software. This situation has created an effective working time of accountants, in the sense that by its reducing, they are no longer simple, accountant "but by this technological advance, they have become a very important human resource in the structure of an organization. Thus, the accountant tends to become an important component in the company, one of the most important structures of an organization that has a hard word to say when business decisions are made. However, many customers do not realize how important is a good accountant in their company, how much he/she can help to raise the company and how much he/she can contribute to managerial performance.

Professional accountants have an important role in society. Community, public relies on professional accountants for financial accounting and for proper reporting, for an efficient financial management and competent advice on a variety of business and tax issues. Therefore, any business should consult such a competent person before open a business, throughout its operation and until it will radiate from the trade register. Why this attitude? Precisely because it is 'assumed' that a professional accountant has the necessary knowledge to adopt the best tax solutions and he/she can protect, defend the entrepreneurial from the risk of paying unnecessary fines or to support an excessive tax. In other words, an accountant can give entrepreneurs a complete and accurate picture of the business carried on by the company / enterprise.

First, an accountant should be a strategic partner in business. He/she should take over any asset movement of a company and must show the effects of these movements to the management. Secondly, the accountant has the duty to transpose correctly and

completely those asset movements into information which will be delivered on time to the tax authorities. Thirdly, when a manager wishes to choose an accountant, he/she must select a professional, who demonstrates that he/she cares about the smooth running of the business, a professional with whom he/she feels that can communicate openly, without restraint, proving to be a reliable person. This fact may illustrate the fact that a good accountant find the right economic language, so that he/she can be understood by the manager, and the information provided by the accountant to help a better management of the business.

For a commercial company that already has an financial -economic history, first it is made a verification/survey of how accounting rules were respected, there are identified the repairable errors, it discusses with persons from company board about the vision, the organizational structure and the records of the financial - accounting department. In this way there is identified the complexity of the business and if it is required the providing of other related services such as: internal reporting or IFRS reporting, other requirements of the parent companies (ex, withdrawal, peer review and certification, etc.).

Thus, we can conclude that:

- Decision making is not the actual end of the process, but is manifested continually in order to reach the objectives;
- The accounting professional assists in the drafting of strategic planning and of the governing strategies of the company that define the competitive position and the objectives of the entity;
- Personal issues and attitude can influence decision making, but business partners can address the problem by supporting decisions based on evidence;
- Business partners can help „formulate" a decision; they can provide management information; they can bring forward ideas and alternative studies that favour successful management (fig. 1). Clearly, accounting professionals have always had a significant role in each stage of the decision making process. This is good news for financial managers who possess technical skills, who understand how the business works, who use good communication techniques and who can influence the future of the company.

Figure no.1 Types of business
Source: CIMA, September, 2010

Even though the term „business partner" is widely used to describe the role played by both commercial and accounting management, the expectations related to this role may

vary. Although the associated service centers – whether internal, external or offshore – become capable of providing financial reports and analyses (such as type 1 in the above diagram), most business partners supply operational support (type 2).

As long as they can be „provoked in a constructive manner" when necessary, this relationship may be favorable for manufacturing companies and especially for those with a long life cycle, for instance Ford and Rolls-Royce. Other business partners work with the management more closely and provide professional support, as well as guidance from headquarters (type 3). The ideal business partner, especially in a consumerist society, is one that can collaborate empathically with operational managers (type 4). He or she uses a common language, rather than economic jargon, and instates accounting discipline in decision making, as well as brings forward other people's suggestions – in other words, a prudent partner.

Accounting firms should not accept the conclusion of service contracts with companies suspected of tax evasion, with litigation regarding unpaid debts to third parties or whose ownership is hidden, companies that have not done a proper inventory of assets in previous years, as well as those entered into liquidation proceedings. Moreover, the literature points out that in such an approach, emphasis should focus on analyzing the relationship between debt and earnings quality (Ghosh et al, 2010).

Accounting- customer relationship must be one of mutual trust, be an amicable, open relationship. The accountant is the person who should "open eyes" of the entrepreneur and teach him/her to do things right. The latter must ensure primarily that the accounting firm or accountant have the right to practice, right acquired by a specialized degree or through a membership card CECCAR target date. Moreover, in order to exist an efficient relationship between the two parts (the accountant and client) must be established early in the contractual relationship a set of rules for communication on the information to be observed throughout the course of the contractual relationship. Moreover, the lack of communication represents the main issue between the accountant and his client, irresponsibility of certain customers in the importance given to accounting. There are still many customers who present the documents to the accountant with delay, customers who still do not realize what dangers are exposed when they prefer to take no accountant and to do what they think, customers who arrive at an accountant with documents too late, only then realizing that an accountant would cost him/her less.

Customer must realize that in today's society an accountant is no longer a person who simply collects figures, but that it has an overview and in particular of the company and manages to decrypt in a balance the investments that the company has made. The accountant is not just a recorder of invoices. The accountant must, in this way, to pass background his/her old concerns to register documents or to accomplish a company's financial statements and occupy an important place among specialists at the firm level, to have an important role in its proper administration and management through the consultancy he/she offers. More important, he/she must expand the sphere of responsibilities and to diversify the offered consultancy so as to generate high quality services for businesses.

An accountant knows how to gather information required for any development, drawing up a strategy of the firm. In this way, he/she becomes an active human resource within the company/enterprise. There is almost no decision that not use the information provided by him. The accountant has become a person who has the power to influence decisions throughout the company. Thus, in modern society's economy, the accountant's role has changed both at the enterprise level and at macroeconomic level.

You cannot settle any transaction without knowing which is the market, which are the costs. We must distinguish between the accountant who only operates some papers received from the client and submit reports to the tax and the accountant who has a

working relationship and partnership with his/her client, provides the client with reports and information that are useful even in management decisions. Vain client receives a list of suppliers or receivables outstanding receivable on 28 February for a position on 31 July. These just do not use anybody, remains only work sheet. It is true that an accountant is able to inform the manager of his company's financial situation in real time and must be consulted before taking any decisions, representing a key link in running a business.

As a consultant for various entities, the role of the professional accountant is to provide practical solutions, through which businesses can improve their own work. Thus, efficiency and productivity can increase, and the negative aspects in financial, accounting, tax, human resources, and they can be prevented or even removed. Perhaps, therefore, when IMMs create opportunities of employment, an important role has the way in which the management is interested to explore the obtaining of additional value. Throughout this process, professional accountants have an important role, which are true consultants on running their own business. On this issue, the concerns of the professional institutes of profile to assist IMM s in the (inter) national level are oriented towards how the decision-making policies are applied to social level. It is known in this way the role that the the Small and Medium Practices Committee has in the CECCAR. This follows the knowledge and national implementation of all standards issued by the PMM Committee of the International Federation of Accountants - IFAC.

The most important activities that a professional accountant can hold for an economic entity are: the accounting mission, analysis-diagnosis services, and consultancy for obtaining firms' financing, consultancy for European projects, tax consultancy, and consultancy for restructuring business.

Regarding the accounting mission, professional accountant analyzes the costs and informs the management company about any found problems, identifies the distortions generated by inflation and the impact on enterprise management, quantifies the incidence of depreciation of the company costs, details in the analytical the accounts of expenses, taking into account that an accounting held only at synthetic level may cause inconvenience and hardships that can go up to the entry into insolvency. Also, there are indispensable to the accounting those approaches characteristic to the analysis-diagnosis services in order to improve the preventive control or other financial – account transactions. In this context, we consider it worthwhile to mention, on the one hand, the consultancy for obtaining financing, that is a real niche that the accounting professionals can approach, and on the other hand, the European projects seen as effective funding sources, in which accountants are contacted to participate actively in the actual implementation steps.

Another extremely important role that professional accountant has is in the restructuring of business activity. This situation can generate a review of internal structural, fact that can generate the reorganization of the actual business. Moreover, this review process involves a rethinking of market relations in order to improve trade relations, in order to strengthen its portfolio of clients and to optimize cost optimization. In this way, the accountant is an important person in the company, around which revolve business decisions. It is obvious in this situation the role of governor office of the accountant, the influence it can have on economic agents (shareholders, banks, investors).

In conclusion, what is the role of the accountant? The answer is simple, through the activity he/she conducts; they lead (in) directly the destinies of a society. There are voices which say that an accountant is a simple operator of documents. Of course, this claim is totally incorrect. The enormous amount of documents which transit the accounting office, accounting analysis which always requires resolution, achieving budgets, the proposal of some tax solutions, many calculations of taxes, all these represent basic components of the accounting profession. Seen from the perspective of the economic reality levels, the

accounting profession reflects possibilities of structural organization at the firm level, through which the pragmatic reasons find their foundation in a social perspective.

To be a good accountant requires in addition to the graduation of an economic faculty, professionalism, passion, commitment, a lot of "science" (whose ingredients are the law concepts, taxation and, of course, accounting). Accounting is a profession that requires professional training and this is possible through the specialized courses (for instance, counseling courses, taxation, financial analysis is found in CECCAR). In other words, an accountant is a person trained and capable of bringing added value to the business, to the company in general (Blair, et al., 2007). Or, the accounting performance is in the efficient management of the economic activity of the firm, but also in affirmation of the specific skills of the accounting profession. Therefore, the accounting department is an important dimension of a firm. In addition, any business, managers to be performing at the firm level, must have accounting knowledge. In this way the financial - account situation of the company can be correlated with its daily activities, and any difference between the accounting balance and the company's reality can be avoided.

3. Conclusions

Conditioning the quality of the accounting profession corresponds to the competitiveness of the firm. Appling the used specialized language, on the one hand, and on the other hand, the effectively managing of the financial situation become significant regarding a strategic partnership in business at the micro and macro-economic level, to the extent that the management structures of understanding the economic reality are correlated with the socio-professional training of the accountant in the company/enterprise. Stimulating competitiveness and quality at the firm level places the accounting in an axiological dimension, where the need of development economic-social structures is obvious. The progresses represent in fact the implementation of the accounting skills which aim is both to promote the performance, and to get a profit at the company level, all these having as aim the idea of global accounting harmonization (Tabără, et al., 2009). Therefore, the competitive approach must take place, on the one hand, morally, and secondly, by reference to the social environment. We believe that the main objective would be management awareness of the following:

- Separating the fiscal accounting information in the economic-financial analysis;
- The dashboard in the financial management of the entity;
- The working capital in analyzing the financial equilibrium of the entity;
- The list of trial balances in the sector analysis of the entity;
- The treasury flows in analyzing the entity's ability to generate liquidities;
- The periodic analysis of the earning capacity, liquidity and solvency rates;
- Establishing different accounting policies that meet the interests of the entity and placing the fiscal aspect on a secondary position.

The real skill of an accountant can be seen in the way in which he/she performs the financial analysis at the firm level, how he/she directs and harmonizes the figures observing the movement means and resources of an enterprise. The professionalism of an accountant is of quality when he/she manages to maintain his/her professional knowledge and skills at the required level. It may be generator of added value when adapting to recent legislative regulations and when performance is a strong point in the praxis of the accounting approach.

The decision comprises five main aspects referring to the ability of the organisation to compete on the market:

- To be sustainable. The decision must ensure a change that would last throughout time. The long term survival of the organisation requires a durable strategy.

- To be distinct. It should be different from the competitors', in terms of novelty. A sustainable strategy is more feasible if it differs from that of its present or potential competitors.
- To provide a competitive advantage. It must not only be distinct, but also present an actual advantage that would allow the organisation to prosper. The corporate strategy is usually employed in a competitive environment.
- To make the best of the relationships between the organisation and its environment. The strategy will take advantage of the numerous relationships existing between the organisation and its environment: suppliers, customers, competitors and, more often than not, the government, through its institutions.
- To be farsighted. It should have the ability to propel the organisation further, beyond its present environment. This entails the employment of innovative strategies.

In a market economy, the accounting information is a force that bestows decisional power upon those who own it, even if this information is not completely accurate. As Michel Capron pointed out in his paper „La comptabilite en perspective", quoting André Cibert, "there are as many truths as information recipients and, as long as it excludes quality, the reducing effect of each measure is inevitable". Authors such as Bernard Colasse or Daniel Boussard have acknowledged the fact that "the truth provided by accounting is only a filter that allows the understanding of a reality".

Economic creativity necessarily requires the existence and active display of creativity on the part of the accounting professional in issues related to finance and credit in the context of managerial activities. Financing means deciding. Financing under efficiency and productivity means allocating the financial resources of the entity competently, according to the given restrictions. Actually, this means creating the background and favorable consequences for the proper development of the entire range of activities of the entity.

The lack of accounting support in defining the management rules shows that 75% of the accounting professionals provide the results of the general course and about 70% say they are addressed by operational departments to provide management information.

The design and development of a general information system for decision making in the financial and accounting activity is a gradual process whose success depends on proper research into financial analysis models and methods so as to determine an appropriate set of indices for assisting decision making. It also depends on designing a flexible architecture of the system that would adapt to the organizational context of each user.

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HOW RISKY ARE SIF'S SECURITIES?

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Abstract: *The capital asset pricing model (CAPM) lies at the heart of models in financial economics and it has a long history of theoretical and empirical investigations. The beta (β) of the stock is a measure of how much specific risk remains in the stock after all possible risks are diversified. The specific risk of an individual stock is the slope coefficient of the regression between the return for the individual security and the return for the market index. The main aim of the paper is to measure the systematic risk for a given number of stocks from the Romanian capital market in order to determine if these stocks are riskier than the market itself. The focus is on market risk and not on the company-specific risk and the hypotheses tested states that "stock market prices are mainly set based on the trading activity of the investors". Using data for the period 2001-2014, the results suggest that all SIF's were bearing a higher risk than the market itself, with an increasing level for the sub-period 2008-2014 (post crisis). Since SIF's are earning a high return too, these results are consistent with risk-return trade-off. The results remain robust even when was used monthly return instead of daily return.*

Keywords: CAPM, beta, stock, risk, return

JEL classification: D53, G11

1. Introduction

The capital asset pricing model (CAPM) lies at the heart of models in financial economics and it has a long history of theoretical and empirical investigations. The underlying concept of the CAPM model is the positive association between risk and return. In other words, stocks with a high level of risk should earn a higher return and vice versa (Perković, 2011).

Beta (β), i.e. the covariance of a stock's return relative to the market portfolio, is a critical measure of the systematic risk of the stock. In risk models in finance, beta have two mainly features. First, instead of measuring total risk it measures the risk added on to a diversified portfolio. Therefore it is likely for a stock to have a high level of risk in terms of individual risk and a low level in terms of market risk. Second, beta is a relative approach of systematic risk in comparison to the benchmark selected.

The main aim of the paper is to measure the systematic risk for a given number of stocks from the Romanian capital market in order to determine if these stocks are riskier than the market itself. The focus is on market risk and not on the company-specific risk and the hypotheses tested states that "stock market prices are mainly set based on the trading activity of the investors". To do so, I estimate beta for all financial investments societies (SIF) by regressing their return against BET index return over 2001-2014. The motivation for testing SIF's stocks relates to their importance on the Romanian stock market, formerly known as "the stock exchange engine". The results suggest that all SIF's were bearing a higher risk than the market itself, with an increasing level for the sub-period 2008-2014 (post crisis). Since SIF's are earning a high return too, these results are consistent with risk-return trade-off.

The paper is organized as follows. Section two briefly highlights the theoretical considerations regarding CAPM model and the role of beta. Section three describes the variables used and methodological framework. Section four reports the results while section five concludes.

2. Literature review

It is well known that investors with diversified portfolio care very little about company-specific risk because that risk can have little impact. On the other hand, they are affected by market risk which is not diversifiable and therefore stock prices will tend to be determined without regard to company-specific risk (Patton and Verado, 2012).

The pioneer of the CAPM was Markowitz which states that investors' select "mean-variance-efficient" portfolios either maximize the expected return or minimize the risk (Markowitz, 1952). Later, Sharpe (1964) and Lintner (1965) developed the Markowitz model by including several hypotheses. Among these it could be mentioned that investors assess their investments over the same single holding period, perfect capital markets and same investment opportunity. According to their models there is a positive and linear relationship between risk (β), and expected return. Thus beta risk has become the iconic symbol of the CAPM (Benson and Faff, 2013). The CAPM equation is the following:

$$\mathrm{Re} = \mathrm{Rf} + \beta(\mathrm{Rm} - \mathrm{Rf}) \qquad\qquad (1)$$

where Re is the expected return on the stock, Rf is the risk-free rate, β is a measure of the level of market risk in the stock, and Rm is the expected return on the market portfolio.

From empirical point of view, several findings support CAPM model. Black et al. (1972) found that the relation between the average return and beta is very close to linear and portfolios with high betas have high average returns and vice versa. Fama and MacBeth (1973) lead to similar results, i.e. positive relation between risk and return but Fama and French (1992) found and insignificant relation between beta and cross-section returns.

Later, Perković (2011) state that beta is not appropriate measure of risk on underdeveloped stock markets as Croatian. Patton and Verado (2012) investigate whether firm-specific information affects the market risk of a stock and the results reject the hypothesis tested. Given the controversial and relative results for different samples and methodologies one could argue that additional research is required in order to reach a consensus.

3. Data and methodology

Modern Portfolio Theory states that investors are not rewarded for the total risk of an investment and rather for the systematic risk. The motivation for such hypothesis is that total risk includes firm specific risk which can be eliminated in a well diversified portfolio. The beta (β) of the stock is a measure of how much specific risk remains in the stock after all possible risks are diversified (Hoover, 2006). The specific risk of an individual stock is the slope coefficient of the regression between the return for the individual security and the return for the market index.

There are three main issues that an analyst should deal with in setting up the regression aforementioned. The first issue relates to the length of the estimation period. It is well known that a longer estimation period provides more data, but the companies itself might have changed in its risk characteristics over the time period. SIF's have changed substantially in terms of business mix after the financial crisis and therefore the regression

will be affected by these changes. In this respect, we perform an analysis for entire period, as well as for subsamples, respectively before (2001-2008) and after crisis (2008-2014).

The second issue relates to the return interval considered. In several data sources, stocks returns are available either annually, monthly, weekly, daily, and even. It is likely to increase the number of observations in the regression by using daily or intraday returns, but due to non-trading the coefficient are biased. The non-trading bias is reduced significantly by using weekly or monthly returns (Damodaran, 2008). To deal with this issue and for the robustness purpose, I performed regression based on both daily and monthly returns.

The third issue relates to the selections of a market index that can be used as a benchmark in the regression. Since I'm estimating the betas for the capital asset pricing model, the index that I'm using is BET index. BET index is the reference index for BSE market and it include the most 10 liquid companies.

In order to evaluate how SIF's performed as investments between 2001 and 2014 and how risky are, I regressed the returns on SIF's against returns on the BET index between June 2001 and April 2014. Data are collected from Bucharest Stock Exchange, statistics section. The returns on each SIF and the BET index are computed as follows:

The returns for SIF's stocks are computed both day on day and month on month from June 2001 to April 2014 and include exclusively the price evolution:

$$R_{SIFi,j} = \frac{Price_{SIFi,j} - Price_{SIFi,j-1}}{Price_{SIFi,j-1}} \tag{2}$$

where "$Price_{SIFi,j}$" is the price for SIFi at the end of day/month j; i = 1 to 5.

The return for BET index is computed for the same time period and for both return interval:

$$R_{BETj} = \frac{BET_j - BET_{j-1}}{BET_{j-1}} \tag{3}$$

where "BET_j" is the level of index at the end of day/month j.

Given these, the equation estimated in terms of raw returns is the following:

$$R_{SIFi,j} = \alpha + \beta \times R_{BET,j} + \varepsilon \tag{4}$$

In terms of estimation method, the equation is estimated using OLS method. Since the model is a times series data, it have been tested for serial correlation and heteroskedasticity. The specific tests suggest such issues and therefore it have been used the Newey West procedure to correct them.

4. Results

In this section, there are reported the results for the models employed. First, table 1 report the main descriptive statistics for the dependent variables.

Table 1: Descriptive statistics

Description	SIF1	SIF2	SIF3	SIF4	SIF5
Daily Return					
Mean	0.001	0.001	0.001	0.001	0.001
Median	0.000	0.000	0.000	0.000	0.000
Std. Dev.	0.027	0.028	0.033	0.026	0.027
Monthly Return					
Mean	0.039	0.042	0.033	0.032	0.041
Median	0.033	0.026	0.029	0.033	0.032
Std. Dev.	0.176	0.177	0.154	0.143	0.164

Source: Author calculation

One can observe that for daily return the average returns is low for all SIF's and al are characterized by volatility. Similar behavior is highlighted for monthly return. Surprisingly, the highest return is recorded for SIF2.

Next, it have been employed a daily return equation for each SIF, for entire sample as well as for specific pre (22.06.2001-15.08.2008) and post crisis (16.08.2008-04.04.2014) subsamples. The results are reported in table 2.

Table 2: Regression results – Daily Return

Sample	Variable	Models				
		SIF1	SIF2	SIF3	SIF4	SIF5
2001-2014	BET	1.064***	1.105***	1.024***	1.005***	1.081***
		(0.057)	(0.057)	(0.056)	(0.052)	(0.054)
	R-Squared	0.392	0.393	0.260	0.376	0.414
	Durbin-Watson	1.89	1.92	1.96	1.90	1.98
	# of observations	3094	3096	3093	3073	3087
2001-2008	BET	0.846***	0.873***	0.785***	0.860***	0.859***
		(0.067)	(0.076)	(0.079)	(0.066)	(0.069)
	R-Squared	0.245	0.227	0.115	0.242	0.247
	Durbin-Watson	1.95	2.01	1.97	1.88	2.07
	# of observations	1707	1712	1705	1694	1702
2008-2014	BET	1.246***	1.301***	1.228***	1.126***	1.267***
		(0.068)	(0.057)	(0.056)	(0.062)	(0.058)
	R-Squared	0.545	0.585	0.520	0.533	0.599
	Durbin-Watson	1.81	1.79	1.94	1.95	1.86
	# of observations	1387	1384	1388	1379	1385

Notes: HAC Standard errors are shown in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Author calculation

Globally, al SIF's are slighter riskier than the market itself, since β is higher than 1. The most risky seems to be SIF2 securities. However, when the sample is divided, one can observe that in the pre-crisis period the SIF's securities were less risky than the market itself. As expected, the securities encountered a higher level of risk after the crisis was triggered.

In order to deal with non-trading bias, it have been employed a monthly return equation for each SIF. Following the procedure aforementioned, the models were tested for entire period as well as for pre and post crisis period. The results are reported in table 3.

Table 3: Regression results – Monthly Return

Sample	Variable	Models				
		SIF1	SIF2	SIF3	SIF4	SIF5
2001-2014	BET	1.271***	1.410***	1.266***	1.084***	1.386***
		(0.178)	(0.168)	(0.115)	(0.085)	(0.158)
	R-Squared	0.449	0.533	0.557	0.490	0.587
	Durbin-Watson	2.59	2.26	2.01	2.10	2.13
	# of observations	141	139	139	138	137
2001-2008m8	BET	0.991***	1.145***	1.098***	1.147***	1.145***
		(0.203)	(0.180)	(0.182)	(0.141)	(0.199)
	R-Squared	0.383	0.422	0.430	0.488	0.459
	Durbin-Watson	1.99	1.96	1.74	1.82	1.76

	# of observations	78	76	76	75	77
2008m9-2014	BET	1.570***	1.670***	1.425***	1.009***	1.666***
		(0.241)	(0.195)	(0.118)	(0.107)	(0.174)
	R-Squared	0.522	0.641	0.689	0.490	0.735
	Durbin-Watson	2.94	2.47	2.34	2.53	2.56
	# of observations	63	63	63	63	60

Notes: HAC Standard errors are shown in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Author calculation

Therefore, several conclusions could be drawn from these results. First, all SIF's securities are riskier than the market itself. The risk was more pronounced in the post-crisis period. Second, SIF2 remain the most risky which is consistent with risk-return relation. SIF2 recorded the highest level of risk (the highest coefficient, i.e. 1.410) and at the same time exhibited the highest level of return (4.2%). Third, in terms of magnitude of the coefficients, the coefficients (β's) are greater in monthly return than in daily return models. This result do not reject the hypothesis which state that non-trading period returns will reduce the coefficient and the correlation between the security and market return.
To sum up, the results suggests the significance of β from the CAPM model which is consistent with previous findings.

5. Conclusions
The main aim of paper was to determine systematic risk for Romanian financial investments societies (SIF), i.e. if β is significant in the relation between stock and market return. Using an individual regression for each out of the 5 SIF's and BET index for the period 2001-2014, the results highlights that all SIF's were riskier than the market itself. This conclusion remain robust even when was used monthly return instead of daily return. As a particular result, the risk was higher for the sub-period 2008-2014, i.e. the post-crisis period. However, a high level of risk is associated with a high level of return, for the same period SIF's were in the top performance stocks.
In terms of implications for practitioners and decision makers the results should be treated with cautiousness, since there is a controversial debate if the historical β's is applicable to the future.

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USING DASHBOARDS IN BUSINESS ANALYSIS

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Abstract: *Due to the development of information technology, every enterprise has a lot of data, which magnify the difficulties of selecting the most relevant. Hence, appears the mistake of measuring too many things. Owning too much information, will lead to vagueness, the opposite effect of a measuring system. This phenomenon does not depend on the manager's ability to compute and communicate, but rather on the ability to provide adequate information, to take good decisions and to compare results with the planned objectives. These can be done through a user interface – Dashboard, which is a tool that allows the alignment of business processes and strategies implementation. Dashboards are more than a collection of indicators and graphics, they are found in different forms and interfaces. Dashboards answer to many questions of the organization and are addressed to different types of audiences. Before creating a Dashboard, we must answer the following questions: who is our audience, what decisions should be taken after the analysis, in what context will be used, how often should be measured the indicators? Once an enterprise has identified a need for a dashboard, managers must go through the process of defining what they will include in their dashboard (key risk indicators and key performance indicators). This paper shows how this methodology has developed, the main features and benefits of Dashboards, as well as the most used software for creating them. As the main objective of the paper is to discuss how Dashboards can be used in business analysis (BA), in introduction, there are presented some general ideas about BA and benefits of using Dashboards. In the next section, there are presented several definitions for Dashboards and the steps which must be followed for implementing an efficient one. In the case study is created a dashboard for sales analysis of an enterprise, using Tableau Public. The paper ends with some conclusions and with the list of references.*

1. Introduction

Acording to the International Institute of Business Analysis (IIBA), business analysis identifies the weaknesses of the enterprise and tries to achieve those changes that provide added value to stakeholders. Business analysis must be implemented across all levels of the enterprise and help in defining the strategy, the goals, the requirements for projects and the improvement of technology and processes.

Every enterprise needs to magnify the business processes and to focus the activities on a clear set of goals. This can be done by implementing a Dasboard for each strategic objective of the company, which selects, arranges and shows the indicators in order to achieve a synthesis of the enterprise activity on a single glance.

Developed in the 80's, Dashboard is a methodology for analyzing and evaluating the performances and risks of the enterprise, and is currently used by more than 40 percent of the top 2,000 corporations in the world, in their Business Intelligence initiatives. Dashboards enable the success of the enterprise, by offering the right information to the right person at the right time. They may be considered an early warning system for managers, showing the present position in relationship to their strategic objectives.

Dashboards can be created in Excel, Tableau Public, Reporting Services, SharePoint, Microsoft SQL Server, Performance Point etc.. All these tools can create dashboards, allow decomposition of business objectives and create a strategy to incorporate the necessary information. However most dashboards are created in Excel, because the cost of implementation is low and can be used to monitor the performance every week, day, and sometimes every hour.

2.   Dashboards

In the 80's, managers tried to find a way to transform the strategic objectives of the enterprise in organizational behavior. Two researchers from Harvard, Kaplan and Norton, who are considered the parents of Dashboards, created a system that transformed strategies into actions, based on Balanced Scorecards method. After implementing it, some enterprises achieved successes, while others considered it a generator of additional expenses.

Over time, the model has developed and matured and is now in the third generation, suffering significant improvements. Currently, the model is used by companies around the world (Hilton, Infosys, Ingersoll Rand, Kraft Food, Merck, Lockheed Martin, Marriott, Motorola, Ricoh, Saatchi & Saatchi, Siemens, Cisco, Skandia, Statoil, UPS, US Department of Commerce, US Army, FBI, Royal Air Force). In Romania, among the companies that have implemented such a model are: Petrom, Rompetrol, ING Romania, UniCredit Tiriac Bank, Vodafone, City Pharma, Zentiva, Accor Services, Kraft Food Romania, Brau Union Romania, Danone, Anticoroziv, Romil Group, Ipsos Interactive Services, Siemens România, Michelin România.

The methodology has been implemented also in the public sector in Romania: The Ministry of Finance, Ministry of Internal Affairs, municipalities, county councils and prefectures.

Modern dashboards display key performance indicators (KPIs) and key risk indicators (KRIs), in related charts, maps and scorecards, in order to enable an enterprise focus on the most important performance activities. The purpose of the Dashboard is to display information on a single screen in a clear manner, in order to be understood by everyone.

Dashboard is an application or a user interface that helps to measure the performance of the enterprise, understand the organizational units and the business processes.

Due to web development, Dashboards began to be used to reflect financial indicators in a manner understood by everyone. There are three types of dashboards: operational,tactical and strategic.

The executive departments use the strategic and tactical Dashboards, the midd-level management uses all three types of Dashboards, while CEO uses strategic and operational Dashboards.

When implementing a Dashboard should be considered: the objective, the audience, the impact, the data needed to analyse the problem, if are needed filters and in what format will be used the Dashboard (PC, mobile, iPad, etc.).

3.   Case study

The Dashboard created in this section was conducted with Tableau Public. Tableau Public, created by a software company in Seattle, enables interactive data visualization and focuses on business intelligence. The product connects to relational databases, cubes and cloud databases. Tableau Public allows the creation of many types of graphs that can be combined in dashboards and distributed on the internet. Currently used in all areas, Tableau Public has imposed by the easy access not requiring programming skills. Among the advantages of using Tableau Public we can mention:

- Speed – is the most important strength of Tableau Public. It is able to analyse millions of rows and provide an answer in few seconds, enabling decision making in real time.
- Ease of use – based on the drag and drop option. Most of times, the graphics are created by importing an Excel file.
- Engaging and interactive Dashboards – enables creation of smart charts and graphs.
- Direct connection to databeses (Google Analytics, MySQL, Microsoft PowerPivot, Oracle, SAP, Windows Azure Marketplace DataMarket, Excel, etc.)
- Easy sharing – can be easily distributed on internet and mobile devices.
- Popular Tool of Business Intelligence

Next we built a Dashboard for an enterprise in Romania, which has as main activity the production and sale of engine parts. Shareholders want to know how sales have evolved in 2010, for this demanding a comprehensive report. The first figure illustrates the countries where they shipped the enterprise's products by sales value and sales agent, through whom the transaction was made. It can be seen that most customers are located in Western Europe and preferred FedEx for products delivery.
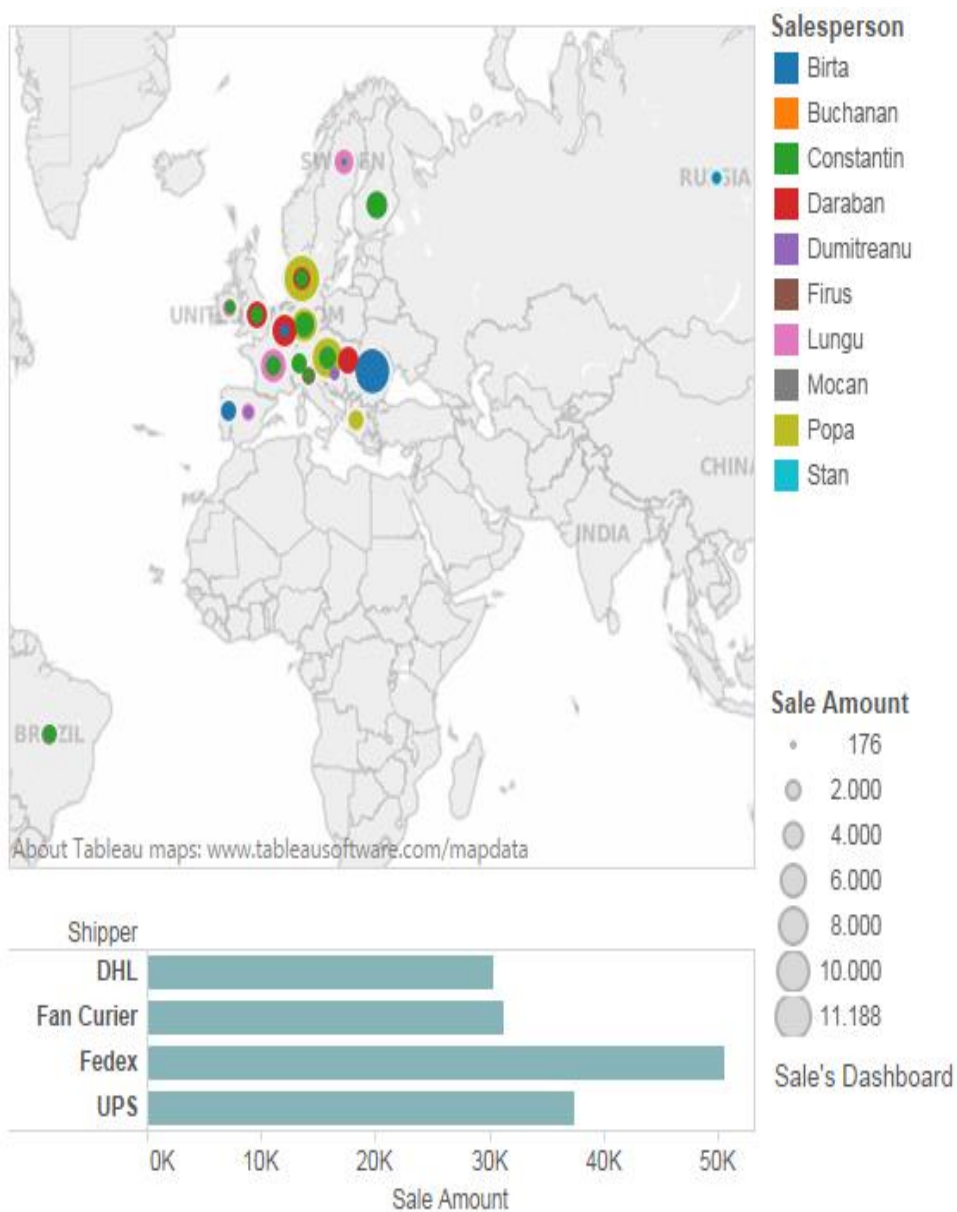
The other graphs show the products sold in each country, the products sold by each salesperson and the customer preference for courier companies. After studying this Dashboard, were made decisions about in which countries should be more promoted the enterprise products, the introduction of a remuneration system for employees according to their sales performances and renegotiating contracts with the courier companies preferred by clients.

4. Conclusions

Dashboards might be implemented at all the levels of the enterprise, as a tool that changes the business culture. One of the most important benefit of using Dashboards is the fact that managers can analyse a single screen where are monitored the key risk indicators, or the key performance indicators and can make decisions and undertake actions to mitigate the risks and improve the performance of the enterprise.

Tableau Public is a useful tool for creating interactive Dashboards, that analyse millions of data in seconds. A Dashboard that monitors the evolution of sales, enables the

manager to make decisions regarding: the market position, the potential customers, the performance of employees, who are the most efficient suppliers and collaborators etc..

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FINANCIAL MODELS

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Motto: "If we know from the start where we are and where we want to get, we can better decide what we should do and how." Abraham Lincoln

Abstract: *The idea of using models is not a new one, but it is an idea that kept the interest of many researchers in different fields of activity for a very long time now. The present paper looks at models starting from the very general forms (divided according to the way they are expressed or to the kind of research they support) to the ones that are specific for the financial field. Financial models are useful as they give managers and other categories of users the possibility to innovate, manage and plan the financial information. The paper provides a theoretical approach to financial models and their importance in the management of different companies. Financial models are very technical instruments that have to be exact enough in order to provide the users with accurate results regarding the financial state of the company. They give users the possibility to examine both past and future events and the quality of the financial decisions highly depends on them. Models that are not based on reality lead to wrong decisions that are incorrect and have adverse effects. Models generate the decision support information. The financial models are based on the normal, natural succession of processing information regarding the transactions and their effects. Such models offer the possibility to imagine what would happen in case of different decisions without having to expose the company to the associated risks of those decisions. Of course that models also have certain shortcomings and they have to be revised all the time. The model used generates results that need to be analyzed, explained and applied. The financial models are applied in order to facilitate the financial decision and the choice of one model over another highly depends on the results the manager expects to obtain and on the degree of exactitude expected.*

Keywords: financial model, information, decision, information flow, decision making

JEL classification: G00.

1. Introduction

The model is defined as a theoretical system (logic or mathematic) or material that helps us indirectly study the properties and transformations of a more complex system, as long as it shares a certain analogy with that system (see the Small philosophical dictionary, 2nd edition, Political Publishing House, Bucharest, 1973, pg.380) .
The model is a simplification, a partial reflection of the object or process, with the purpose of offering a material, more accessible means of theoretical or experimental investigation as theory without practice has no value, just as practice without theory is blind.
The model, both in logic and mathematics, is an interpretation of a formal system.
According to the way they are expressed, models can be very different:

- Ideal, as logical-mathematic representation or construction. It is an intermediate connection between the experience and theory referring to the studied object or phenomena that permits the verifying of the hypothesis;
- Similar with the original system. There is a difference in the size, characteristic values;
- Analogical, of a different nature, characterised just through relations (equations) of the same kind as those of the original system;
- Miniatures, small copies of the original.
  Models are true research instruments.

Research is a group of organised activities, scientific, controlled and checked information, regarding a certain established field of reality, used in order to exercise a direct or indirect control and management of the field's specific processes.

Research is using or even building different models, according to the nature of the research:

- Fundamental through newly discovered events and processes are explained, establishing and drawing up laws for them
- Operational that applies scientific models and methods to management or coordination problems, for integrating different centres' activities, when these centres are different as functioning or hierarchy;
- Applied in which is dominating the extension of the effective control over events and processes.

No matter what kind of research or model it is used, the major importance is that of the informational flow. Information describes what is going on and together with theory; it shows what is possible and evaluates that theory, in order to improve it.

2. **Financial Models**

Combining the economic reality with the financial ideas leads to a financial model. The model is a useful tool, that managers have at their disposal for planning and execution activities, in order to use as well as possible the financial information.

Information and the computers power allow not only handling the financial models, but also the creation of new ones that are necessary to the management.

The financial model is both an instrument and a result of the research and situations.

Financial models are simple way of innovating, managing and planning the financial information.

Models are useful in testing the implications of plans drawn up by managers, before they apply them in the real world. They simulate the possible actions, decisions over the added value, the assets and liabilities, over the cash-flows, the budget, the success and security through the financial flexibility or over the financial passivity.

The increased degree of incertitude, in a risky environment, the rapid changes contribute to the need to make predictions, as precise as possible, that allow the managers to formulate tactics and strategies that will ensure the survival and success of the company.

The traditional management models were starting from the idea that planning is a strictly rational process but reality showed different, taking into account the pressure of time.

Drawing up financial models, for planning and decision making purposes, needs time invested and time is not always available.

A model has to follow certain steps in its designing and testing:

- Identifying the variables in the analysing stage, as inflows of the model;
- Establishing relations between the analysed variables and expressing them in a mathematic form;
- Formulating the calculus rules that can lead to the expected result;

- Explaining the connections, in a logical structure, in an ascending evolution of the form inflows – transformations - results;
- Separating the logic and reporting in the model, in respect to a referential.

In the case of drawing up financial models, the alternative is applying the decisions in practice and taking full responsibility of all financial consequences.

3. The Content Of Financial Models

The model equally reflects and influences the understanding of the real world.

If humans would understand and fully know the real world, models would not be needed anymore and the decisions' results could be accurately estimated.

Models are drawn up in order to examine both past and future events. In general, the model is made of facts, states, hypothesis and numbers, in a form that can be mathematically described.

Models that are not based on reality lead to wrong decisions that are incorrect and have adverse effects. Models generate the decision support information.

The decisions' quality is up to the quality of the inflows that are processed and transformed, the systems quality (or the processing and transformation of information model) that influence the outflows quality. Of course that the quality level depends also on the decision taking system's quality.

The financial model is made of facts, hypothesis and numbers that are correlated in a manner that can be described through a model (in a mathematical form). The model is designed to support the decision process, the financial management process, the operations' processing, the risk control and management at the company level. As decision support, the model allows performance analysis, cost analysis and backing up of the strategic plan.

In the field of transactions' processing, which is the most important in the financial function activities, models are diversified according to the requirements of the accounting. Through the model, control is increased, a better access to information is provided along with a better integration and profitability is increased through the competitive advantage.

The financial models are based on the normal, natural succession of processing information regarding the transactions and their effects.

4. Advantages And Disadvantages Of The Financial Models

The model is an instrument used for setting a frame for solving the financial functions' problems of the company. It allows a better understanding of the problem by building a model that can contribute to its control.

The model offers the possibility of testing a large set of possible scenarios based on the question „what would have happened if?"

Applying the model involves economy of time and money.

But models do not have only advantages. On the contrary, the disadvantages should be identified in order to be eliminated or avoided. Among the disadvantage, one could name:
- The danger of oversimplifying, in the case certain essential factors are not taken into account from the stage of projecting the model;
- Not all relations can be expressed in a mathematic language. Any forcing of this is a problem in the drawing up of the model;
- The possible rigidity of the model makes it inflexible towards eventual changes;
- The model offers, in the planning stage, just estimations and not sure facts;
- The possible manipulation of the inflows of the model, in order to get the wanted outflows. It is a manipulation of the results in order to reach a certain objective.

5. The Use Of Financial Models In The Company's Financial Function

The financial function is the whole made up by components that gather together activities that facilitate reaching the financial function's objectives.

The models used and the results reached through processing refer to different positions: business consultancy, business analysts, technical specialists.

The model used generates results that need to be analyzed, explained and applied.
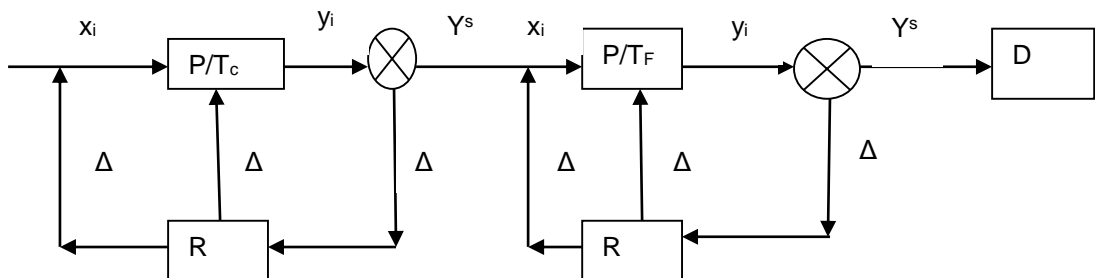
Figure 1. Using a series of models of processing/ transforming information for taking decisions

Source: own processing of information in which

X_i = inputs (data, information)

P/T = processing, transforming through the model

Y_i = outputs of the model

Y^s = standard reference data

Δ = deviation, variation

R = decision control and adjusting centre

F = financial

D = decisions

The models' users are either those that use them in order to generate information for different users or those that use the information given, as outputs, in order to take correct decisions regarding the performance, sustainable growth, risks, strategies, reporting, declaring and presenting the economic-financial state, audit, treasury.

Besides, models are a support in the risk control and management through: budgeting, performance reporting, treasury management, internal audit, tax planning, cash-flow management.

The model is drawn up and applied into an environment full of risks that influence the reception, presenting, use of information and future forecasting.

Still, the future is estimated, a wish that can be negotiated. The future cannot be considered as known or certain. It is just a result with lots of sides. It is improbable but possible under a certain degree of probability.

The information generated by applying financial models is a source for the accounting management in understanding its role and responsibilities in modeling the financial function.

The financial models are applied in order to facilitate the financial decision. The financial decision as solution, applied in the tactic area, leads to fulfilling the problem's requests.
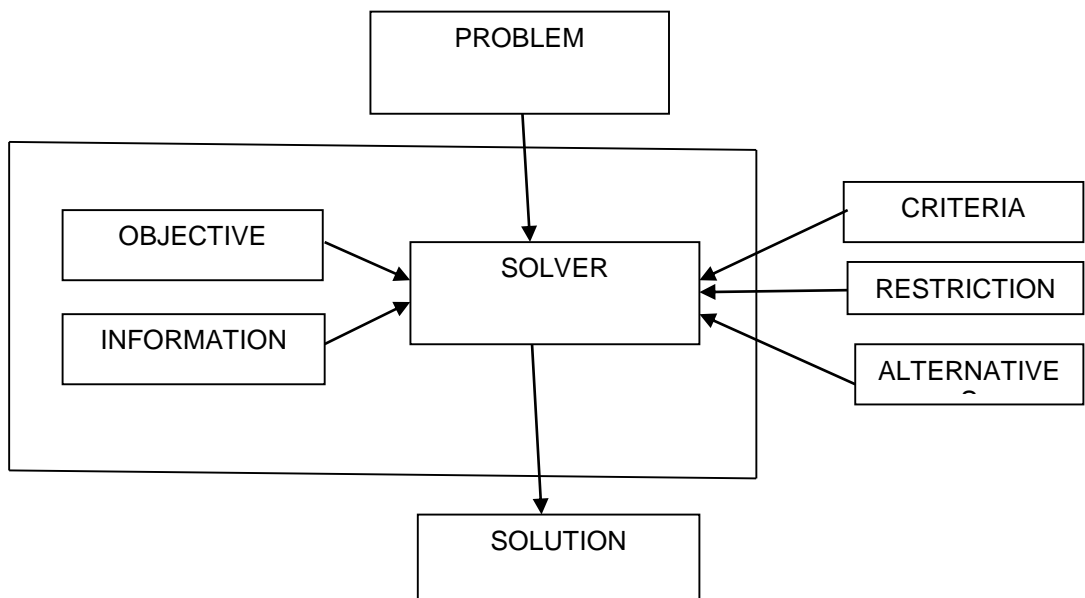
Figure 2. The results of using the model
Source: own processing of information

The model offers the possibility of evaluating the alternatives and to select the best one that becomes the problem's solution.

CONCLUSIONS

Models are drawn up in order to examine both past and future events.

Designing and drawing up a model is a learning process. The model cannot show all reality and this leads to a certain degree of incertitude for the predictions made.

The model's results have a certain degree of liberty and therefore should be treated with care. It should identify the problems, establish the objectives, identify the options, choose the right decision, apply the solution, monitor the results, use the correcting feed-back, adjust and improve the financial activities dedicated to fulfilling the objectives.

The decision taking model (the rational model) becomes:

1. Defining and diagnozing the problems
   - Real problems and their possible causes
   - Attention, interpreting and sinthetising capacity

2. Establishing the objectives
   - Desired results to be obtained
   - General, operational objectives

3. Identifying the possible decisions
   - Ways of reaching the objectives
   - Action lines, ways to be folowed in reaching the objectives

4. Evaluating and comparing the options
   - Evaluating and comparing the identified options

5. Choosing a decision
   - Final decision
   - Results, costs, risksi, applying and valuation peroad. DECISION

6. Implementing the choosen solution
   - A well choosen solution is not also a success
   - Ways of applying the choosen decision

7. Follow-up and control
   - Implementing doesn't obligatory equall reaching the objectives
   - Control and follow up of the implementing activities

RESULTS

Figure 3. The decision taking model
Source: own processing of information

The use of one model or another highly depends on the expected results.

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PRICING AND ASSESSING UNIT-LINKED INSURANCE CONTRACTS WITH INVESTMENT GUARANTEES

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Abstract: *One of the most interesting life insurance products to have emerged in recent years in the Romanian insurance market has been the unit-linked contract. Unit-linked insurance products are life insurance policies with investment component. A unit-linked life insurance has two important components: protection and investment. The protection component refers to the insured sum in case of the occurrence of insured risks and the investment component refers to the policyholders' account that represents the present value of the units from the chosen investment funds. Due to the financial instability caused by the Global Crisis and the amplification of market competitiveness, insurers from international markets have started to incorporate guarantees in unit-linked products. So a unit- linked life insurance policy with an asset value guarantee is an insurance policy whose benefit payable on death or at maturity consists of the greater of some guaranteed amount and the value of the units from the investment funds. One of the most challenging issues concerns the pricing of minimum death benefit and maturity benefit guarantees and the establishing of proper reserves for these guarantees. Insurers granting guarantees of this type must estimate the cost and include the cost in the premium. An important component of the activity carried out by the insurance companies is the investment of the premiums paid by policyholders in various types of assets, in order to obtain higher yields than those guaranteed by the insurance contracts, while providing the necessary liquidity for the payment of insurance claims in case of occurrence of the assumed risks. So the guaranteed benefits can be broadly matched or immunized with various types of financial assets, especially with fixed-interest instruments. According to Romanian legislation which regulates the unit-linked life insurance market, unit-linked life insurance contracts pass most of the investment risk to the policyholder and involve no investment risk for the insurer. Although the Romanian legislation authorizes the Romanian insurers to offer unit-linked contracts without investment guarantees, this research provides a proposal of a theoretical and empirical basis for pricing the unit-linked insurance contracts with incorporated investment guarantees.*

Keywords: Unit-linked products; Investment guarantees; Black-Scholes Model; Call options; Treasury bills.

JEL classification: G22, G17, G12, C58, C87.

1. Introduction

Pricing of unit-linked life insurance contracts has generated much interest among researchers and practitioners in the last two decades (Romanyuk, 2006). Unit-linked contracts have two important components: protection and investment. The protection component refers to the insured sum in case of the occurrence of insured risks and the investment component refers to the policyholder's account that represents the present value of the units from the chosen investment funds (Gavriletea, 2009). So the payoff in such contracts contains both financial and insurance risk elements, which have to be priced so that the resulting premium is fair to both the seller (insurer) and the buyer (policyholder) of the contract (Romanyuk, 2006). Due to the financial instability caused by the Global Crisis and the amplification of market competitiveness, insurers from international markets have started to incorporate guarantees in unit-linked products. Investment guarantees are very popular features in life insurance policies because in addition to paying a death benefit or a maturity benefit, these policies are tied to the return of an underlying asset or an actively managed portfolio. Thus, the policy also acts as an investment because the investor's capital is credited with a minimum return. In exchange for this protection, the policyholder pays a higher premium, reflecting the market risk assumed by the insurance company (Augustyniak and Boudreault, 2012). An important component of the activity carried out by the insurance companies is the investment of the premiums paid by policyholders in various types of assets, in order to obtain higher yields than those guaranteed by the insurance contracts, while providing the necessary liquidity for the payment of insurance claims in case of occurrence of the assumed risks. So the guaranteed benefits can be broadly matched or immunized with various types of financial assets, especially with fixed-interest instruments (Hardy, 2003).

The objective of this research*:* although the Romanian legislation authorizes the insurance companies to offer unit-linked contracts without investment guarantees, this research provides a proposal of a theoretical and empirical basis for pricing and assessing unit-linked insurance contracts with investment guarantees. This study contributes to the existing literature regarding the issue of appropriate pricing of life insurance contracts and hedging of the risks involved, with an exclusive focus on the unit-linked life insurance contracts with investment guarantees.

The structure of this paper is as follows: Section 2 discusses some previous research on the issue. Section 3 describes the main categories of investment guarantees commonly used in unit-linked insurance and presents some of the contracts that offer investment guarantees. Section 4 outlines the methodology. The sample data and the empirical results are presented in Section 5. Section 6 provides a summary of the main findings and some concluding remarks.

2. Literature review

There is an extensive literature on the pricing, hedging and risk management of these contracts. See for example, Nielsen & Sandmann (1995), Tiong (2001), Grosen (2002), Hardy (2003), Argesanu (2004), Biffis & Millossovich (2006), Gaillardetz (2006), Romanyuk (2006), Boyle and Tian (2009), Reichenstein (2009), Keneley (2010), Mahayni and Schlogl (2010), Gatzert et al.(2011), etc.

Brennan and Schwartz (1976), Boyle and Schwartz (1977), and Brennan and Schwartz (1979) were the first articles that elegantly described some of the option elements of life insurance products and demonstrated how the relatively young option pricing theory of Black and Scholes (1973) could be applied to value these contracts. Brennan and Schwartz (1976), Brennan and Schwartz (1979) consider an equity-linked life insurance policy with an asset value guarantee and determine the value of such policy using the economic concept of equilibrium pricing. Boyle and Schwartz (1977) work out a similar solution for death benefit and maturity benefit guarantee contracts, which pay the larger of a fixed guarantee or value of some risky fund at expiration of the contract or upon the death of the policyholder. Delbaen (1986) extends previous articles by proposing Monte-Carlo simulation to price fixed term equity-linked contracts with guarantee, for which premiums have to be paid periodically and survival probability of the client is factored into the value of the contract.

Bacinello and Ortu (1993) further build on the above papers by considering the case of equity-linked contracts where guarantees are determined endogenously based on the premiums paid, as opposed to being specified exogenously, as in Brennan and Schwartz (1976), Brennan and Schwartz (1979) and Delbaen (1986). Ekern and Persson (1996) calculate premiums for a large variety of equity-linked contracts, including those with payoffs where the contract owner chooses the larger of the values of two risky assets (and possibly a guaranteed amount) at maturity of the contract. Boyle and Hardy (1997) examine the pricing of and reserving for maturity guarantees for policies where the policyholders' premiums are invested in a specified portfolio which is guaranteed not to fall below a certain level at maturity. Tiong (2000) examines the pricing, hedging and accounting of equity-indexed annuities (EIAs). Moeller (2001) examines a portfolio of equity-linked life insurance contracts and determines risk-minimizing strategies in a discrete-time setting for the Cox-Ross-Rubinstein model.

Hardy (2003) discusses the modelling and risk management for equity-linked life insurance; the focus of his research is on stochastic modeling of embedded guarantees that depend on equity performance. Argesanu (2004) focuses on the risk analysis and hedging of variable annuities in incomplete markets. Romanyuk (2006) describes the problem of appropriate pricing of equity-linked life insurance contracts and hedging of the risks involved, and proposes the use of two types of imperfect hedging techniques: quantile and efficient hedging. Gaillardetz (2006) introduces a pricing method for equity-indexed annuities and valuates these products by pricing its death benefits and survival benefits separately. Boyle and Tian (2008) examine the optimal design of equity-linked products with probabilistic constraint. Mao and Ostaszewski (2008) examine the pricing of equity-linked life insurance including a minimum interest rate guarantee in a partial equilibrium framework.

Dickson, Hardy and Waters (2009) have developed the theory to measure and manage risks that are contingent on demographic experience as well as on financial variables. Quittard-Pinon and Randrianarivony (2009) focus on the pricing of a particular equity-linked life insurance contract where the conditional payoff to the policyholder is the maximum of two risky assets. Bernard and Boyle (2011) propose the establishment of a natural hedge to reduce the volatility risk of an insurance company's liabilities. Sweet (2013) focuses on the pricing and evaluating of the equity-linked annuities.

3. Types of contracts that offer investment guarantees

In this section the authors present the various types of investment guarantees commonly used in unit-linked insurance and describe some of the contracts that offer investment guarantees as part of the benefit package. The unit-linked contracts offer some element of participation in an underlying index or fund or combination of funds, in conjunction with one or more guarantees. Without a guarantee, unit-linked insurance involves no risk to the insurer, which merely acts as a steward of the policyholders' funds. These fixed-sum risks generally fall into one of the following major categories:

The guaranteed minimum maturity benefit (GMMB): guarantees the policyholder a specific monetary amount at the maturity of the contract. This guarantee provides downside protection for the policyholder's funds, with the upside being participation in the underlying stock index. A simple GMMB might be a guaranteed return of premium if the stock index falls over the term of the insurance (with an upside return of some proportion of the increase in the index if the index rises over the contract term). The guarantee may be fixed or subject to regular or equity-dependent increases.

The guaranteed minimum death benefit (GMDB): guarantees the policyholder a specific monetary sum upon death during the term of the contract. Again, the death benefit may simply be the original premium, or may increase at a fixed rate of interest. More complicated or generous death benefit formulae are popular ways of tweaking a policy benefit at relatively low cost.

With ***the guaranteed minimum accumulation benefit (GMAB),*** the policyholder has the option to renew the contract at the end of the original term, at a new guarantee level appropriate to the maturity value of the maturing contract. It is a form of guaranteed lapse and re-entry option.

The guaranteed minimum surrender benefit (GMSB) is a variation of the guaranteed minimum maturity benefit. Beyond some fixed date the cash value of the contract, payable on surrender, is guaranteed. A common guaranteed surrender benefit in Canadian segregated fund contracts is a return of the premium.

The guaranteed minimum income benefit (GMIB) ensures that the lump sum accumulated under a separate account contract may be converted to an annuity at a guaranteed rate. When the GMIB is connected with an equity-linked separate account, it has derivative features of both equities and bonds. In the United Kingdom, the guaranteed-annuity option is a form of GMIB. A GMIB is also commonly associated with variable-annuity contracts in the United States.

This section also describes the main types of insurance contracts that offer investment guarantees.

Segregated fund contracts: the segregated fund contract in Canada has proved an extremely popular alternative to mutual fund investment. The basic segregated fund contract is a single premium policy, under which most of the premium is invested in one or more mutual funds on the policyholder's behalf. The contracts all offer a GMMB and a GMDB of at least 75 percent of the premium and 100 percent of premium is common. The name "segregated fund" refers to the fact that the premium, after deductions, is invested in a fund separate from the insurer's funds. The insurer usually offers a range of funds, including fixed interest, balanced (a mixture of fixed interest and equity), broad-based equity, and perhaps a higher-risk or specialized equity fund.

The variable-annuity (VA) contract is a separate account insurance, very similar to the Canadian segregated fund contract. Premiums net of any deductions are invested in subaccounts similar to the mutual funds offered under the segregated fund contracts. GMDBs are a standard contract feature; GMMBs were not standard a few years ago, but are beginning to become so. They are known as VAGLBs or variable-annuity guaranteed living benefits. Death benefit guarantees may be increased periodically.

Unit-linked insurance resembles segregated funds, with the premium less deductions invested in a separate fund. Some unit-linked contracts associated with pensions policies carry a guaranteed annuity option, under which the fund at maturity may be converted to a life annuity at a guaranteed rate.

The equity-indexed annuity (EIA) offers participation at some specified rate in an underlying index. The contract will offer a guaranteed minimum payment of the original premium accumulated at a fixed rate; a rate of 3 percent per year is common. EIAs are generally rather shorter in term than unit-linked products, with seven-year policies being typical.

Equity-linked insurance: these contracts resemble the EIAs, with a guaranteed minimum interest rate applied to the premiums, along with a percentage participation in a specified index performance (Hardy, 2003).

4. Methodology

Soon after the celebrated papers by Black and Scholes (1973) and Merton (1973) on the pricing of call options, the topic of pricing of unit-linked insurance contracts became popular (Romanyuk, 2006). One of the most intriguing issues concerns the pricing of minimum death benefit or maturity benefit guarantees and the establishing of proper reserves for these guarantees.

The essence of mortality risk is that individual lives are independent so that risks may be nearly eliminated by pooling or diversification. Investment risk on the other hand affects all contracts simultaneously and in the same direction. A single event, a dramatic decline in stock prices simultaneously will render the insurer liable under the maturity guarantee of all its maturing contracts. Insurers granting guarantees of this type must estimate the cost and include this cost in the premium (Boyle and Schwartz, 1977).

Insurance companies should purchase bonds (instruments with fixed income) and call options to cover the minimum guarantee and to meet the market return portion of the payoff (Tiong, 2000).

An option is a security which gives its owner the right to buy (or sell) an asset at a fixed price, under certain conditions, within a fixed period of time (Boyle and Schwartz, 1977). The holder of a European call option on a stock has the right (but not the obligation) to buy an agreed quantity of that stock at a fixed price, known as the strike price, at a fixed date, known as the expiry or maturity date of the contract (Dickson, Hardy and Waters, 2009).

Let S_t denote the price of the stock at time t. The holder of a European call option on this stock with strike price K and maturity date T would exercise the option only if $S_t > K$, in which case the option is worth $S_t - K$ to the option holder at the maturity date.

The option would not be exercised at the maturity date in the case when $S_t < K$, since the stock could then be bought for a lower price in the market at that time. Thus, the payoff at time T under the option is:

$$(ST - K) = \max(ST - K, 0) \qquad\qquad (1)$$

For a call option, at-the-money means that the stock and strike prices are roughly equal (Hardy, 2003).

Black and Scholes(1971) show that it is possible to form a portfolio of an option and a share so that the rate of return on the combined portfolio is non-stochastic or riskless (Boyle and Schwartz, 1977). In the Black-Merton-Scholes (BMS) framework, one can replicate the payoff of an investment guarantee, which is a essentially a put option, by trading in the underlying stock and the risk-free asset (Augustyniak and Boudreault, 2012).

The Black-Scholes-Merton framework for option valuation is a continuous time model, and is based on more sophisticated market assumptions: the market model should follow a geometric Brownian motion (GBM), there should be no market frictions (no transaction costs and no constraints on trading) (Augustyniak and Boudreault, 2012), short selling is allowed without restriction, and borrowing and lending rates of interest are the same, trading is continuous and interest rates are constant (Hardy, 2003). If we consider a single premium unit-linked contract providing a guaranteed amount g on death or maturity; g may be a function of time or it may be a constant. So when a claim arises the amount payable is the greater of g and the market value of the units purchased in the reference portfolio. Also the date on which the contract will become a claim is known with certainty. This situation corresponds precisely to that of a combination of a call option on a non-dividend paying stock plus the payment of the fixed amount g. If the value of the reference portfolio is denoted by x, the benefit can be expressed as follows:

$$Benefit = \max(g, x) = g + \max(x - g, 0) \qquad (2)$$

5. Empirical results
In this section the authors have performed an empirical simulation regarding the pricing and assessing of the unit-linked insurance policy with investment guarantee.

A life insurance company is issuing single-premium unit-linked insurance policies with

investment guarantees with the following characteristics:

Table 2: The characteristics of unit-linked insurance contracts with investment guarantees issued by a life insurance company

Unit-linked Single Premium for 1 Insurance Policy (LEI)	10,000
Number of contracts	100
Unit-linked Single Premium for the Entire Portfolio of Insurance Policies (LEI)	1,000,000
Insurance sum in the event of a death / contract (LEI)	25,000
The Age of the Insured Person (years)	35-45
Guaranteed Minimum Crediting Rate (%)	3.00
Unit-linked Maturity (years)	10
Current level of BET Index	6,359
Price of At-The-Money BET Index Call Option with 10 Year Maturity (LEI)	3,643
Current Rate on 10 Year, Treasury Bills (%)	6.99

Source: Authors' processing based on the Annual Reports of National Bank of Romania

and the Bucharest Stock Exchange Database.

When the insurance company receives the premiums from the policyholders (a total amount of 1,000,000 LEI), it will invest sufficient financial funds in a Treasury bills portfolio in order to make sure that it can guarantee the minimum return (3.00%) to the policyholders.

The authors have performed Excel DerivaGem test, 2.01 version, to calculate the call option price. The call option price is calculated using the Black & Scholes formula:

$$C = N(d_1) \cdot S - N(d_2) \cdot Ke^{-rT} \qquad (3)$$

$$d_1 = \frac{ln\left(\frac{S}{K}\right) + rt + \frac{\sigma^2 t}{2}}{\sigma\sqrt{t}} \qquad (4)$$

$$d_2 = d_1 - \sigma\sqrt{t} \qquad (5)$$

Where:
- N is the cumulative distribution function for the standard normal distribution
- S is the spot price of the underlying stock
- K is the strike price
- r is the risk-free rate of return
- t is the time to maturity
- σ is the volatility of the returns of the underlying stock.

The data of the study consists of daily closing values of BET index. BET is the reference index for the Bucharest Stock Exchange (BVB) market. BET is a free float weighted capitalization index of the most liquid 10 companies listed on the BVB regulated market. The index methodology allows BET to be a good underlying for derivatives and structured products.

All the closing prices of Bet index are collected from BVB database. The daily data is taken from April 1, 2004 to April 1, 2014. We have calculated the daily standard deviation of returns series using software Eviews: $\sigma_{daily} = 1.74\%$ and then we have obtained the annual volatility for the Romanian stock market, using the following formula: if the daily logarithmic returns of a stock have a standard deviation of σ_{daily} and the time period of returns is N, the annual volatility is:

$$\sigma_{annual} = \frac{\sigma_{daily}}{\sqrt{N}} \qquad (6)$$

A common assumption is that $N \cong 1/252$ (there are 252 trading days in any given year). The annual volatility is 27.62%.

Underlying Data					Graph Results		
Underlying Type:			Time	Dividend	Vertical Axis:		
Equity	▼				Option price	▼	
					Horizontal Axis:		
Stock Price:	6359.00				Volatility	▼	
Volatility (% per year):	27.62%						
Risk-Free Rate (% per year):	6.99%				Minimum X value	1.00%	
					Maximum X value	200.00%	
Calculate					Draw Graph		
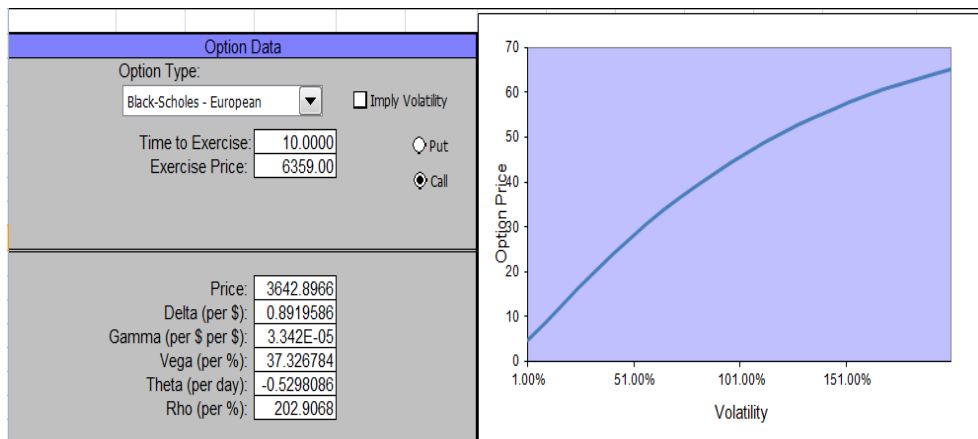
Figure 10: The calculation of the call option price
Source: Authors' processing; this figure is imported from Excel DerivaGem 2.01.

Therefore the price of a call option is Call (T=10, K=6,359, S=6,359) = 3,643 LEI.
The insurance company has to fulfill the following steps:

- How much should the insurance company invest in Treasury bills today to be able to meet the guaranteed minimum rate?

In 10 years the insurance company is required to obtain the following amount of money to guarantee the minimum return to the policyholders: 1,343,916.38 LEI.

$$1,343,916.38 = 1,000,000(1 + 0.03)^{10} \qquad\qquad (7) \quad \text{So}$$

today the insurance company should invest the following amount of money in Treasury bills in order to be able to provide the guaranteed minimum rate (3.00%): 683,817.75 LEI.

$$683,817.75 = 1,343,916.38 : (1 + 0.0699)^{10} \qquad\qquad (8)$$

- How many BET Index Call Options should the company purchase today?

The insurance company can invest 316,182.25 LEI (1,000,000-683,817.75) in call options.
So today the insurer should purchase 87 call options at the price of 3,643 LEI.

Table 3: The investment in Unit-linked products in 10 years

Scenario	Pessimistic		Optimistic
BET Index Value in 10 Years	3,174	6,359	12,718
Ending Value of Treasury Bills Portfolio (LEI)	1,343,916.38	1,343,916.38	1,343,916.38
Ending Value of Index Call Option Portfolio (LEI)	0	0	553,233
Ending Value of Unit-Linked Products (LEI)	1,343,916.38	1,343,916.38	1,897,149.38
Annualized Return of Unit-Linked (%)	3.00%	3.00%	6.61%
Annualized Return of BET (%)	-6.71%	0	7.18%

Source: Authors' processing

As we can see in the table above, in the case of an optimistic scenario, the ending value of unit-linked products will be 1,897,149.38 LEI and the annualized return of unit-linked products is 6.61% (which is above the guaranteed minim return of 3.00%).

6. Conclusions

One of the most interesting life insurance products to have emerged in recent years in the Romanian insurance market has been the unit-linked contract (Boyle and Schwartz, 1977). Unit-linked insurance with guarantee provides downside protection with a guaranteed minimum return (Josephy, Kimball and Steblovskaya, 2011). So a unit-linked life insurance policy with an asset value guarantee is an insurance policy whose benefit payable on death or at maturity consists of the greater of some guaranteed amount and the value of the units from the investment funds (Brennan and Schwartz, 1979).

A unit-linked contract is wrapped with some guarantees such as: the guaranteed minimum maturity benefit (GMMB), the guaranteed minimum death benefit (GMDB), the guaranteed minimum accumulation benefit (GMAB), the guaranteed minimum income benefit (GMIB) and the guaranteed minimum surrender benefit (GMSB) (Gaillardetz, 2006).

According to Romanian legislation which regulates the unit-linked life insurance market, unit-linked life insurance contracts pass most of the investment risk to the policyholder and involve no investment risk for the insurer. Although the Romanian legislation authorizes the Romanian insurers to offer unit-linked contracts without investment guarantees, this research provides a proposal of a theoretical and empirical basis for pricing the unit-linked insurance contracts with incorporated investment guarantees.

The Black-Scholes Model (1971) shows that it is possible to form a portfolio of an option and a share so that the rate of return on the combined portfolio is non-stochastic or riskless (Boyle and Schwartz, 1977). The guaranteed benefits can be broadly matched or immunized with various types of financial assets, especially with fixed-interest instruments (Hardy, 2003). In the situation corresponding precisely to a combination of a call option on a non-dividend paying stock plus the payment of the fixed guaranteed amount, the benefit payable can be expressed as the greater of the guaranteed amount and the market value of the units purchased in the reference portfolio (Boyle and Schwartz, 1977).

According to the empirical results, in the case of an optimistic scenario, the ending value of unit-linked products will be 1,897,149.38 LEI and the annualized return of unit-linked products is 6.61% (which is above the guaranteed minim return of 3.00%). On the other hand in the case of a pessimistic scenario, the ending value of unit-linked products will be 1,343,916.38 LEI and the annualized return of unit-linked products is 3.00% (which is the guaranteed minim return). Besides the gains provided by the investment, the insured person can benefit also from the protection component (the insured sum is 25,000 LEI).

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THE SOLVENCY II APPROACH ON THE CAPITAL CHARGE FOR THE NON-LIFE CATASTROPHIC RISK

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Abstract: *This paper addresses a current issue: the assessment and the establishment of the capital charge for the non-life catastrophic risk (cat risk) in terms of Solvency II Directive. Firstly we'll present several aspects on the conditions and the defining elements of Solvency II Directive implementation, by positioning us in the underwriting risk module, cat risk being a component of it. Nowadays the cat risk is a concern for the insurance companies and in order to have an harmonized legislation on the insurance industry for all Member States of the European Union this was a sensitive topic being presented various approaches regarding the methods used for determining the level of the capital charge. We'll present the main methods proposed in the Quantitative Impact Studies QIS4: standard approach, scenarios and personalized scenarios and also those proposed in QIS5: standardised scenarios and factor-based approach. Our purpose is to illustrate the situations when each alternative is most efficient to be used and also the steps taken from one quantitative impact study to another in order to have an accurate method of the cat risk assessment. Taking into account that these are standardised formulas, there are certain cases when the results are not consistent with the reality, especially for the insurers with a different structure of the insured portfolio, for example those having a large part of the insurance policies issued for a single line of business. In these cases it is recommended to use undertaking specific parameters (USP). Once presented these methods we'll offer an example for the calculation of the capital charge for the earthquake risk using standardised scenarios for Natural Disaster Insurance Pool (PAID). In order to achieve this goal we'll perform an analysis of the mandatory household insurance policies against natural disasters (PAD policies) in force in December 2013, these being grouped on CRESTA zones to determine the total insured value for each of the 41 zones in Romania. These values being calculated and using the technical parameters offered by an Annex of QIS 5 we obtained a value of around 227 million Euro for the earthquake cat capital requirement for PAID.*

Keywords: CRESTA zones; cat risk; Quantitative Impact Studies

JEL classification: G22

1. Introduction

The need for a unitary and integrated approach on Member States of the European Union is also present in case of the insurance market, being taken a series of steps for legislative harmonization of the insurance activity. In addition, in time have been observed weaknesses of the system, in these circumstances the requirements established by Solvency I Directive are no longer up to date. Therefore, a new regulatory framework has been introduced, respectively Solvency II Directive that imposed a new set of capital requirements, assessment techniques and also standards of reporting and governance. It is not easy to implement these requirements but rather a continuous process involving collaboration and permanent feedback between the parties involved: insurance companies, institutions specially established to assist and advise the European Commission on the implementation process. The new structure based on three pillars will be implemented on stages, there being noticed some similarities with the Basel II regulation for the banking industry but also differences. For example, the risk is approached differently, in case of Solvency II we can talk about an integrated approach of a portfolio of risks being also observed interdependencies between different types of risks. On the other hand, according to Basel II Accord the models are applied individually for investment risk, credit risk and operational risk. This approach on the capital requirements based on the exposure to risk is considered to be the main characteristic of Solvency II Directive, obviously higher risks involve higher capital requirements. (Hay et. al, 2011)

In this paper we'll focus on the regulation regarding the capital requirements for covering catastrophic risk. In the beginning we'll illustrate the structure of Solvency II in order to have a better image of our work within the extensive process:

Pillar1	Pillar 2	Pillar 3
Quantitative requirements	Management and Governance	Disclosure
Quantitative requirements, such as: SCR-Solvency Capital Requirements Underwriting risk *Non life cat risk sub-module*	Qualitative requirements Efficient risk management Own Risk and Solvency Assesment(ORSA)	Improved reporting Transparency for supervisors and the public

Figure 1: Placing the non-life cat risk in the structure of Solvency II Directive
Source: Authors' processing based on information provided by Lloyds and KPMG

As we can see in the figure above, our paper approaches the non life cat risk- a component often disputed due to the difficulty in establishing the value of the capital charge. The reasons why it is so difficult to find a formula may be the financial impact of a catastrophic event and also the specific of the risk portfolio of each insurer. In these circumstances a lot of work is needed to get a real assessment of the exposure to risk and finding a general formula that can be applied by all the insurance companies is very complicated to obtain.

2. The steps taken and the institutions involved in developing the methods for the capital requirements

The implementation of the Solvency II Directive is a difficult process, therefore even if in a first stage the European Parliament approved as application date January 1, 2013, this term couldn't have been respected, firstly being announced a delay until January 1, 2014. Neither at this date the application was not possible due to modifications made by a new legislative proposal, Omnibus II that brings a number of significant changes and whose publication in the Official Journal of European Parliament could not have been made before January 1, 2014. In these circumstances the term was again deferred to January 1, 2016.

Given the aspects presented this process involves collaboration, therefore we'll present the main institutions playing an important role especially through consultancy offered to European Commission since 2004:

- CEIOPS-Committee of European Insurance and Occupational Pensions Supervisors that functioned until the end of 2010, from January 1, 2011 being substituted by:
- EIOPA-European Insurance Occupational Authority- an European supervisory body with extensive powers.

This change is part of the reform of the European supervisory architecture, by creating EIOPA being realized a framework for more secure financial services.

CEIOPS had an extremely important role during the development of the regulatory framework, a major result being represented by the five Quantitative Impact Studies (QIS)

- QIS1 – conducted at the end of 2005 aimed testing several hypotheses for the prudential level of technical provisions.
- QIS2-represented a first step for the calculation of Solvency Capital Requirements (SCR), Minimum Capital Requirements (MCR) and the assessment standards. When it comes to catastrophic risk we mention that in this study only natural catastrophes were considered and not those technical ones.
- QIS3 – the main aspects monitored being: obtaining additional information on the applicability and the calculations involved, the alternatives tested, quantitative information about the financial impact on balance sheet if the information from QIS 2 are considered, testing these specifications for insurance groups.
- QIS4, conducted between April-July 2008. Catastrophic risk, the insurance premium risk and the reserve risk were included in the non-life underwriting risk. It was the first time when Romania participated.
- QIS5 is the last study realized in order to develop the standard formula that will be applied to determine SCR for all European insurers that have no internal model.

In the next part we'll focus on the technical specification and methods proposed in the studies QIS4 and QIS5 as regards the non-life cat risk module, taking into account earthquake risk, this having a great impact in case of occurrence in our country as stated in Annex L.4 of QIS 5.

3. Methods for calculating the capital charge for cat risk proposed by QIS 4

As a part of the non-life underwriting risk the catastrophic risk is defined as the risk of loss, or of adverse change in the value of insurance liabilities, resulting from significant uncertainty of pricing and provisioning assumptions related to extreme or exceptional events. (Solvency II Directive, Art. 105 2 (b))

A first version proposed for determining the capital charge for the non-life catastrophic risk was offered by QIS4, three different alternatives being proposed, one of these methods being optional.

We'll realize a comparative analysis of the methods presented in each study. Firstly we'll stop on the methods proposed in QIS4:

- *Standard approach*

$$NL_{CAT} = \sqrt{\left(\sum_{t \neq 3,4,10,12} (C_t \times P_t)^2 + (C_3 \times P_3 + C_{12} \times P_{12})^2 + (C_4 \times P_4 + C_{10} \times P_{10})^2 \right)}$$

Where NL_{CAT} represents the capital charge for the non-life catastrophic risk, C_t- represents a factor that has a different value for each line of business, these values being presented in the technical specification, P_t- net written premium for each line of business during the forthcoming year.

- Scenarios

This method is recommended to be used when the data representing the input are available; in these cases the standard approach is replaced. Also, the regions that are covered by the insurance policies issued by an insurance company are also important in order to take into account all the scenarios, for each zone. In Romania this method could not be used in 2008 due to the fact that no regional scenarios were available for our country. Regional scenarios were provided by local supervisors from: Austria, Belgium, Czech Republic, Denmark, France, Germany, Hungary, Italy, Iceland, Lithuania, Malta, Norway, Poland, Portugal, Slovakia, Slovenia, and Sweden.

$$NL_{CAT} = \sqrt{\sum_i CAT_i^2}$$

CAT_i represents the cost of the catastrophe i, being taken into account only those catastrophes that exceed a threshold, which is 25% of the cost of the most severe scenario.

If the results obtained by applying one of these methods are considered irrelevant for an insurance company, there is the possibility to choose another method, this being optional:

- Personalised scenarios

In this case companies must provide information about the reason why they decided to use a particular scenario, these being chosen taking into account the geographic concentration and the classification of the exposed portfolio for each line of business. Also, catastrophic scenarios are defined by considering the impact of a single event, but while the covered period is one year the probability to be registered more events exists, each affecting different reinsurance contracts. Therefore it is important to simulate the impact of various events.

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4. QIS5 approach on catastrophic risk

The fifth quantitative study made a series of changes regarding the non-life catastrophic risk sub module. Primarily we refer to the progress made in case of scenarios approach, being proposed an aggregation of the risk on CRESTA zones (Catastrophe Risk Evaluating and Standardizing Target Accumulations)- a standard for the insurance industry, being considered not only the type of the risk but also the correlation between countries and between different zones of the same country. It was also introduced the idea of using internal models, to model the catastrophic risk, in these cases the standard formula being replaced. (Simons et. al, 2010, p. 3)

Once QIS 5 was finished it represented an important step towards the development of the calculation methods used for determining the capital charge for catastrophic risk. In this study are presented two methods:

- Standardised scenarios

For the development of this method CEIOPS decided to create a working group called Catastrophe Task Force (CTF). It was established at the end of 2009 among the members being found: Swiss Re, Lloyds, Munich Re, Willis, RMS, Guy Carpenter. As a result of the collaboration between all these parties involved were developed scenarios for different types of natural catastrophes: windstorm, flood, earthquake, hail and subsidence. The selection of the risks was based on the occurrence probability of events and the potential impact. If circumstances require companies have the possibility to include other risks through alternative methods.

This method does not take into account the classification on lines of business, this being replaced by the classification depending on the type of the risk. Also, the exposure is determined for CRESTA zones, each country having a number of such zones. There is a standard formula for all types of natural catastrophes:

$$WTIV_{ZONE} = TIV_{ZONE} * F_{ZONE}$$

Where $WTIV_{ZONE}$ represents geographically weighted total insured value by CRESTA zone; TIV_{ZONE} is the total insured value by zone in certain cases being composed of the weighted sum of total insured value for different lines of business: fire, motor, marine, this classification being necessary to reflect the real impact on other lines of business; F_{ZONE} is a relativity factor for each zone of a country.

Once determined the value of $WTIV_{ZONE}$ the next step is the calculation of the capital charge for catastrophic risk:

$$CAT_{peril-contry} = Q_{country} * \sqrt{\sum_{r \times c} AGG_{r,c} * WTIV_{zone,r} * WTIV_{zone,c}}$$

$CAT_{peril-contry}$ represents the estimation of the cat capital charge for a specific country, $Q_{country}$ –the market factor, its value being offered for each country and peril in Annex 2 of Catastrophe Task Force Report, $AGG_{r,c}$- rows and columns of the aggregation matrix AGG by country, also available in a excel file called *parameters for non life catastrophe*, $WTIV_{zone,r}$ $WTIV_{zone,c}$- geographically weighted total insured value by zone.

Once determined the value of the catastrophe capital requirement for non life risk at peril level the next step is to aggregate these results:

$$NL_{CAT} = \sqrt{\sum_{peril,i,j} Corr_{peril,i,j} * CAT_{peril,i} * CAT_{peril,j}}$$

NL_{CAT} representing the catastrophe capital requirement for non life risk under method 1, $corr_{peril, I,j}$- correlation between perils i,j, $CAT_{peril,i,j}$- catastrophe capital requirement for each peril.

- Factor-based approach

For companies that decide to use the standard formula the choice of the method 1 is encouraged, respectively standardised scenarios, the factor based approach being recommended to be used only if there is no possibility to determine the capital charge by applying the first method.

This approach is a simplified version of the standard formula. The underlying assumptions are: the factors represent a single event and before being applied a classification of the premiums on lines of business is required. The gross written premium is taken into account and also gross factors.

$$NL_{CAT} = \sqrt{\left(\left(\sqrt{\sum_{t=1,2,3,5}(c_t \times P_t)^2} + c_{11} \times P_{11}\right)^2 + \sum_{t=4,7,8,9,10,13}(c_t \times P_t)^2 + (c_6 \times P_6 + c_{12} \times P_{12})^2\right)}$$

P_t- estimate of the gross written premium during the forthcoming year in the relevant lines of business which are affected by the catastrophe event, c_t-are the gross factors by event and applicable to all countries.

These two methods presented are independent; therefore in case both are applied the results should be aggregated:

$$NL_{CAT} = \sqrt{\left(NL_{CAT\_method1}\right)^2 + \left(NL_{CAT\_method2}\right)^2}$$

For an appropriate risk management companies are encouraged to calculate USP-Undertaking Specific Parameters, this leading to a better assessment of the underwriting risk. In this case there are two possibilities: these parameters to be developed by the company or to choose for stochastic models offered by companies specialized in cat risk modeling, reinsurance brokers. However it is quite difficult to develop such a model and often is decided to use a partial internal model.

Once presented the existing models for determining the capital charge for non-life catastrophic risk we intend to estimate the value of earthquake cat capital requirement for an insurance company.

5. Estimating the earthquake cat capital requirement for the National Disaster Insurance Pool of Romania

Based on the aspects presented, we'll estimate the earthquake cat capital requirement for the Natural Disaster Insurance Pool of Romania (PAID). This is an insurance and reinsurance company established in 2009 having 12 insurance companies as shareholders. The policies are issued by each insurance company that is a part of the National Disaster Insurance Pool, all of them being responsible for the sales process of the insurance policies against natural disaster (PAD). The Natural Disaster Insurance Pool is a public-private partnership, a part of the reinsurance program against natural disasters.

The PAD policies are issued for two types of buildings, depending on the construction materials used:

- Buildings type A: the insured value is 20.000 EUR and the insurance premium is 20 EUR for each and every household
- Buildings type B: the insured value is 10.000 EUR and the insurance premium 10 EUR for each and every household

Data and methodology

In order to estimate the earthquake cat capital requirements were taken into account all the policies issued by PAID in force at the end of 2013, data being obtained from the official site of the National Disaster Insurance Pool. These values were grouped on CRESTA zones. An impediment was represented by the lack of information regarding the distribution of the policies for each type of buildings. The scenario considered was that all the policies are issued for households type A.

The method used is that of personalised scenarios. So we'll determine the following values:

$$WTIV_{ZONE} = TIV_{ZONE} * F_{ZONE}$$

$$CAT_{earthquake-Romania} = Q_{Romania} * \sqrt{\sum_{r \times c} AGG_{r,c} * WTIV_{zone,r} * WTIV_{zone,c}}$$

The meaning of the terms used in this formula was explained in the first part of our paper.

Results

Romania is divided into 41 CRESTA zones, in the table bellow being presented the situation of the PAD policies in force at the end of 2013:

Table 1 The number of the PAD policies in force at the end of 2013 for each CRESTA zone

CRESTA ZONE	PAD policies(number)	CRESTA ZONE	PAD policies(number)
01 Alba	7304	26 Hunedoara	10255
03 Arad	15678	27 Ialomita	7497
04 Arges	18544	28 Iasi	26722
05 Bacau	23657	29 Maramures	11020
06 Bihor	15788	30 Mehedinti	5990
07 Bistrita-Nasaud	7288	31 Mures	11721
08 Botosani	6999	32 Neamt	14370
09 Braila	11622	33 Olt	8391
10 Brasov	23229	34 Prahova	36002
12 Buzau	15181	35 Salaj	4068
13 Caras-Severin	9199	36 Satu Mare	8308
14 Calarasi	7565	37 Sibiu	14450
17 Cluj	20022	38 Suceava	18471
18 Constanta	39130	39 Teleorman	9220
19 Covasna	6074	40 Timisoara	35008
20 Dimbovita	12695	41 Tulcea	7998
21 Dolj	18051	42 Vaslui	9245
22 Galati	24322	43 Vilcea	11168
23 Giurgiu	7605	44 Vrancea	15194
24 Gorj	6815	45 Bucuresti	169225
25 Harghita	5227	TOTAL	736318

Source: Authors' processing based on data provided by paidromania.ro

As we can see in the table above at the end of 2013 a number of 736318 PAD policies were active. 518100 have been issued for households located in urban areas (70,36%) and the rest of 218218 (29,64%) for those from rural areas. There can be observed only 9 cases where the number of the PAD policies from urban area exceeds the total policies covering households from rural areas: Giurgiu(60,89%), Vrancea(58,92%), Dimbovita(58,43%), Buzau(56,74%), Suceava(55,89%), Gorj(53,09%), Calarasi (53,09%), Teleorman(51,3%), Ialomita(50,78%).

In Romania the value of the total households covered by a mandatory insurance policy (PAD) is around 8,66%, the highest values being recorded in: Bucharest (18,15%), Constanta(14,36%), Timisoara(12,78%) at the opposite site being Harghita(3,93%), Slaj(4,06%) şi Botosani(4,09%).

We couldn't obtain information about the number of households type A and B covered by a PAD policy for each CRESTA zone, the information available is that in Romania 84,3% of active PAD policies are issued for households type A and the rest of 15,7% for households type B.

Based on this information we can determine the geographically weighted total insured value by CRESTA zone:

$$WTIV_{ZONE} = TIV_{ZONE} * F_{ZONE}$$

The relativity factor takes values between 0 and 5,2. The CRESTA zones with the smallest relativity factors are the zones less exposed to earthquake risk. If we take into account a classification based on the exposure to earthquake risk of the counties in Romania in three zones A, B and C, those from C zone being the most vulnerable, as expected in case of zone A we can find the smallest relativity factors. The highest value of the relativity factor is recorded for Vrancea zone, this area being known as the most important seismogenic zone in Romania. In Figure 2 can be observed the extreme values obtained for the geographically weighted total insured value by CRESTA zone: Bucharest is the first due to the large number of PAD policies in force in this area and also the relativity factor associated has a relative high value of 1,9. We want to mention that Bucharest is the CRESTA zone with the greatest number of households covered by a PAD policy, 18,15% of the total number of households being covered by the mandatory insurance policy against natural disasters.
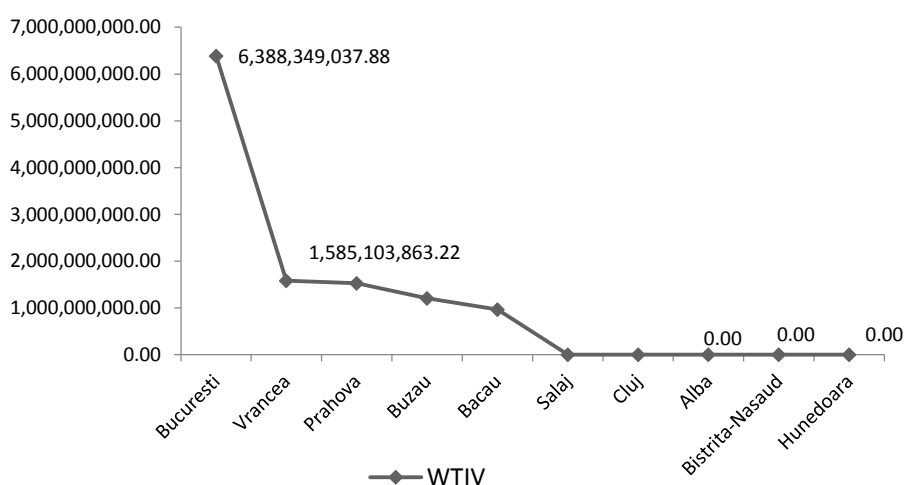
Figure 2: The geographical weighted total insured value by CRESTA zone (EUR)
Source: Authors' processing

Once determined WTIV, we can estimate the earthquake cat capital requirement, using the data from the aggregation matrix. The market factor $Q_{Romania}$ is 1,7%. It has a relatively high value due to the Romania's exposure to earthquake risk.

$$CAT_{earthquake-Romania} = 1,7\% * \sqrt{\sum_{r \times c} AGG_{r,c} * WTIV_{zone,r} * WTIV_{zone,c}}$$

$$CAT_{earthquake-Romania} = 1,7\% * 13.358.024.760,92 = 227.086.420,94$$

The estimated value of the earthquake cat capital requirements in case of Natural Disaster Insurance Pool is 227 million Euros.

6. Conclusions

Based on the aspects presented we can conclude that the estimation of the capital charge for catastrophic risk is not a simple matter but rather one of the most discussed and analyzed subject due to the major impact of these extreme and rare events.

According to the results obtained in QIS5 European insurers should allocate about 25% of the entire capital at risk to catastrophic risk.

Improvements from QIS4 to QIS5 are represented by the development of the personalised scenarios and also the classification of the total insured value on CRESTA zones. Also, the method of USP-Undertaking Specific Parameters is encouraged to be used. We find that an important role in determining the capital needed by an insurance company to cover its exposure to earthquake risk is played by the companies specialized in catastrophe modeling.

Once determined the capital charge for catastrophic risk the next step is choosing the best solution for covering against catastrophes: a reinsurance contract or alternative transfer solutions, such as catastrophe bonds.

For our country the total value of the capital charge for the non-life catastrophic risk is represented by the aggregation of the earthquake cat capital and the flood cat capital.

Our paper can be seen as a first step for determining the capital requirement for non-life catastrophic risk in terms of Solvency II Directive. This study can be developed for other insurance companies and also for the flood risk.

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GOVERNMENT INTERVENTIONS IN THE VENTURE CAPITAL MARKET – HOW JEREMIE AFFECTS THE HUNGARIAN VENTURE CAPITAL MARKET?

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Abstract: *JEREMIE (Joint European Resources for Micro to Medium Enterprises) program was implemented as a part of the EU cohesion policy in the framework of 2007-2013 programming period. The primary objective of the program was to enhance the financing prospects of SME's through structural funds that provide financial engineering instruments like loan, guarantee and venture capital. This paper focuses on the effects of JEREMIE on Hungary's venture capital market. Since 2010, 28 JEREMIE backed venture capital funds were founded in four rounds and 130 billion HUF capital was allocated into these funds with the contribution of Hungarian government. A well-established venture capital market can boost entrepreneurship and innovation, therefore economic growth which is the foundation of government involvement. On the other hand, there is an extensive literature highlighting the limits and possible drawbacks of the active role of public sector in the venture capital market. There is a consensus in the literature that in the long run the extensive role of government in venture capital industry is counterproductive. Substituting market participants by government agencies will hardly result in a competitive and efficient market. However, temporarily as a catalyst public sector can contribute to the development of venture capital market. Direct government intervention supportable temporarily only in the infancy of the industry. The primary objective of every program must be to develop the market to the level where it becomes self-sustaining. This way the success of these programs must not be measured only by the amount of invested capital, financial performance of venture capital funds and venture capital backed companies. Raising private sector awareness and the progress of necessary institutions are also the criteria of a successful program. During the design and implementation of venture capital agendas these aspects must be taken into consideration. This paper aims for evaluating how successful JEREMIE program is in enhancing the development of venture capital industry.*

Keywords: venture capital; government intervention

JEL classification: G24

1. Why should and why shouldn't the public sector play a role in VC market?

Venture capital (VC) and private equity (PE) industry in Hungary emerged in the early 1990's shortly after the economic transition and developed at a steady pace. In terms of invested capital Hungarian private equity industry was well-developed compared to EU and Central and Eastern European countries. However, this fact was led by buyouts; traditional VC investments meant only a tiny fraction of the private equity market. This paper focuses on traditional VC, the equity-like financing of young and innovative enterprises by institutional investors. Financing of the early stages of these enterprises via VC had fallen far below the EU average in Hungary before the JEREMIE backed VC funds appeared in 2010.

The financing of these young innovative firms with great growth potential plays a crucial role in the development of a healthy entrepreneurial sector, but as a result of the special characteristics of these enterprises, the necessary financial sources are not always available for them. Szerb (2006) shows that, firms in different stages of their life have

access to different types of financial resources, and their demand for finance increases rapidly at special points. Financing gaps occur when there are not enough funds for financing firms that have great growth potential, at a given stage of their life. These gaps usually occur at seed, early and early expansion stages and at startup companies (Nagy, 2004). One reason of insufficient funds for young and innovative firms is that the 3F (family, friends and founders) doesn't have the necessary resources to finance the further development of their company, but they are not suitable for bank financing. They don't have collaterals, their capitalization is low compared to their financial needs and they don't have any track record. The imperfections of market can also lead to the lack of financial supply for startup firms. These imperfections are the moral hazard problems described by Jensen and Meckling (1976) and asymmetric information demonstrated first by Akerlof (1970).
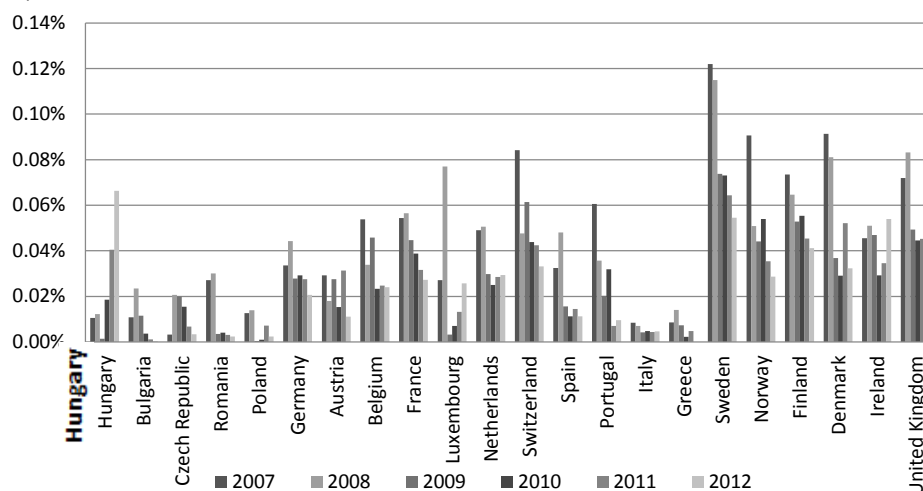
Figure 1: Venture capital investments in European countries as a percentage of GDP (2007-2012)
Source: EVCA (2013)

Figure 1. shows the VC investments as a share of GDP in 22 European countries in the 2007-2012 period. According to its ratio to the GDP, VC played the most important role in the Northern European countries and accounted for only 0,01% - 0,03% in the Central and Eastern European countries before the recession at 2008. In the given period in correlation with the total investments, VC decreased in every country except for Hungary. This asset class proved to be very sensitive to economic cycles; in average it decreased almost by 50% from 2007 to 2012. Contrary to the declining European trend, in Hungary VC investments increased to 0,066% of the GDP which was the highest ratio in 2012 in Europe. The cause of this pro-cyclical movement in case of Hungary is the increasing role of public sector in VC industry and the appearance of EU's financial sources in the form of JEREMIE VC funds.

The importance of VC in enhancing innovation and this way its spurring effect on economic growth is the reason of public sector efforts for promoting this asset class. Kortum and Lerner (2000) showed by examining patenting activity, that venture capital investments increased patenting three times more than the financing of traditional corporate R&D activity. The real question is, whether governments can effectively promote entrepreneurship via intervening in the VC industry. There is no consensus about the question of government effectiveness in VC market. An extensive literature highlights the limits and possible drawbacks of the active role of government. There are two types of public sector involvement; it can affect the market directly or indirectly. Direct

intervention is when government invests in funds or manages them. Governments also have the tools to influence VC markets indirectly. Taxation, legal environment, public R&D spending, regulation, financial market liberalization are areas that have huge effect on VC industry, mainly affecting the demand side of VC. Through JEREMIE the public sector directly affects the VC market via funding VC firms in a hybrid public and private framework and supervising them, therefore this paper focuses on the direct involvement of the government. For a more detailed discussion of indirect involvement see; Da Rin et al. (2006), Lerner and Tåg (2013).

A possible drawback of public investment is that it crowds out private investors. Leleux and Surlemont (2003) examined the crowd-out effect of public sector involvement in case of VC and according to their results public involvement does not crowd out private investments, on the contrary it increases the amount of capital invested in the VC industry. They also found that large public involvement was more typical in case of smaller, less developed VC markets. Crowd-out effect is typical when a market reaches its optimal level by private investors. In case of an infant VC market like the Hungarian, as a result of the lack of necessary institutional environment and market imperfections the capital allocation to VC industry is not optimal and there are not enough funds for young, innovative firms. Temporarily public sector involvement in the VC industry may appear without the crowd-out effect, but just in its developing stage. The more developed a country's VC market is, the less justified the government involvement is (Karsai, 2002).

Kelly (2011) compared the returns of VC funds in the United States and Europe and found that the European returns are below the US returns. One reason of this weaker performance is that European market is in its development stage compared to the US market and it have not yet reached the critical mass to work effectively. VC investments have positive externalities for their peers, hence the more VC firms operate in an area, the more developed their environment is with regards to VC industry (Lerner, 2009). First of all VC market must reach the critical mass to develop the institutional environment that is necessary to an effective industry (Lerner and Tåg, 2013). Government activities can play an important role in creating and formulating the institutional environment and attracting market participants to VC industry via special incentives. In case of a young and less developed VC market public sector interventions can help the industry to reach its critical mass. In theory this seems like a valid reasoning, but in the real world this issue is more complex. What is the point, where a VC market considered being mature and self-sustaining? In spite of the spurring purpose of direct public sector intervention it can easily become a setback of development. To minimize this negative effect, government agendas must also have an exit strategy. From the beginning the goals of any program must be clear and government must plan not just for the implementation of the program but also for the withdrawal from VC market.

A possible drawback of public sector involvement can be that it increases the moral hazard of investments. Moral hazard issue runs deeply in case of VC. Sahlman (1990) describes the double moral hazard problem of VC investments. There is a two-level principal-agent relationship, where in terms of its relationship with the portfolio companies the VC firm is the principal, and in terms of its relationship with the investors the VC firm is the agent. The consequence of moral hazard problem in principal-agent relationship is that the efforts of agent to maximize its utility are not optimal for the principal. This way the agent is not acting on behalf of the principal and the relationship reaches less likely its original goal. In case of government backed VC funds this problem is more complex. The exposure of public sector to the issues of moral hazard and principal-agent problem is extended and diversified (Lane, 2000). When instead of private investors there is a government agency that finances VC funds than a multi-level principal-agent relationship evolves. As a result of these problems government involvement in the VC industry can lead to counterproductive actions, like financing companies out of the target group or

financing firms with affiliations to the agent. These negative effects mostly depend on the ability of institutional environment on enforcing accountability.

Lerner (2009) examined government efforts to boost VC market and entrepreneurship and found that most of these efforts were in vain and the failures were originated in the design of the programs. Public sector involvement in the VC industry is not unprecedented in Hungary. Former attempts failed to understand the VC method, the firms and funds created by the public sector lacked the features of VC. Public sector backed firms financed primarily companies in traditional industries, they had different exit approach, provided debt-like financing instead of equity-like financing and they were not involved in the operation of enterprises (Karsai, 2006). These characteristics of VC are necessary in creating a consistent system that can effectively spur entrepreneurship and innovation. Exit approach plays a crucial role in VC investments. VC's can realize profit via exiting their portfolio companies so they must have an exit strategy from the beginning of an investment or even before they invest into a company (Becsky-Nagy, 2006). VC's invest into young and smaller-sized enterprises but exiting companies via IPO or M&A is not possible profitably unless they reach a given size due to the economies of scale. As a consequence of the limited life of VC funds companies must have great growth potential to reach the size on a short run, where an exit can be profitable. Growth potential varies across industries (Greiner, 1998); companies in traditional industries have a lower growth rate in average, while companies in high-tech or biotech industry are able to grow more rapidly. That is the main reason why they can attract VC investments and why VC is associated with a few industries. As a consequence of this specialization VC's obtains special expertise and create networks that they can utilize in the selection of portfolio companies and in the further co-operation with them. Chemmanur et al. (2011) shows that, the non-financial value added services offered by VC's effectively increase the value of portfolio companies this way enhance the chance of successful exit. As we can see the features of VC follows from each other and they are parts of a consistent system. The understanding of VC method must be the first step in the planning of a VC agenda. The former efforts in Hungary were inconsistent with the VC method. These programs as a result of poor design failed to attract investors to the VC industry and they could not promote young innovative firms. On the other hand JEREMIE breaks with the previous government agendas and it is an important step forward. In the following sections the paper will describe the Hungarian JEREMIE VC program and its early results.

2. Hungarian JEREMIE venture capital program

2.1. Structure of funds

JEREMIE VC funds appeared in 2010 in Hungary. Figure 2. shows the basic structure of the program. The financial resources of JEREMIE are mainly from EU (85%) with Hungarian government contribution (15%). This capital is managed by Venture Finance Hungary PLC (VFH).
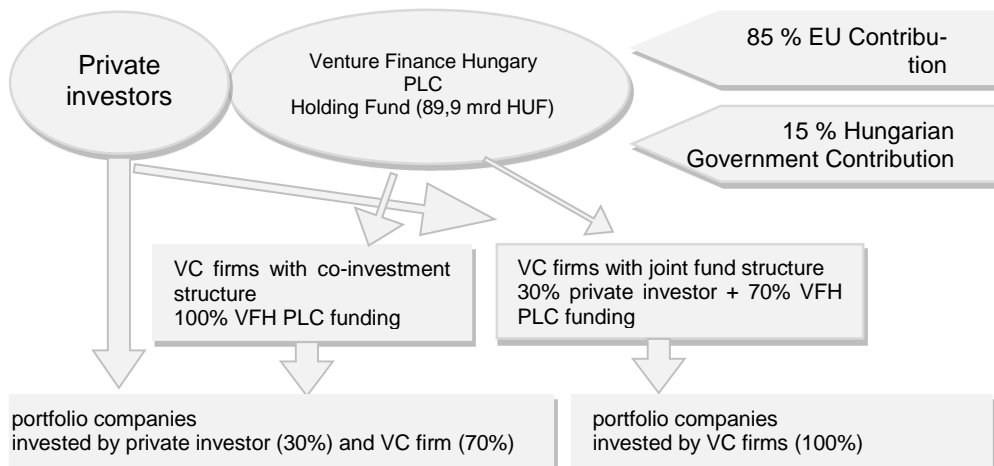
Figure 2: Structure of JEREMIE VC program
Source: author's illustration, Venture Finance Hungary PLC (2013)

The key element of the program is that it draws in private sector participants; investors and VC firms. As it was discussed above the lack of understanding of VC method by government can lead to the failure of the programs designed to stimulate innovation and entrepreneurship by spurring VC. This negative effect can be eliminated by the partnership of public and private sector that we can see in case of JEREMIE. VFH allocates capital to VC firms from private sector with an open tender procedure. Instead of the government agency private VC firms invest into companies and monitors their operation, VFH only supervises them. To meet the requirements of the tender VC firms had to employ experienced senior investors. With the participation of such investors the non-financial value added of VC can be increased.

On the other hand private sector investors also play an essential role in JEREMIE. There are two fund-structures in the program; co-investment and joint fund. In case of joint fund public sector funds must be supplemented by private sector investments in a 70%-30% compound. The other structure in the program is co-investment. In this set-up the VC fund itself is financed by VFH in a 100%, but each investment must be implemented in co-operation with private investors also in a 70%-30% compound. There are incentives built in the program that draws private sector investors in. There is a profit ceiling for public sector investment set to the benchmark interest rate of the EU. Above that level private investors are entitled to the profit of the VC funds. In case of profitable operation as a result of this leverage private investors can nearly triple their profits. On the other hand losses are mitigated, 5% of losses are taken over by the public sector.

The advantage of different structures of the funds is that it mobilizes different participants of VC industry. While investing into joint funds is preferable for institutional investors because of the larger-scale funding requirements, co-investment structure can attract other segments of VC market like business angels, serial-entrepreneurs or other VC firms specialized in smaller-scale investments. VC industry and its effectiveness is dependent upon these market participants. Institutional VC investors focus is more on the early and early expansion stages, while seed investments play a less important role in VC portfolios (Metrick, 2007). Also due economies of scale companies with lower funding needs are less likely to get VC funding. These are the pre-VC stages of young, innovative enterprises and the survival and development of firms in this period affects the demand side of institutional VC industry. Madill et al. (2005) showed that 57% of companies that received business angel financing also received VC financing, while only 10% of VC backed

companies had not obtained business angel funding. The result of funding gaps in the pre-VC ready stages will be the inadequate number of investment possibilities for VC. Informal VC is a missing link in the chain of funding sources in Hungary (Makra, 2004) that affects negatively the number of VC-ready enterprises. Co-investment structure could mobilize these market participants hence develops the ecosystem of VC industry.

The capital allocated into VC funds was low before JEREMIE. One reason is that legal environment and financial market regulations excluded domestic institutional investors from VC market until 2006 when the new capital-market regulation became effective (Karsai, 2007). Financial market deregulation and the appearance of pension funds proved to be a catalyst in many countries, for example in the USA in the early '80 or in Sweden (Lerner and Tåg, 2013). From 2006 although the regulation allowed it, institutional investors did not invest into this asset class. The future prospects of Hungarian VC market are not auspicious in face of the reversal of Hungarian pension reform. The windup of mandatory private pension scheme results in a hiatus of possible investors, which would be an indispensable pillar of a self-sustaining industry. As a result of missing institutional investors Hungarian VC is dependent on regional VC firms and foreign investments.

2.2. Investment policy

JEREMIE funds were founded in four different rounds and in each round with different characteristics. The main difference is in the focus of funds; 4 funds of the second round aim companies in their seed stage, the first round focuses mainly on early stage investments, while the other funds offer financing for companies in early expansion stages. Table 1. summarizes the specification of investment policy of VC firms dictated by the tender procedure. There are restrictions on the territory, age, revenue of the companies and on the size of investments.

Table 1: Characteristics of JEREMIE VC funds investment policy

Round		JEREMIE I.		JEREMIE II.		JEREMIE III.	JEREMIE IV.
Structure		Co-Investment	Joint Fund	Joint Fund Seed	Joint Fund Expansion	Joint Fund Expansion	Joint Fund Expansion
Number of Funds		1	7	4	6	8	2
Capital (billion HUF)		7,1	40,9	8,56	32,1	34,2	8,6
Scope	**Territory**	Central-Hungarian Region	out of Central-Hungarian Region				
	Age	< 5 years	< 5 years	< 3 years	< 5 years	< 5 years	< 5 years
	Revenue (billion HUF)	< 1,5	< 1,5	< 0,2	< 5	< 5	< 5
	Maximum size of invest-ment	1,5 million EUR in a 12 month period for no more than 3 consecutive years (max. 4,5 million EUR/company)		150 thousand EUR in a 12 month period followed by a 150 thousand EUR loan (max. 300 million EUR/company)	2,5 million EUR in a 12 month period		

Source: Venture Finance Hungary PLC (2013)

The territorial restrictions derives from that JEREMIE was implemented as a part of EU's regional development policy. Convergence of underdeveloped regions is one of the

primary objectives of EU's regional policy so the most developed Central-Hungarian Region is out of the focus of the program. Only one fund was raised to invest in this region. While this objective might be reasonable in case of other instruments of JEREMIE like loan or guarantee program, but it is inconsistent with VC. VC aims the most developed areas, innovative industry clusters and it is highly concentrated (Metrick, 2007). According to the study of NESTA (2009) that examined the private and public hybrid funds of the UK, such regulation of investment policy kept government involvement from reaching its goal. Territorial restriction is a counterproductive measure of JEREMIE. Other negative effect of territorial limitation is that the co-investment fund operates only in the Central-Hungarian Region therefore it cannot mobilize business angels in the whole country. It is true especially, if we take into consideration, that informal VC operates locally.

In terms of young innovative firms, age and revenue restrictions of JEREMIE are soft so the funding of a wide range of enterprises is possible. In the time of investment, most companies are in pre-commercial stage and have no revenues (Chemmanur et al., 2011). The maximum size of investment is a very strong constraint (Papp, 2012), especially in case of the four JEREMIE II. joint seed funds. To invest the entire capital of seed funds, supposing that firms invest the maximum amount of money into a company, each VC firms should make 24 investment decisions. The managing of such a portfolio would be hardly possible even if there were enough investment opportunities. On the other hand the capital allocated into expansion funds is disproportionately low compared to the higher funding needs of this stage of companies.

3. The early results of JEREMIE

The investment period of JEREMIE ends at the end of 2015. The funds of JEREMIE III. and IV. have started their operation only at the end of 2013 and there are no empirical evidences about their performance. On the other hand, more than 80 investments were made by JEREMIE I. funds. Originally, the end of investment period of JEREMIE I. was the end of 2013 but it was prolonged until the end of 2015. The reason of this prolongation is the low rate of investment. VC funds had made decision only about 66% of their capital (Garamvölgyi, 2014) and the effective disbursement was even lower until the end of 2013. One reason is that the demand side of VC is not ready for the amount of capital accumulated in JEREMIE; there is a shortage in the number of VC-ready companies. Harmonized government efforts in areas, like business incubation and development of entrepreneurial ecosystem are necessary for the progress of VC industry. Technology transfer policies could also stimulate the demand side of VC, but in case of Hungary as a result of the informational gap between VC's and spin-off companies the role of VC in this area is not significant (Becsky-Nagy, 2013). Recently we can see government effort aiming the development of these areas like the establishment of business incubators by National Innovation Office. Also the seed focus of 4 JEREMIE II. funds aims to stimulate diverse segments of enterprises. In the development of young innovative firms VC plays an important role, but it is part of a system and dependent on other factors. This paper focuses on the supply side of VC market; the more detailed analysis of the demand side goes beyond this paper. The low rate of invested capital does not derive only from the insufficient amount of investment possibilities. As we can see in Figure 1., VC investments in Hungary is the highest in Europe even though that one third of the capital was not invested. The first round of JEREMIE seems to be oversized compared to the maximum investment into a company.

Previous VC agendas failed to reach innovative firms (Karsai, 2007) whereas most companies obtained VC in JEREMIE represent this type of enterprises as a result of the VC method consistent operation of private VC firms. Until the end of 2013 JEREMIE funds had invested into 82 companies. From the total of 82 VC-backed firms 37 companies are

in the field of IT and communication, 16 are in biotech and healthcare industry (Garamvölgyi, 2014). Innovative firms dominate the portfolios of VC firms.

To evaluate JEREMIE we have to take into consideration the financial performance of funds and firms and the affects of the program on the environment of VC industry. In case of financial performance a quantitative research, the observation of portfolio companies and the exits are necessary to evaluate the program. Up to the end of 2013 there is information about one successful exit and one firm that went bust, most companies still in private. The absence of early successful exits might be the sign of poor performance, but the more detailed assessment of the financial performance of JEREMIE would be premature, average investment time is less than 3 years yet. As it was mentioned before, the effects of government involvement on the ecosystem of VC is also an important criteria. Future qualitative researches should surveying the attitude of entrepreneurs and investors toward VC, their awareness of this asset class, development of contracting conditions and the activity of market participants of VC ecosystem.

4. In conclusion

There is an extensive literature discussing the different aspects of government interventions in the VC market. In the long run public sector involvement is not able to substitute market participants, still in the short run in case of infant VC industries government actions can be the catalysts of the development. Well designed program's goal must be to attract private sector participants and not to substitute them.

Previous attempts aiming the stimulation of young innovative enterprises via VC failed in Hungary as a result of poor design and the lack of private sector involvement. The greatest achievement of JEREMIE is that it has drawn in different market participants via the partnership of public and private sector.

While the governing principal of the program is a significant step forward there are counterproductive and inconsistent restrictions in its implementation. Regional preferences and the limitation of the size investments are setbacks of the effectiveness. Also the size of funds and their composition with regards to their stage focus are miscalculated.

It is the success of JEREIME that it could reach young innovative companies contrary to the previous government actions aiming the alleviation of the financing prospects of these enterprises and that it could attract private sector participants. The more detailed assessment of the results and performance of JEREMIE would be premature. The proper evaluation of this agenda will require the quantitative analyses of financial performance of VC-backed companies and VC funds as well as the qualitative research of the development of the ecosystem.

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FINANCIAL INDICATORS IN MANAGERIAL DECISION-MAKING

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Abstract: *Working capital is crucial to determine the short-term financial position of a given company. Significant changes in working capital provide important information to the stakeholders. Working capital analysis is one of the methods of credit rating and it can also help to better understand the business cycle of a given company. One of the key elements of working capital management is liquidity management, that is, to maintain a company's ability to pay continuously, because in the short-term, it ensures the company to stay afloat, and justifies its progress on the long-term. Decision makers are in need of such indicators and interrelations that can help precisely assessing the real situation and recognise problems of funding in time. Achieving this goal is a very complex task because the use of several indicators and perspectives are necessary to measure liquidity. For this, companies have to develop management and organizational structures that provide an adequate framework to measure and follow up liquidity. To facilitate this, the study draws attention to interrelations that anticipate the actual liquidity position of a company more precisely. Generally, liquidity indicators are being used to measure a company's ability to pay, but those do not sufficiently take into account for how long different components are tied up during the operation. Adjusted liquidity indicators can be calculated to solve these problems as these include the time an asset is in the operating cycle in the case of current assets and short-term liabilities. At the same time, these days the continuous monitoring and analysis of operational data has become essential, too. The database which has been created as a result of the annual financial statement reporting obligation that was introduced by the Act C in 2000 can be used to analyse company data on a yearly basis. However, in case we would like to examine the changes of these indicators continuously during the financial year, we need (monthly or quarterly) data and the introduction of a proper accounting information system for the managers to continuously receive those processed data that are essential for decision making, and to receive information about the performance of their department. This study's aim is to show the difference between the consequences of company liquidity results using only year-end data and when liquidity indicators are being adjusted on a monthly basis.*

1. Introduction

As the result of the economic crisis that evolved from the international financial crisis, there are numerous companies in worse conditions than they were before. Some of them bankrupted, some of them are still fighting for survival. In several aspects of life it is very important to clearly and precisely evaluate corporate performance and income positions including credit institution debtor ratings before lending processes, and to measure company performance in the case of subsidy requests (Orbán, 2006). This has a consequence of reduced lending activity from external sources and lenders. Potential investors like venture capital firms (Nagy, 2004) have become a lot more wary. They analyse loan applicants more carefully. Therefore, companies have to become more aware of their own present and future financial situation, financing capabilities, to submit appropriate loan applications to the financial institutions. Mcmenamin (2005) defines the financial aims of a company, such as being profitable, pursuing liquidity and sustaining a proper capital structure. The importance of a proper capital structure was emphasised by Herczeg (2009), too.

As a result of the uncertainties emerged and came to the fore in the economy, risk measurement and risk management have an ever greater role in corporate governance. According to a change management study of Bácsné (2011), this is how top managers of profit oriented companies' think of everyday practice. There is a strong and increasing demand for solutions that can forecast default risks in advance. There are different – simple and more complex – methods that can be used by decision-makers to assess risks and to be aware of the direction of changes. So far, numerous financial indicators have been developed and there are different prediction models, too. (Chorafas, 2002).

Traditional financial indicators cannot be emphasized enough to be used very cautiously. We should keep in mind that their signals can show the opposite of the actual situation. We also need to know that an accurate forecast can only be done by combining different indicators, and by developing complex forecasting models.

2. Working Capital Management

Companies have to deal with indicators and company features much more thoroughly than they did before to be aware of their position, to know their financing facilities using their internal sources to better utilize their own resources available. Ensuring internal sources at an appropriate level and continuous funding of company operations are topics closely linked to working capital management. Another reason of its importance these days – in conjunction with the previous one – is that, nowadays companies work with ever longer payment periods, which means significantly longer-term trade credits than before. Companies should be able to finance those longer timeframes.

Working capital is crucial to determine a company's short-term financial status. Significant changes in working capital provide important information to the stakeholders. It is especially true for net working capital. Working capital analysis is one of the methods of credit rating and it can also help to understand the normal business cycle of a given company.

Tarnóczi and Fenyves (2011) defined the terms of working capital and net working capital because in domestic (and seldom in international) literature there are various interpretations of these definitions. It is important to differentiate working capital (gross working capital) and net working capital, because it makes easier to use them as measurement tools, and last, but not least the 'net' expression can be better understood. *Working capital (it is also called as gross working capital) is the cash of the company that are invested in cash, accounts receivables, inventories and other current assets.* Conventionally, working capital means a company's investment in current assets, which are expected to be converted to cash in less than a year.

An important indicator related to working capital management is *net working capital which can be defined as the difference of current assets and current liabilities of the company*, i.e. the part of current assets that is not covered by current liabilities. Net working capital can be considered as netting gross working capital (Figure 1.). From a different point of view, *net working capital means the part of current assets that are financed from long-term financial assets or shareholders' equity, i.e. financed from long-term sources.*
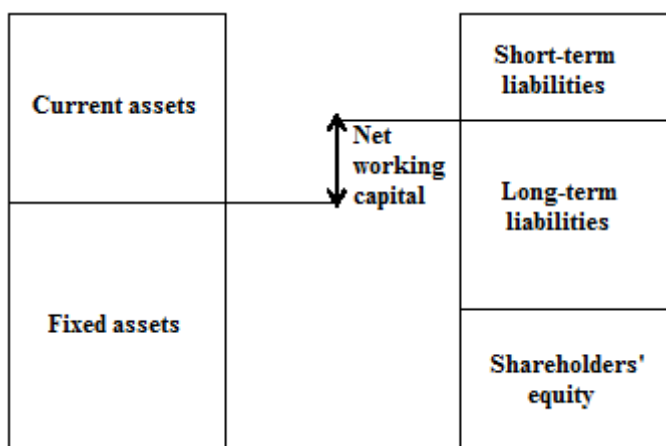
Figure 1: Net working capital
Source: self-structured

If we interpret working capital and net working capital as described above, then *working capital management* includes financing and managing current assets and controlling short-term liabilities of the company. One of the key elements of working capital management is liquidity management, that is, to maintain a company's ability to pay continuously because in the short-term, it ensures the company to stay afloat and in the long-term it justifies its progress. Elimination of liquidity can cause a company ceases to exist (Chorafas, 2002). Accordingly, one of the most important corporate financial risks, the non-payment or default risk is related to liquidity management. Basically, the main tasks of liquidity management are to minimize risks, or we might as well say the development of an optimal financial structure.

3. Liquidity Management
The effective liquidity management – beyond securing their survival – helps companies to reach higher profitability by reducing their input needs. Furthermore, it grants strategic advantages in the economically difficult time periods. According to Havran (2011), applying consistent liquidity management can provide opportunities for a company to react market changes faster and cheaper, or more profitably. In general, traditional liquidity indicators are used to measure the company's ability to pay. (Table 1.)

Table 1.: Traditional liquidity indicators

Current ratio	Quick ratio	Cash asset ratio
$\dfrac{Current\ assets}{Short - term\ liabilities}$	$\dfrac{Current\ assets - inventories}{Short - term\ liabilities}$	$\dfrac{Cash + Securities}{Short - term\ liabilities}$

Source: self-structured

If we look into the formula of the current ratio, an obvious correlation can be found with net working capital. The current ratio is also called working capital ratio. As a result of this correlation, if the company meets the required level of current ratio, the net working capital will be positive. We can also conclude that current ratio should not be less than 1 to have a positive net working capital ratio. Depending on the industry and company, this ratio can vary in a wide range. In case of manufacturing companies, a higher ratio is better, while a lower ratio is acceptable for service companies, as they usually have more easily calculable and predictable cash flow, lower inventories and fewer liabilities (Soenen-Tarnóczi, 1995).

Current ratio was formerly called as a 2:1 ratio indicator, but these days its value between 1.3-1.7 is acceptable – depending on the sector. A too high value is not good either, as it can decrease profitability (Himber et al., 2006). If the lower boundary of this ratio is concerned, one can conclude that at least 30 % of current assets have to be financed by long-term sources. This is the evidence that net working capital can be used as a liquidity indicator, i.e. inadequate net working capital shows insolvency risk of a company.

With positive net working capital we can assume that the company will be able to comply with its obligations during the fiscal year, it is solvent. This is not necessarily always true, because net working capital – just like current ratio – is not the most accurate indicator to determine liquidity, because only cash and short-term investments (securities) are truly liquid assets. Those assets are considered truly liquid that can be converted into cash easily and without significant loss, while a liability is liquid when it has to be repaid in a short time (Soenen-Tarnóczi, 1995). High net working capital can be a result of highly invested accounts receivable (as a result of customers' delayed payments or non-payments) and/or because of increased inventories. Logical, that due diligence is needed during interpretation of liquidity indicators. Changes in net working capital ratio can be a result not only of changes in current assets and short-term liabilities, but shareholders' equity, long-term liabilities and fixed assets also affect. Therefore, it is worth considering and calculating with all three ratios, because this is the only way to avoid bad decisions and to be aware of the company's solvency risk.

One of the stricter tests to determine a company's liquidity is the so called quick ratio, which measures short-term liabilities to the difference of current assets and inventories. This is a more accurate ratio as it ignores those current assets that are less liquid, namely the inventories. It only considers those current assets that can be converted into cash more easily. Lower liquidity of inventories means in some cases it is harder to sell them in a short period of time on the desired price (financially realize). Moreover, the book value of inventories does not always coincide with market prices even if they turn relatively fast, and it does not consider quality differences, either (Soenen-Tarnóczi, 1995).

Cash asset ratio is the most important to calculate a company's liquidity position. Normally this indicator does not have a minimal threshold level, but I think – considering the method it is calculated – the 0.25-0.3 level is acceptable. It means the company could pay 25-30 % of its short-term liabilities immediately.

Traditional liquidity measurement indicators should be also noted not being accurate in all cases. It comes from the basic characteristics of financial statements. They do not always show a true picture regarding the liquidity of a company, overestimation and underestimation can also occur. Liquidity indicators would be important to follow precisely but this would require companies to close accounting records monthly or quarterly.

Traditional liquidity indicators do not always accurate in measuring a company's ability to pay as those do not take into account how long different components are tied for the operation of the company. However, the time it is tied or it is working can substantially affect how quickly a company can fulfill its payment obligations and it also alters the liquidity indicator values, too. To solve this problem, the components of current assets

and short-term liabilities should be adjusted first, and these numbers should be used during liquidity calculations. The balance sheet items used during liquidity calculations should be adjusted by the time those are in the operating cycle, what conventional liquidity indicators ignore. A corrective factor has to be calculated for each item to be adjusted. By multiplying the item with the corrective factor we get the adjusted value:

$$Corrective\ factor = 1 - \frac{1}{Rotation\ speed\ of\ an\ asset\ or\ source}$$

In case of current assets only inventories and accounts receivables are adjusted. In short-term liabilities, promissory note liabilities and current portion of long-term debt should not be adjusted. After the corrective adjustment, we can calculate the values of the adjusted current assets and adjusted short-term liabilities which can be used to calculate the adjusted liquidity indicators:

$$Adjusted\ general\ liquidity\ ratio = \frac{Adjusted\ current\ assets}{Adjusted\ short-term\ liabilities}$$

This ratio can be improved by increasing the rotation speed of inventories and accounts receivables and decreasing the rotation speed of short-term liabilities, i.e. by improving the asset- and resource management of a company. This indicator can have a higher or lower value than the general liquidity ratio has. However, if a company manages its current assets and short-term liabilities efficiently, then the value of the adjusted general liquidity ratio will be higher than the general liquidity ratio. (Gangadhar, 2003).

4. Results and Evaluation

By the use of different liquidity indicators we try to anticipate whether companies can meet their short-term liabilities using their available current assets. Liquidity ratios have a great benefit of being relatively accurate regarding their components because on the short-term, there are more realistic data available in the accounting system than for analysing long-term assets and sources. However, we have to keep in mind that liquid asset prices change fast, that's why these indicators can become outdated in a short period of time. Therefore, when we implement liquidity tests, a continuous monitoring is necessary. In case of certain fields of activity, the degree of liquidity can differ seasonally.

Nowadays, it is very important for the management to receive new information the fastest possible, because this is the only way to act quickly. The earlier an effect can be seen – whether it is negative or positive –, the sooner it can be managed or taken advantage of. This is the exact reason why the continuous observation of the company's operations and data analysing is essential for companies. One of the sources of data to be used for the analysis could be the annual report for those companies that are legally bound to prepare it. Annual reports of the companies are required by the Act C of 2000 which has been amended several times since its implementation. However, to keep track of the changes in these indicators during the year, (monthly and/or quarterly) data is needed. For the managers to receive the necessary and essential information for decision-making, the adaptation of an adequate accounting information system is required, moreover, to get feedback about the performance of their department.

For the calculation, we have analysed data of a manufacturing company in the period of 2011-2013. We have used both monthly and annual data that allowed us to compare monthly and yearly results. The general and adjusted liquidity ratios of the company are shown on Figures 2-4.
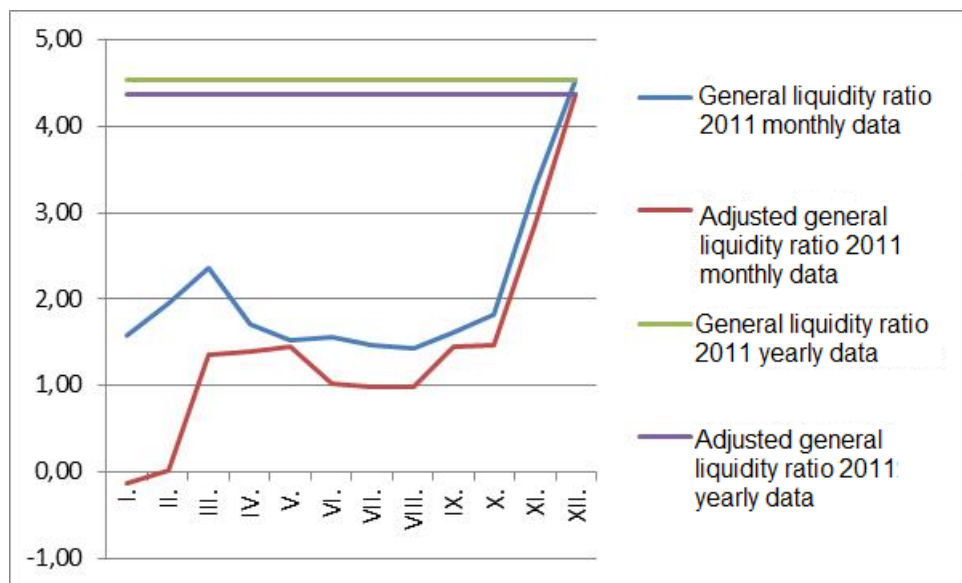
Figure 2: The general and the adjusted liquidity ratio in 2011.
Source: self-structured

Data shows the company does not have liquidity problems in general. When analysing the monthly data, bigger and smaller fluctuations can be seen. This is the result of seasonal sales periods and different payment conditions for different partners. In 2011 and 2012 the adjusted liquidity ratio was mostly lower than the general liquidity ratio.
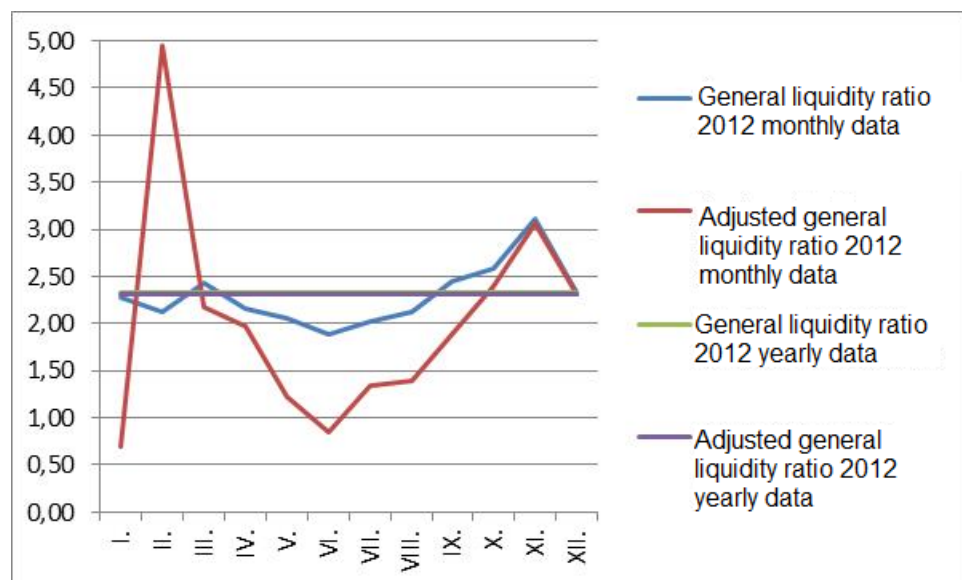
Figure 3: The general and the adjusted liquidity ratio in 2012.
Source: self-structured

We can also see the monthly general liquidity ratio to be volatile in 2013, but in this case the adjusted liquidity ratio was higher in several cases (Figure 4).
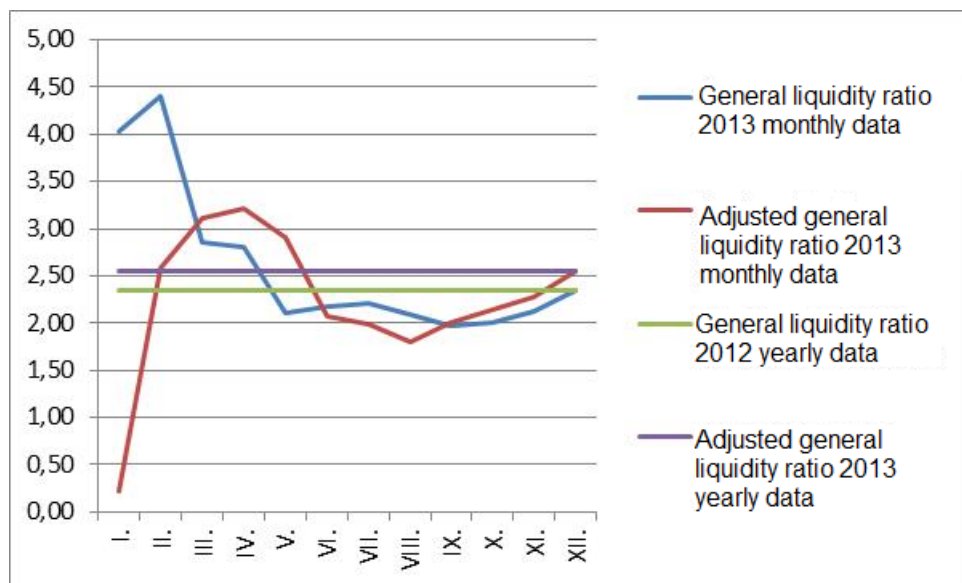
Figure 4: The general and the adjusted liquidity ratio in 2013.
Source: self-structured

After looking at Figure 2-4, we can draw the conclusion that monthly adjusted data shows a lot more accurate and realistic picture about the liquidity position of the company than the yearly data. The values of the year-end adjusted monthly data are much more accurate. The adjusted and the general liquidity ratios were different in the end of the studied years; in 2011 the general liquidity ratio was higher, while in 2012 the two ratios were nearly the same in the end of the year (yearly general liquidity ratio 2.33, adjusted general liquidity ratio 2.32). In 2013, the yearly general liquidity ratio was higher. Regarding the monthly data – excluding the early year and year-end results –, the values of the adjusted general liquidity ratio were lower than the general liquidity ratio's values.

The general liquidity ratio does not measure the flexibility of a company. A company is more liquid in the periods it has a lot of cash and marketable securities than in the periods it has big inventories. This is the reason why the general liquidity ratio is not a reliable indicator to show a company's ability to pay.

Buying stocks does not affect the general liquidity ratio but decreases quick ratio values. General liquidity ratio is worth mentioning to be dependent on several variables that affect liquidity on different ways. Quick ratios of the company can be seen on Figure 4-6.
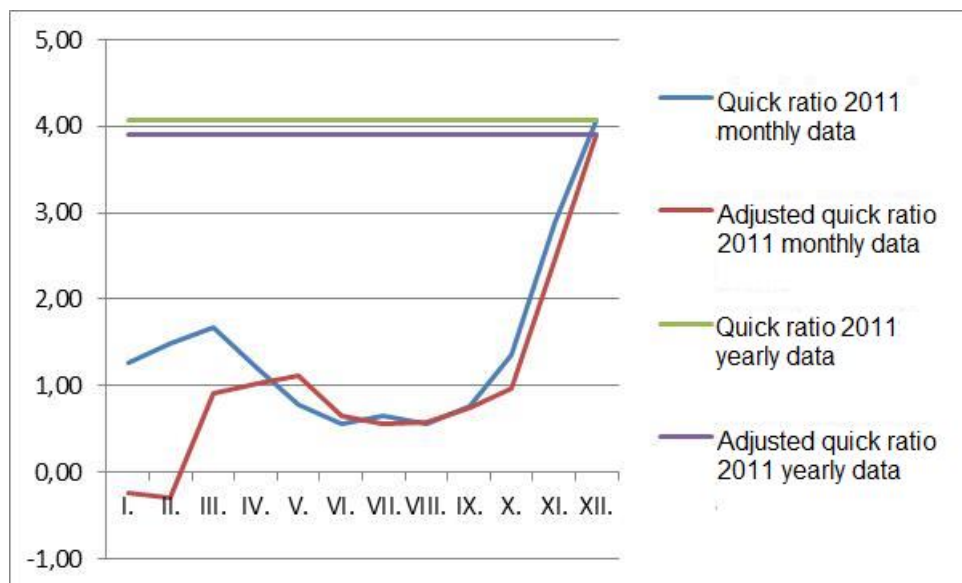
Figure 5: The general and the adjusted quick ratio in 2011.
Source: self-structured

The significance of monthly values in enterprise valuation is evidenced in these results, too. Looking at the monthly data we can also draw the conclusion that the values of the ratio are fluctuating in greater or lesser extent.
If we look at the company's timeline of 2011 and 2012 (between May and September) we can see there were periods when the quick ratio was temporarily below the lower boundary of the accepted range. The adjusted quick ratio had similarly low values in the beginning of the year as the adjusted liquidity ratio did.
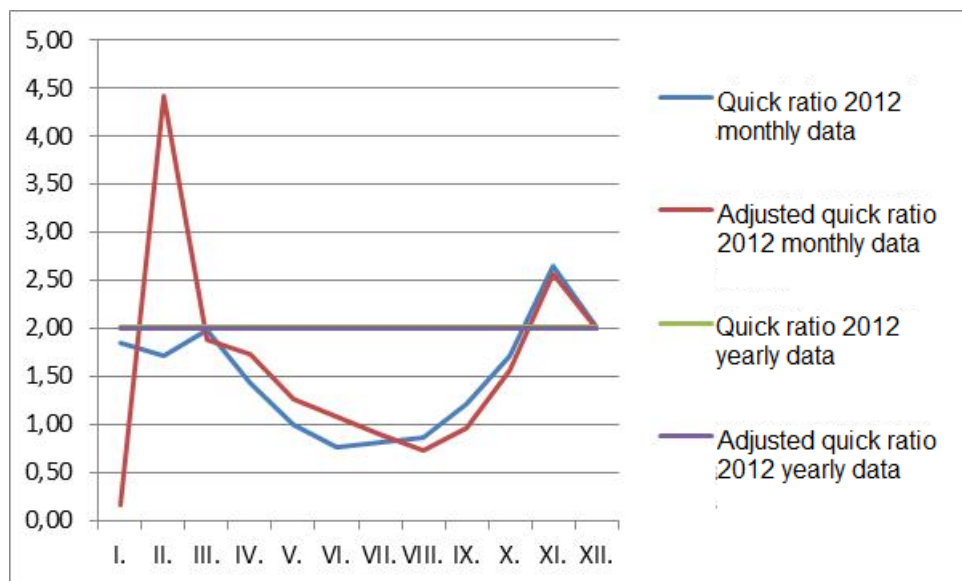
Figure 6: The general and adjusted quick ratio in 2012
Source: self-structured

The adjusted quick ratio values were very low in the beginning (January) of all the three years studied, just like the adjusted liquidity ratio values.
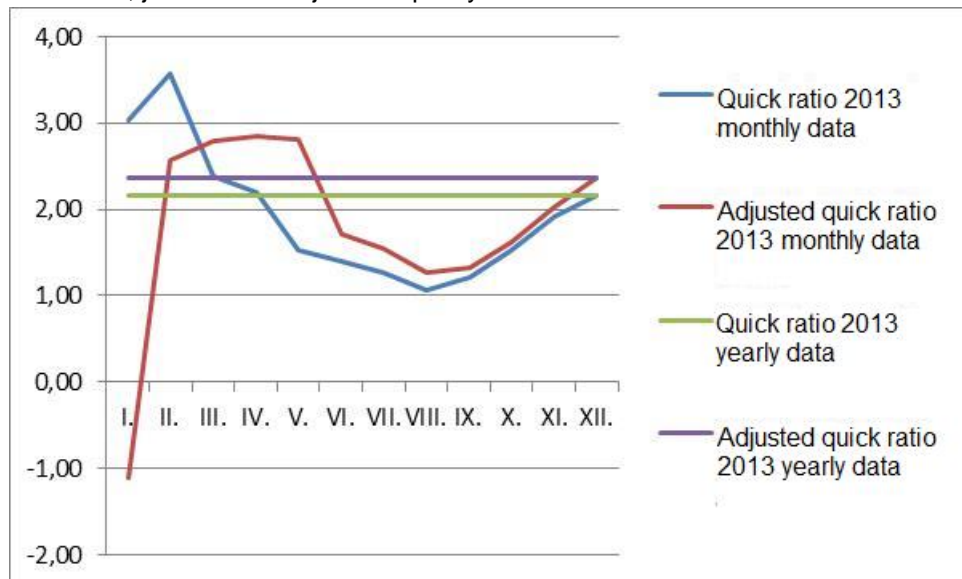
Figure 7: The general and adjusted quick ratio in 2013
Source: self-structured

The quick ratio ignores the most illiquid assets of a company, but the analysed one had significant amount of cash, which has caused differences between the values of the general liquidity ratio and quick ratio.
Figure 8-10 show the cash ratio of the company.
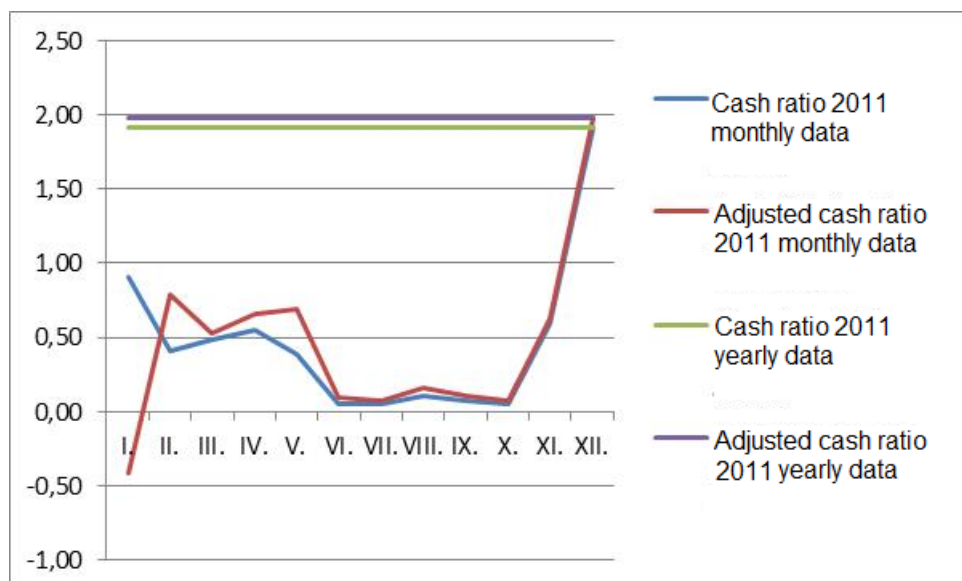
Figure 8: The general and adjusted cash ratio in 2011
Source: self-structured

In the case of this company, this ratio could be calculated by dividing cash assets by short-term liabilities, as the analysed company did not have marketable securities in any particular year.
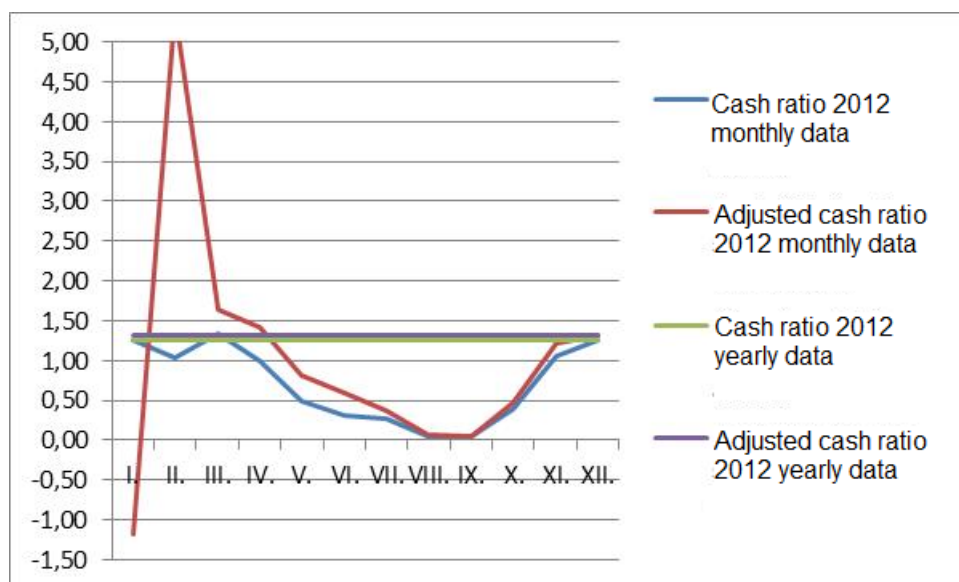
Figure 9: The general and adjusted cash ratio in 2012
Source: self-structured

In case of monthly cash ratios there is a similar tendency as the previous two ratios had, but in certain periods of 2011 and 2012 (namely in August and September), the values of the indicators were repeatedly close to zero, which indicates very bad liquidity situation. Conversely, in 2013, the cash ratio's lowest value was 0.43 points in September, which is positive.
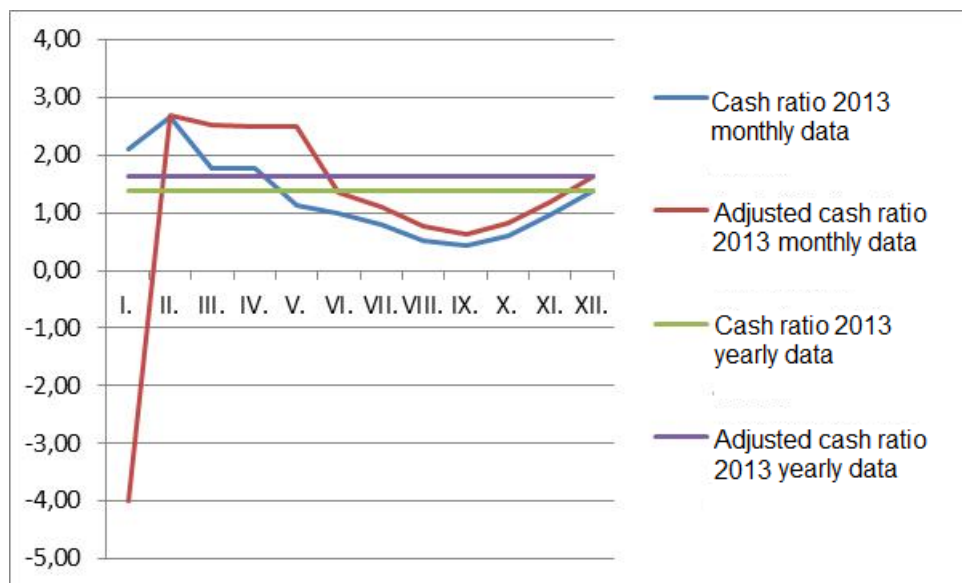
Figure 10: The general and adjusted cash ratio in 2011
Source: self-structured

The adjusted cash ratio was negative in January. The adjusted liquidity ratios can be negative only when the turnover rate of the adjustable items (inventories, receivables, short-term liabilities) has a value under 1. In the case of cash ratios, the adjusted ratios were higher in all the studied three years, except for the months of January.

5. Conclusions

It is important to continuously monitor liquidity ratios that help determine a company's financial position, but for this, monthly or quarterly closing of the books is required. This is not only important because of the monitoring, but also the timely decision making. For the management, nowadays it is not enough to focus on the decision but the time factor is getting more and more important. Another factor is the follow-up of the decisions' results in case of successful companies. Monthly closings could help to make these observations, and operating results can be analysed in detail, too. Companies, their creditors and internal stakeholders should be aware of the liquidity and solvency situation of a given company, which can be measured by different liquidity ratios. However, traditional liquidity ratios do not sufficiently take into account how long their components are tied for the operation of the company, which significantly affects their values. Adjusted liquidity ratios can be used to solve this problem.

6. References

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FINANCING ASPECTS OF THE HUNGARIAN GENERAL MANUFACTURERS IN 2010-2012

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Abstract: Observing and analysing the capital structure of corporations is one of the most important economic issue, it affects several fields of the life. The aim of the present study is to analyse the connection between capital structure and profitability in order to reveal such a ratio for the capital leverage and liabilities, by which it can say, to that connect the profit or loss. I searched the volume of influence of chosen indices of capital structure on financial and profit situation of corporations, in addition I studied which variant of those that take a part in development of capital structure, should be in functional relation with profitability indices. I used cutpoint analyses to determine the quantile point between the profitable or the non profitable operating. In my analysis I am seeking the answer for the question: whether the relation between the capital structure and the profitability can be proven, and if yes, then can we determine its direction and intensity.

1. Introduction

Capital structure refers to the way a corporation finances its assets through some combination of equity, debt, or hybrid securities. A firm's capital structure is then the composition or 'structure' of its liabilities. So capital structure is a mix of a company's long-term debt, specific short-term debt, common equity and preferred equity. It shows how a firm finances its overall operations and growth by using different sources of funds (Shapiro, 1989).

Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings. Short-term debt such as working capital requirements is also considered to be part of the capital structure.

Defining the optimal capital structure have for a long time been a focus of attention in many financial institutions that probe into this area. This is comprehensible as there is a lot of money to be made advising firms on how to improve their capital structure. The concept is extremely important because it can influence not only the return a company earns for its shareholders, but whether or not a firm survives in a recession or depression.

Lot of theories exist to describe the optimal capital structure. The first breakthrough came with Modigliani and Miller's theorem, which specifies conditions under which various corporate financing decisions are irrelevant. MM Proposition I. concerns about the irrelevancy of the value to capital structure. MM Proposition II. implies that, the higher the debt-equity ratio, the higher the expected turn on equity. (Modigliani-Miller, 1958) Later Modigliani and Miller showed that when corporate taxes are included, the value of the levered firm is equal to the value of an unlevered firm plus the present value of the tax shields associated by debt.

This third step in capital structure theory was first suggested by Baxter and later modified by others. In this way, bankcruptcy costs are introduced. Now the value of the firm in bankruptcy is reduced by the fact that payments must be made to third parties other than bond- or shareholders. This theory states that there is an advantage to financing with debt (namely, the tax benefits of debt) and that there is a cost of financing with debt (the bankruptcy costs and the financial distress costs of debt). The next step in capital structure theory was the introduction of personal taxes in 1977. Miller showed that, a "nothing matters" situation arises when you combine corporate and personal taxes.

The "Pecking Order" theory capture the costs of asymmetric information. It declare that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort (Treynor, 1981). The pecking order theory is popularized by Myers (1984) when he argues that equity is a less preferred means to raise capital because when managers (who are assumed to know better about true condition of the firm than investors) issue new equity, investors believe that managers think that the firm is overvalued and managers are taking advantage of this over-valuation. As a result, investors will place a lower value to the new equity issuance.(Myers, 1984)

Most recently, the assumption of comple contracts is relaxed. Instead, contracts are assumed to be oncomplete, i.e. they don't specify precise provisions for every conceivable future event. And apart from the theoretical literature hundreds of papers try to empirically test all the different capital structure theories.

2.   Methodology

In my study calculations is connection with the analysis of fund- and capital structure of 50 general manufacturers are based on their balance sheets, appeared OPTEN database, period 2010-2012.

Balance data and internal proportions - partition coefficients - furthermore indices calculated based on these shall help to estimate occurring changes in the composition of assets and funds. Taking advantage of common methods of statistic analysis I defined the most important index numbers (such as leverage, capital strength and capital supply) regarded to the consideration of capital structure, their rates annually and by corporations, then I evaluated main tendencies in management of the sector by processing average rates calculated from these.

I searched the volume of influence of chosen indices of capital structure on financial and profit situation of corporations with regression calculating, in addition I studied which variant of those that take a part in development of capital structure, should be in functional relation with profitability indices (Van Horne, 1987).

I used regression analysis for an empiric proof of capital structure theories and cutpoint analyses to study the credit distributing phenomenon by Stiglitz since in the subject of the database I searched the significance of wontedness and slant that marked damage of normality at many factors, furthermore in many cases even the terms of a dispersion homogenity were not certain. Because of repeated damages of the two modelled T-test, a specified comparison of distribution seemed to be expedient within the confines of a cutpoint analyses which I performed with the assistance of the ROPstat 1.0 statistic pack of programs.

3.   Results and discussions

3.1 Profitability connection with capital structure

In my analysis I looked into the factors defining capital structure, the existence of connection between index numbers describing it and the strength of this connection as well as how an existing connection could be described and expressed. I meant to test the correctness of the following pieces of hypothetical:

Capital structure are in connection with the main parameters describing financial and income situation of corporations, if so, combination of chosen balance items (variants) could serve an explanation for the fluctuation of profitability indices.

Thus I performed regression analysis of studied database on the base of two starting point. In one case I was trying to find the answer for what influence the capital structure indices, which may describe fund structure the best and are chosen by me, take on the financial and profitability situation of the corporation; whilst due to the second calculation I was looking for the answer for which of the variants filling a part in development of capital structure is in functional connection with the fluctuation of profitability indices.

The results of relation analysis for instance the connection between the profit in proportion with assets items are described in table 1. It shows that profit in proportion with assets is in strong, negative connection with the proportion of credits lodged from owners in total capital; a change of 100 percent degree of that proportion would lower the rate of profit index by 24 percent degrees. Similar to credits lodged from owners, the studied index is also in a negative way of correspondence with proportions of long and short-term liabilities, however in the case of the latter the correspondence is not significant. Index number of fitting to the regression equation (R-square) is 0,39 that is to say the calculated model explains 39 percent of variance.

Table 1: Regression Analysis of Return on Assets

ROA	Coef	Std.Err	t	P>|t|	95% Conf.Int.	
Accummulated profit reserve	0,042473	0,01217	3,12	0,000	0,04253	0,09111
Loan from owners	-0,23814	0,03088	-5,66	0,000	-0,3537	-0,1919
Long term liabilities	-0,01645	0,03473	-2,63	0,106	-0,1249	0,01206
Short term liabilities	-0,20987	0,02597	-3,23	0,000	-0,1611	-0,0586
Const.	0,063636	0,01045	6,09	0,000	0,04301	0,08425

Source: Own calculation based on balance sheet of the examined corporations

3.2. Cut-point analysis for the optimal capital structure

In the followings I am looking for the answer whether in the studied 3 years should be a kind of capital structure considered to be general, due to which it could be stated that it couples to management producing profit or deficit instead. I plan to test the correctness of the following hypothetical:

According to general manufacturers researched a sort of proportion is detectable between foreign capital and equity as well as at credit files, to which its profiting connects.

The conventional statistic methods were not adequate to confirm this, since according to several variants drawn in the analysis, tests of both normality analysis and scatter homogeneity marked damages of adapted conditions; this is why I searched my idea through cutpoint analysis. I defined a proportion between foreign capital and equity which could be regarded as this: that proportion or a rate over it goes together with deficit in operation. I found that only 36 percent of corporations producing deficit and at the same time only 14 percent of those producing profit have leverage index over the rate 1,35. It also could be appreciated remarkable that almost 100 percent of corporations producing profit bear index numbers under 2,5 however, one out of five of those producing deficit have higher rates than this (table 2.)

I performed the same statistic process in the consideration of the liabilities' proportion within fund construction and on this I found that more than 62 percent of studied corporations producing profit operate credit proportion under 40 percent however, almost 71 percent of those producing deficit have rate proportion barely over this. Due to my results break-out possibilities for corporations already producing deficit are tightly limited, banks found granting credit to them is risky; moreover they have slight opportunity for development and by this flare and profiting operation by self strength.

Table 2: Specified Comparison on Distribution of Leverage

c	F1(c)	F2(c)	F1-F2	Korrekt%	Phi	Coef.	p	Adj. p
-49,12	0,011	0,000	0,011	50,7	0,10	0,00	0,2990	
-11,39	0,030	0,000	0,030	51,2	0,14	0,00	0,1206	
-3,43	0,045	0,000	0,045	52,3	0,17	0,00	0,0413	
0,25	0,313	0,368	-0,055	52,7	-0,05	1,28	0,4496	1,0000
1,35	0,612	0,860	-0,268	63,4	-0,31	4,65	0,0000	0,0003***
2,23	0,791	0,960	-0,169	58,4	-0,27	6,34	0,0005	0,0041**
3,54	0,836	0,976	-0,140	57,0	-0,26	7,99	0,0007	0,0056**
4,34	0,881	0,976	-0,095	54,8	-0,20	5,51	0,0175	0,1403
5,53	0,940	0,984	-0,044	52,2	-0,12	3,90	0,1857	1,0000
6,53	0,955	0,992	-0,037	51,8	-0,12	5,81	0,1231	0,9848
7,53	0,970	0,992	-0,022	51,1	-0,08	3,82	0,2792	1,0000
9,52	0,985	0,992	-0,007	50,3	-0,03	1,88	1,0000	
10,51	0,985	1,000	-0,015	50,7	-0,10	....	0,3490	
47,37	1,000	1,000						

Source: Own calculation based on balance sheets

3.3 Empiric Test on Capital Structure Theories

Corporation decisions relating to capital structure are the observed of all theoretical observers although corporation leaders make capital structure decisions in very few cases while expressly aspiring to the achievement of some optimal structure. This is because management mostly make decisions of production, market and finance and all these take direct effect on all-time capital structure of corporations. I was searching for the answer whether statements of certain theories on capital structure should be realized considering corporations examined by me (Tarnóczi-Fenyves, 2011).

Certain statements on capital structure are effective on corporations as well, however, capital structure policy of corporations cannot be described extensively by any models.

According to corporations I studied, negative connection proven between profitability and leverage refers to the realization of hierarchy theory however fundamentals of conversion theories do not come true. Positive connection being between consistence of assets and proportion of long-term credits though confirm the very grounds of conversion and agent theories.

Through empiric test of a statement of hierarchy theory of Myers-Majluf that refers to the internal sequence and the sequence among foreign funds, I tested whether it comes true that if investment possibilities of corporations are almost the same, amount of their internal funds and credits should be in negative connection. The more the available own funds are, the less foreign funds are needed to attain certain investment policy.

Based on researches of **ÁBEL-ÖCSI (1999)**, in the course of the analysis I adapted leverage index for estimating foreign funds however, to show internal funds I adapted the rate calculated by them, which relates to total balance of corrected operation flow. This index number does not include interest obligation in connection to foreign funds since this would cause inconvenient negative correlation effect considering rate of leverage. Method of calculating corrected operation flow is the following: taxed throughput – dividend + amortization + interests.

Leverage calculated from data of a certain year appears as dependent variant of regression equation, furthermore as an explaining variant aside from the index number of corrected flow, corporation size is also brought in the model, which I defined as a natural based logarithm of income. Estimation results of equation describing leverage are shown by *table 3*.

Table 3: Estimation Results of Equation Describing Leverage

	Coef	p-value
Const	0,4190257	0,016
Adj.operating cash-flow	-1,77678	0,0005
Size	-0,02132	0,239

Source: Own calculations

Due to the found equation, index of corrected flow is significant and goes with a negative indication which matches my idea, however connection between corporation size and leverage cannot be proven statistically.

Although indication of this index reflects negative rate that was hoped, this result could be caused even by coincidental fluctuation as belonging high P-rate shows. However it is clear that proportion of external sources relating to own capital lessens around 1,8 percent degrees in the case of 1 percent degree raise of flow related to total balance. Negative relation between held back profit and leverage, which is detected due to the regression equation, tallies the hierarchy theory of Myers-Majluf that sais corporations would finance firstly from own funds and would only after this take the opportunity of lodging credit.

Through empiric test of capital structure theories I confirmed the theorem which is already stated also by technical literature: none of them are realized comprehensively in the process of the changing of capital structure at corporations I studied. However the hypothesis of hierarchy theory does come true, which finds that corporations would finance activity of corporation firstly using own funds and only after this would turn to the opportunity of foreign funds.

Results of my research draw attention to the fact that conscious management of funds and amplification of the ground of own capital are indispensible conditions for better profitability status of the sector and for achieving competitive production.

4. Conclusions

Dealing with the optimal capital structure is current. The decisions of it is critical not only because of the need to maximize returns, but also because of the impact such a decision has on an organization's ability to deal with its competitive environment.

I prove with relation analysis: capital structure proportions take serious effect on the fluctuation of profitability.
Symmetry of own capital (also proven statistically) shows positive relation of variation of profitability indices and liquidity, furthermore, raise of proportion of foreign capital couples with diminution of taxed throughputs: influence of its payable interest flow in taxed throughputs.

With the assistance of cutpoint analysis (also either specifically to orientation of activity and size) I defined a proportion of foreign capital and own capital which if reached or exceeded, may lead to operation producing deficit.

In the course of empiric test on grounds for capital structure theories considering general manufacturers, by statistic methods (correlation- and regression calculation) I prove that in the processes of developing capital structure of plants none of the theoretical models are realized comprehensively. However, while analysing comprehensive realization of models I managed to define factors of certain condition systems that do come true considering plants of manufacturers.

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SUMMARY OF THEORIES IN CAPITAL STRUCTURE DECISIONS

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Abstract Defining the optimal capital structure is a critical decision for any organization. This decision is important not only because of the need to maximize returns, but also because of the impact such a decision has on an organization's ability to deal with its competitive environment. There are many theories for this theme, but all the same, researchers have not found the optimal capital structure.
In Hungary the capital structure of enterprises changed significantly since 1990, but it is true, that their decisions about the capital can not fit with neither theoretical appeal totally. There is no universal theory of the debt-equity choice, and no reason to expect one.

Keywords capital structure, Modigliani Miller, enterprises

JEL classification: M40

1. Introduction

In traditional corporate finance, the objective in decision making is to maximize the value of the firm. A narrower objective is to maximize stockholder wealth. When the
stock is traded and markets are viewed to be efficient, the objective is to maximize the stock price. "Stock price maximization, firm value maximization and stockholder wealth maximization is not the same. Stock price maximization is the most restrictive of the three objective functions. It requires that managers take decisions that maximize stockholder wealth, that bondholders be fully protected from expropriation, that markets be efficient and that social costs be negligible.
Stockholder wealth maximization is slightly less restrictive, since it does not require that markets be efficient." (Damodaran, 1994)
Firm value maxmization is the least restrictive, since it does not require that bondholders be protected from expropriation. Thus, when we make the argument that an action by a firm (such as investing or financing) increases firm value, this increase in firm value will necessarily translate into increasing stockholder wealth and stock price only if the more restrictive assumptions hold. Conversely, an action that increases the stock price in a world where the less restrictive assumptions do not hold, may not necessarily increase firm value.
As the Figure 1. shows, all other goals of the firm are intermediate ones leading to firm value maximization, or operate as constraints on firm value maximization. The objective of maximizing stock prices is a relevant objective only for firms which are publicly traded. For firms which are not publicly traded, the objective in decision making is the maximization of firm value. Since firm value is not observable and has to be estimated, what private businesses will lack is the feedback, sometimes unwelcome, that publicly traded firms get when they make major decisions. (Damodaran, 1994)
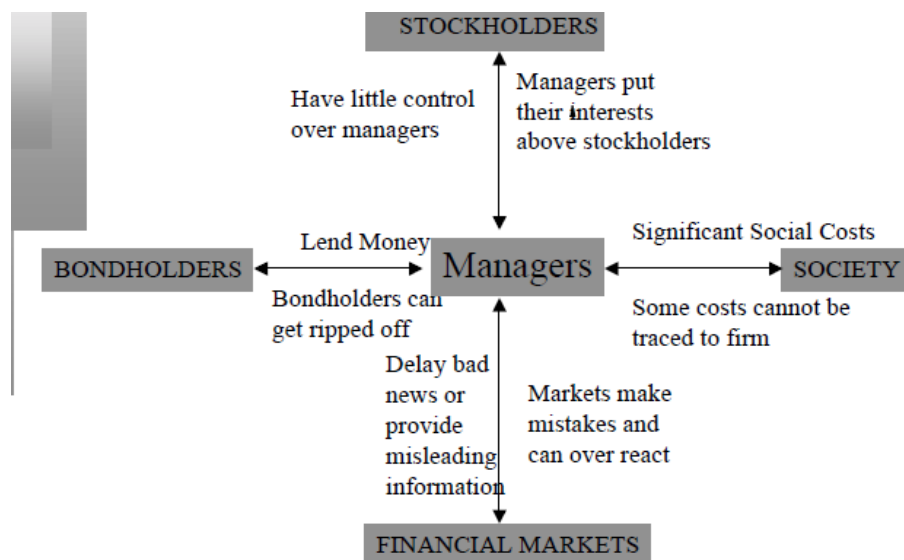
Figure 1. The classical objective function
Source: Damodaran, 1994

In this way, one of the most important issues in corporate finance is responding "How do firms choose their capital structure?". Locating the optimal capital structure have for a long time been a focus of attention in many academic and financial institutions that probe into this area. This is comprehensible as there is a lot of money to be made advising firms on how to improve their capital structure.

There are many methods for the firm to raise its required funds, the most basic instruments are stocks or bonds. The mix of the different securities is known as its capital structure, so it can be defined as the combination of debt and equity used to finance a firm. And the target capital structure is the ideal mix of debt, preferred stock and common equity with which the firm plans to finance its investments.

2. Modigliani and Miller Proposition I-II /No tax scenario/
The greatest breakthrough in theory of optimal capital structure came with Modigliani and Miller's theorem, which specifies conditions under which various corporate financing decisions are irrelevant. Essentially, they hypothesized that in perfect markets, it does not matter what capital structure a company uses to finance its operations. They theorized that the market value of a firm is determined by its earning power and by the risk of its underlying assets, and that its value is independent of the way it chooses to finance its investments or distribute dividends. The assumptions of **MM proposition I** are the followings:

- Homogeneous expectations
- Homogeneous business risk
- Perpetual cash flows
- Perfect capital market
    - Perfect competition (every one is a price taker)
    - Firms and investors can borrow and lend at the same rate

o Equal access to all relevant information
o No transaction cost (taxes or bankruptcy costs)

(Modigliani – Miller, 1959)

In this circumtances MM Proposition I. concerns about the irrelevancy of the value to capital structure. The value of the levered firm - V_L – must be equal to the value of the unlevered firm. (Figure 2.) V_U . ($V_L=V_U=EBIT/WACC=EBIT/K_E^U$)
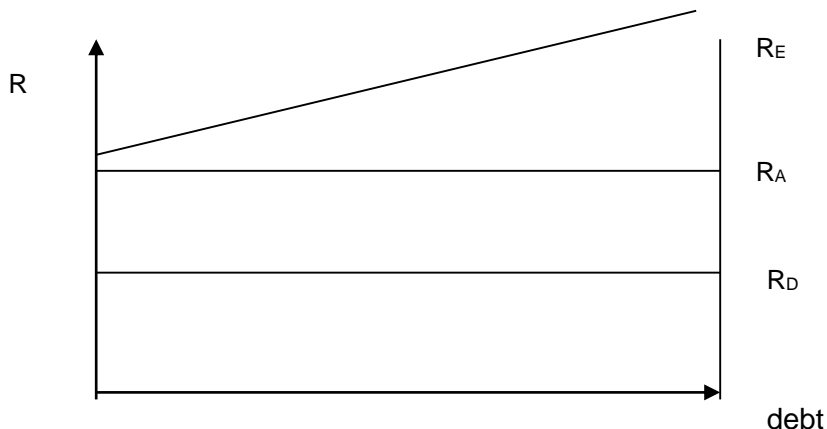
Figure 2. Modigliani and Miller Proposition I-II. (no tax scenario)
Source: Bélyácz, 1997, 20.p.

MM Proposition II. implies that, the higher the debt-equity ratio, the higher the expected turn on equity. ($R_E=R_A+(R_A-R_D)(D/E)$)
Now let:

R_E = the expected return on equity, or the cost of equity
R_A= the expected return when the company is all-equity financed

R_D= the interest rate, or the cost of debt
D = debt
E = equity

3. Modigliani and Miller Proposition I-II /with taxes/

Of course, in the real world, there are taxes, transaction costs, bankruptcy costs, differences in borrowing costs, information asymmetries and effects of debt on earnings. The earnings after interest payments are taxable in the real world. And this is one of the most important reasons for firms to use debt financing. Modigliani and Miller made a correction in 1963, when the first imperfection was introduced: corporate taxes (Modigliani-Miller, 1963).

This proposition recognizes the tax benefit from interest payments - that is, because interest paid on debt is tax deductible, issuing bonds effectively reduces a company's tax liability. Paying dividends on equity, however, does not. Thought of another way, the actual rate of interest companies pay on the bonds they issue is less than the nominal rate of interest because of the tax savings (Modigliani-Miller, 1963).

MM showed that when corporate taxes are included, the value of the levered firm is equal to the value of an unlevered firm plus the present value of the tax shields associated by debt: $V^L = V^U + t*D$, where t is the corporate tax rate. In this way the optimal capital structure that maximizes the value of a firm consists of 100% debt. I illustrate this theory in Figure 3.

In summary, the MM I theory without corporate taxes says that a firm's relative proportions of debt and equity don't matter; MM I with corporate taxes says that the firm with the greater proportion of debt is more valuable because of the interest tax shield. In comparing the two theories, the main difference between them is the potential benefit from debt in a capital structure, which comes from the tax benefit of the interest payments.
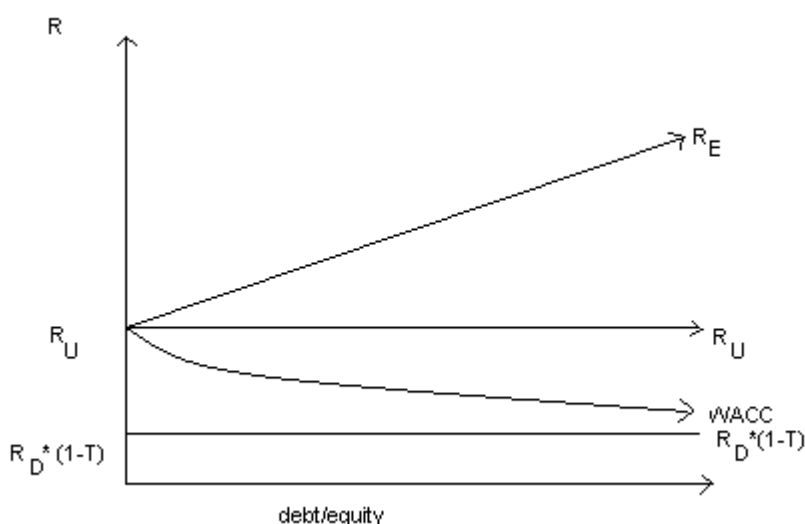
Figure 3: Modigliani and Miller Proposition I-II. (with tax)
Source: Bélyácz, 2001, 537.p.

4. Baxter - Bankruptcy costs

As we have seen, in a world without transactions costs risky debt does not affect on the value of the firm. When bankruptcy costs are taken into consideration, things are beginning to look differently.

This third step in capital structure theory was first suggested by Baxter and later modified by others. In this way, bankcruptcy costs are introduced. Now the value of the firm in bankruptcy is reduced by the fact that payments must be made to third parties other than bond- or shareholders. Trustee fees, legal fees, and other costs of reorganization or bankruptcy are deducted from the net asset value of the bankrupt firm and from the proceeds that should go to bondholders. (Harvey, 1995)

These "dead weight" losses associated with bankruptcy cause the value of the fim to be less than it would have been otherwise, namely the value based on the expected cash

flows from operations. And since the change of going bankrupt is higher when a firm is financed with more debt, there are costs involved with debt financing. The tradeoff between the tax advantage of debt and bankruptcy costs associated with debt results in an optimal capital structure, the so called balancing theorem (Figure 4.).

V

Present value of tax shield on debt

$V_L = V_U + T\,D$

Financial distress costs

actual firm value

V_U

← optimal amount of debt

value of firm with no debt

0   A   B   D   debt
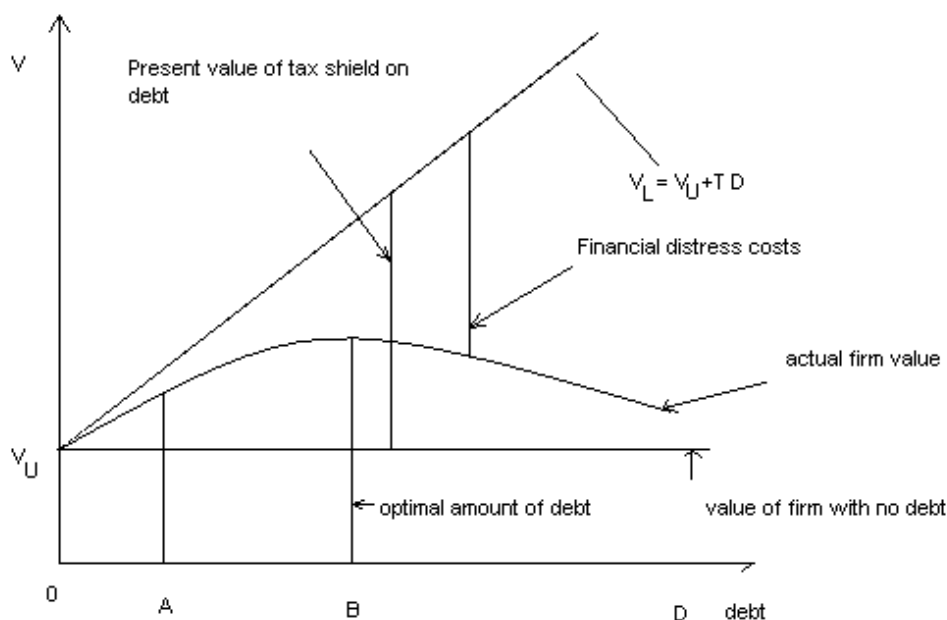
Figure 4: The optimal capital structure according to the balancing theorem
Source: Bélyácz, 2001, 537.p.

5. Later developments in the theorems
The next step in capital structure theory was the introduction of personal taxes in 1977. Miller showed that, again, a "nothing matters" situation arises when you combine corporate and personal taxes. Since capital gains are not taxed, but interest is taxed at the personal level, for the investor, who ultimately determines the market value of a company, there might even be a tax *disadvantage* to debt financing. (Allen, 1991)
Then in 1976, a new strand of literature was started by Jensen and Meckling. They introduced the so called *agency theory* –see Figure 5.- in the world of corporate finance, which relaxes the assumption of no conflict of interest between different parties, especially management, shareholders and debtholders. In particular, managers do not always act in the interest of the shareholders and consequently the goal is not always to maximize the value of the company. The paper shows that, based on these agency problems and without assuming taxes or bankruptcy costs, an optimal capital structure can be explained.

A

D
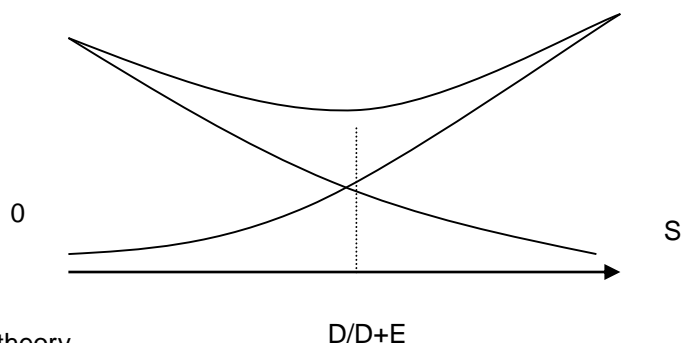
Figure 5: Agency theory
Source: Bélyácz, 2001, 504.p.

In 1977 Ross introduced the existence of asymmetric information in capital structure theory. Assuming that managers have more information about the expected returns of the company than outside investors, he argued that bigger financial leverage can be used by managers to signal an optimistic future of the firm. (Fama, 1984)

Since the late seventies, until the late eighties, virtually all research concerning capital structure issues has been concerned with agency and/or asymmetric informational issues. Since the middle of the eighties, interrelations between financing and investment decisions (Titman, 1984) and capital structure choices in relation to takeovers (Harris and Raviv, 1988) have been studied. In particular, in Harris and Raviv managers are assumed to want always to continue the firm's current operations even if liquidation of the firm is preferred by investors. In Stulz (1990), managers are assumed to want always to invest all available funds even if paying out cash is better for investors. In both cases, it is assumed that the conflict cannot be resolved through contracts based on cash flow and investment expenditure. Debt mitigates the problem in the Harris and Raviv model by giving investors (debtholders) the option to force liquidation if cash flows are poor. Capital structure is determined by trading off these benefits of debt against costs of debt. In Harris and Raviv, the assertion of control by investors through bankruptcy entails costs related to the production of information, used in the liquidation decision, about the firm's prospects. The cost of debt in Stulz's model is that debt payments may more than exhaust "free" cash, reducing the funds available for profitable investment.

Diamond (1989) and Hirshleifer and Thakor (1989) show how managers or firms have an incentive to pursue relatively safe projects out of reputational considerations.

„Diamond's model is concerned with a firm's reputation for choosing projects that assure debt repayment. There are two possible investment projects: a safe, positive NPV project and a risky, negative NPV project." (Harris-Raviv, 1988)

The risky project can have one of two payoffs ("success" or "failure"). Both projects require the same initial investment which must be financed by debt. A firm can be of three, initially observationally equivalent types. One type has access only to the safe project, one type has access only to the risky project, and one type has access to both. Since investors cannot distinguish the firms *ex ante*, the initial lending rate reflects their beliefs about the projects chosen by firms on average. Returns from the safe project suffice to pay the debtholders (even if the firm is believed by investors to have only the risky project), but returns from the risky project allow repayment only if the project is successful.

And apart from the theoretical literature hundreds of papers try to empirically test all the different capital structure theories.

7. Conclusion

We can see above how many theories exist for defining the optimal capital structure. Proposition I of MM has become the first step in capital structure theory and it is sometimes called the 'irrelevance' theorem. It states that, as an implication of equilibrium in perfect capital markets, the value of a firm is independent of its capital structure. The second step was also made by MM in 1963, when corporate taxes are introduced in the model, 100% debt financing is optimal. The third step in capital structure theory was first suggested by Baxter in 1976 and later formalized by others. Now, bankcruptcy costs are introduced. The tradeoff between the tax advantage of debt and bankruptcy costs associated with debt results in an optimal capital structure, the so called balancing theorem.

Despite these theoretical appeals, researchers in financial management have not found the optimal capital structure.

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CHALLENGES IN PERFORMANCE METRICS IN SOCIALLY RESPONSIBLE INVESTMENTS

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Abstract*: Sustainability issues have been penetrating the financial world over the decades at corporate and sector levels. In the field of sustainable finance, socially responsible investments (SRI) are a dynamically evolving segment which has become a special industry in asset allocation and investments out of a niche movement. This article aims to highlight the trends, investors' motives and performances of these investments. It concludes that controversies around the terminology, performance metrics and return of socially responsible investments, have not been resolved in academic literature yet.*

Keywords: socially responsible investments, portfolio performance, sustainable development

JEL classification: G11, M14, Q01

SRI categories
A report of the Global Sustainable Investment Alliance, GSIA published in 2012 categorizes socially responsible investments as follows:
1. *Negative (exclusionary) screening:* the exclusion of certain sectors, companies or practices based on (environmental, social and governance (ESG) criteria from an investment fund.
2. *Positive (best-in-class) screening:* the stimulation of investments in positive sectors, companies or practices based on ESG performance relative to industry peers
3. *ESG integration:* the systematic inclusion of ESG factors into traditional financial analysis by the investment managers.
4. *Sustainability themed investing:* investments in themes or assets specifically related to sustainability (clean-energy, green technologies, sustainable agriculture).
5. *Impact or community investing:* impact investing includes community investing, where capital is directed to traditionally underserved individuals or communities with a clear social or environmental purpose.
6. *Corporate engagement and shareholder action* based on ESG principles.

Figure 1 summarizes the amount invested in each of the above mentioned strategies by region.
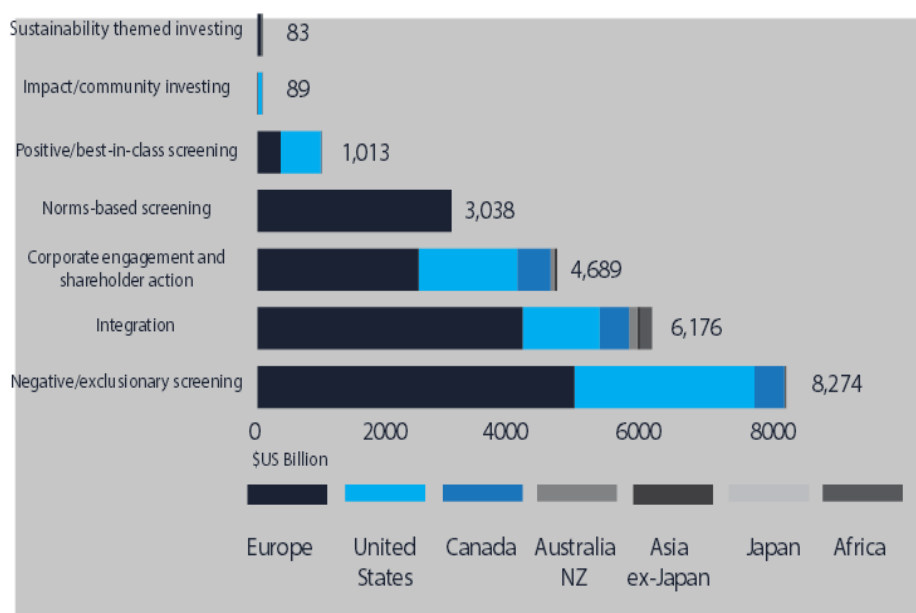
Figure 1: The global aggregation of SRI investments (2011)
Source: GSIA, 2012: 15.

The SRI community
The SRI community is formed by the network of asset owners, asset managers and those supplying supporting services, but in the wider sense this includes consumers, non-governmental organizations and regulators as well. Among those providing supporting services we should mention general international agencies (EIRIS, Vigeo, MSCI ESG Research, etc.), extra-financial information providers (Asset 4, Bloomberg, RepRisk), the specialized agencies (Maplecroft, Solaron, Trucost, etc.) and the local agencies (Gerain and Leconte, 2011). The purpose of ESG rating agencies is to assess the extra-financial performance of public and private companies as well as other issuers of securities with a specifically unique method based on environmental, social and corporate governing aspects. These ESG ratings are used by asset owners and asset managers to design their portfolios.
Every rating agency has its unique methodology. In Europe however there is a standard that qualifying companies adhere to. This is held together by the Association for Responsible Investment Services - ARISE, 2002. Beside the possible investing universe of companies screened on the basis of ESG criteria, the rating agencies provide country sustainability reports, ESG news and different monitoring services.
SRI asset owners can be divided into three groups: retail investors, small and the large institutional investors, among who national, local and private pension funds- as well as sovereign wealth funds. The European SRI market is dominated by institutional investors (Louche and Lyndenberg, 2011). Community investors tend to be dominant in Japan and in the USA.
The *universe of SRI investments* may extend from equity funds, through sustainable bond funds and sustainability index funds to the fund of funds (Table 1).

Table 1: The spectrum of SRI investments

Category		Description
Equity funds	Equity funds	Actively handled funds.
	Ethical funds	Criteria based on principles and religious exclusion.
	Environmental technology funds	Funds focusing on environmental technologies used for cleaner production, recycling, etc.
	Eco-efficient funds	Big companies displaying best-in-class environmental protection practices.
	Funds of leading companies in sustainability	Big companies with best-in-class sustainability practices. (it also focuses on the best possible sectors: the best among the best-in-class).
	Eco-pioneer/venture capital funds	Innovative companies with small- and middle capitalization that focus on environmental technologies and services.
	Environmental resources funds	The theme of these funds is related to environmental resources, e.g. water, energy or sustainable silviculture.
Sustainable bond funds		State/corporate bonds that are chosen based on sustainability criteria.
Sustainability index funds		Passively handled funds in a highly diversified manner with a best-in-class approach.
The fund of funds		The portfolio of the above mentioned funds.

Source: Koellner et al., 2005: 64

According to a survey made among French, German, Italian, Dutch and Swiss pension fund specialists, the majority of experts have the opinion that SRI criteria are going have an increasingly important role in the investment decisions regarding pension funds, moreover they are not going to affect equity investments only, but other asset classes as well (Boersch, 2010).

ESG rating
As members of the SRI community, ESG rating agencies provide information on the analysis of extra-financial criteria of investment decisions. The rating process is as follows: the environmental, social and corporate governance themes are rated based on the inner directives of the rating agency and are adjusted by risk factors; an overall ESG performance score is established. The rating system is agency-specific; the MSCI ESG Research for instance applies a 9-grade scale, while the FTSE4Good ESG Rating uses a 5-grade scale.
The problem with ESG ratings is that they highly depend on the corporate sustainability reports, the disclosed information, the interpretation of CSR and its operationalization, as well as the methodology used by the rating agency and the subjectivity of the analyst. ESG ratings have practically become commodities (Butz and Pictet, 2008). On the market there are both low and high quality ESG ratings, depending on the investments into research. The role of sustainability ratings is to contribute to investors' decision to use sustainability indicators just as well as financial indicators in their SRI portfolio management.
Sustainability reports are unsustainable in their present quality (Hubbard, 2011). There are problems with corporate interpretation of CSR, reporting differences between industry sectors and countries, ambiguous corporate policies and performance targets. There is

no unified form and availability of CSR reports in the world (KPMG, 2011). The ISO 14001, for instance, controls the internal environmental processes of an organization, it is unable to create a comprehensive sustainability framework; furthermore it focuses on the process, not the environmental output. The Eco-Management and Audit Scheme (EMAS) is also wide-spread in Europe, it is also limited to environmental and process-related issues.

The Global Reporting Initiative, the world's leading corporate responsibility standard, may be interpreted in different ways by different rating companies. Many companies do not provide an ESG report, and this is particularly true in the case of SMEs. For instance, high rating depends on whether screening is done based on toxic emission and compliance with regulators or based on environmental policy and the quality of the reports (Delmas and Blass, 2010). The authors have pointed out that there were instances where a company, that was among the best in terms of toxic emission, was listed among the worst based on the reports. Companies, that are leaders in communication and reporting, are often lag behind in the actual environmental performance.

ESG analysts should have professional qualification and analytical skills; furthermore, they should take part in ongoing training in order to be able to deliver relevant critical ratings instead of ticking standard boxes (Butz, 2005). The analysts' subjective judgments and preferences also highly influence the quality of ratings.

The return of SRI investments

The SRI investor is willing to sacrifice a part of the financial return for a higher social and environmental performance; this trade-off relationship leads to the „sustainability utility fuction" (Butz and Pictet, 2008). According to the authors, comprehensive performance is determined by the interdependencies between three dimensions (Figure 2). This can be linked to the so-called *eco-efficient premium puzzle* which was formulated when a portfolio with high eco-efficiency characteristics provided higher returns compared to its low-ranked counterpart over the period of 1995-2003. The performance differential could not be explained by market sensitivity, investment style, other industry-specific components or transactions costs. (Derwall et al., 2004).
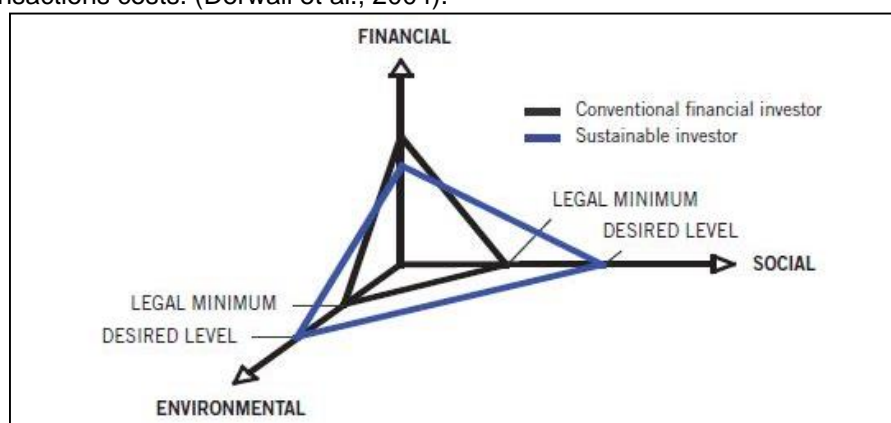
Figure 2: The threefold return: environmental, social and financial
Source: Butz and Pictet, 2008: 24

The SRI is an investment that achieves the highest possible, risk-adjusted rate of return, while it takes into consideration the social, ethical and environmental aspects as well (Derwall et al., 2011; Sandberg et al., 2009). It is important to understand, how investors weigh the financial and moral issues in their decisions in reality. A Norwegian bank

(Skandiabanken) wanted to label its responsible investment funds, and made a survey beforehand. They divided 140 000 investors into two groups: one group, the wealth-frame investors, received financially framed information through email, while the other group received morally-framed information. The research showed that wealth issues have an increased relative importance compared to moral concerns in socially responsible investment decisions in the information search and investment behavior stages (Doskeland and Pedersen, 2013).

According to a meta-study (Margolis and Walsh, 2003), 54 articles out of 127 indicate a positive connection between financial and social performance, 48 indicate a non-existent or mixed connection, and a few show negative connection. Ter Horst and his co-authors (2006) have demonstrated that SRI fund investors are more interested in social and ethical issues than in the performance of the investment fund when making investment decisions. During their research they have found that an SRI investor chases past returns and is less interested in the risks and costs of the investment fund.

According to a meta-study that analyzes 21 scientific articles published between 2008 and 2010, based on risk-adjusted returns, 7 articles state that SRI investment funds have similar performances to conventional funds, 5 state that they outperform them, 3 state that they fall short of them, while 6 present mixed results (Sjöström, 2011). Based on a sample extending to 145 investors, an Australian study demonstrates that socially responsible investors seek financial return as well as non-financial benefits; furthermore social conscience and social health are relevant for them as opposed to environmental issues. Another interesting interrelation is that SR investors tend to be middle-aged, middle-income professionals and have tertiary qualifications. (Perez-Gladish et al., 2012).

When analyzing the performance of SRI funds one specific research direction is the impact of different applications of screening. During the management of SRI portfolios, beyond consideration the financial return, such screenings are used with which certain investments can be excluded (negative screening) or preferred (positive screening), furthermore the owner's right to vote is used for promoting the inclusion of CSR into portfolio companies (Crifo and Forget, 2012). "Perhaps the most frequent criticism concerning socially responsible investment funds is that the introduction of non-financial screening restricts investment opportunities, reduces the efficiency of diversification and thus has a contrary effect on performance" (Lee et al., 2010: 351). SRI funds are less diversified during the traditional mean-variance analyses because the investments were made into a limited number of companies because of screening; therefore they have underperformed during the crisis (Guenster, 2012). Another study, however, contradicts this idea stating that SRI funds outperform conventional investment funds during market crisis, but are underperforming during non-crisis periods (Varma and Nofsinger, 2012).

The financial loss of SRI funds due to poor diversification is offset as social screening intensifies because better managed and more stable firms are selected into the portfolio (Barnett and Salomon, 2006: 2). The authors find that there is a curvilinear relationship between financial and social performance, moreover it varies with the types of social screens used: community-based screening increases financial performance, while environmental and labor related screening decreases financial performance.

It appears as a criticism that in many cases the highest rate of financial return is only attainable through social injustice and environmental degradation, namely the externalization of costs on people, the future and the environment (Hawken, 2004). After surveying 600 investment funds, it turned out that over 90% of the Fortune 500 company is included in SRI investment fund portfolios, which demonstrates a very wide and loose interpretation of SRI, thus SRI appears as a marketing strategy only, without the portfolio-managers actually adopting the philosophy itself (Hawken, 2004). Since there is no generally accepted definition for SRI, its interpretation depends on whether the effort is

formulated from perspective of the individual, the company or the organization (Chieffe and Lahey, 2009).

Challenges in SRI Performance Metrics
The measurement of the triple return of SRI investments is problematic. The conflict between the shareholder value maximization and ethics cannot be resolved unambiguously. The discretional interpretation of sustainable development may lead to dubious trade-off relationships when choosing a purpose.

Social accounting and sustainability indicators may function as a benchmark so that social and environmental performance may be measured. Up until now, social accounting has mainly touched upon narrative reporting models in corporate financial statements. The social and environmental costs and profits of business activities are not reflected in financial reports (KPMG, 2005). Sustainability indicators are also rather experimental concepts. These measures turn ecological and social data into performance-standards which do not have to be quantified financially, furthermore, they do not specify how performance standards should be complied with. Sustainability indicators are not adequately set up for the portfolios of financial institutions. Investors can analyze financial performance with several different devices, but no similar instruments are available for mearuning extra-financial performance. Financial performance indicators are unambiguous and structured, environmental performance indicators are heterogeneous; because of the use of different metrics, the authenticity of SRI screening is questionable, moreover, managers may not know how to rank their investments to improve sustainability performance (Delmas and Blass, 2010).

SRI investments are intended to create a positive impact on society and on environment. In contrast to financial returns, the non-financial impact is usually not assessed in a systematic manner. Similarly to standard financial analysis techniques, performance measures of social and environmental impacts would move the obstacles from the compatibility issues inherent in financial and non-financing metrics.

Measuring the impact of SRI should comprise both intended and unintended positive and negative impact from the perspective of all stakeholders and the total investment portfolio. However, none of the metrics used by the dominant standards and principles (Table 2) are suitable for impact measurement, that is there are no ready-to-use indicators for the sustainability impact assessment of SRIs (Weber, 2013).

Table 2: A review of SRI metrics

CSR practices	Review of metrics
Global Reporting Initiative (GRI, 2011) Financial Sector Supplement	There is no indicator that could measure the sustainability impact of the financial sector.
Principles for Responsible Investing (PRI, 2006)	It does not focus on the social, environmental and sustainability impact of SRIs.
The Equator Principles (2011)	It cannot measure the impact of financial products, services.
Impact Reporting and Investment Standards (IRIS, Global Impact Investing Network, 2012)	Indicators concentrate on creating new jobs; renewable energy, health and education are not covered. They only measure positive impacts.
Global Alliance for Banking on Values (GABV, 2012)	It does not provide systematic insights into the impact of the financial sector on the society or the environment.

Outreach Measurement in Microfinance	It does not deliver a valid and reliable impact measurement for the financial sector itself.
Social Return on Investment (SROI)	A real measure of financial product and service impact, however there is no systematic application of it in the financial sector.

Source: personal editing based on Weber, 2013

Environmental (EIA), Social (SIA) and Sustainability Impact Assessment are methods of measuring impact on the environment and society caused by projects, businesses or other economic activities. Both positive and negative impacts are quantified, and they realize the integration of all the affected stakeholders. Social and environmental measures can be used to capture the long-term value creation potential of the company and the risks related to it.

Conclusions
There has been a growing demand for socially responsible investments where investors are willing to give up a part of their financial return for higher ESG return. A lot of research has been done on whether socially responsible investments outperform or underperform the return of traditional investment funds. Academic literature is still divided in answering this question, presenting and clashing contradictory opinions, results and views. Concerning the performance metrics of SRI investments, the comparability of results is a challenge based on the scope, geographic location, ESG characteristics and time of sampling.

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ANALYSIS OF ROMANIAN SMALL AND MEDIUM ENTERPRISES' BANKRUPTCY RISK

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Abstract: Considering the fundamental role of small and medium enterprises in Romanian economy, this paper aims to quantify the level of their bankruptcy risk for 2009 and 2012 period, after debuting of financial crisis. The main reason of selecting this type of companies is that they represent the backbone of national economy. They have an indispensable role, because they offer jobs for great part of population and their contribution for GDP stimulation is considerable. In this paper it was applied two default risk models, namely the well known Altman's Z-score model, based on five financial ratios and a bankruptcy predictor model developed by Teti et. al (2012) used firstly exclusively for Italian small and medium-sized enterprise for 2006-2009 period. The model proposed by Teti et. is based on the investigation of financially distressed and financially non-distressed Italian small and medium-sized enterprises during the financial crisis by using a discriminant analysis model. They conclude that there are four financial ratios, which characterized well the small and medium-sized enterprises bankruptcy risk. These variables are financial ratios, like: Debt/Total Assets, Return on Sales (ROS), EBIT/Interest Expenses and Working capital/EBIDTA. They consider that small and medium-sized enterprises require a particular approach in terms of bankruptcy risk analysis. In present study I try to compare the efficiency of traditional bankruptcy risk model with a small and medium-sized specific model. The necessary database for present analysis is ensured by simplified financial reports of 120 small and medium-sized enterprises registered in Bihor County. The selected enterprises are operating in manufacturing industry (21,67%) and trading (78,33%). Present investigation has an important value in actual economic background, where the healthiness and sustainability of small and medium-sized enterprises is a great issue. The results of study shows contradictory results after implementing above mentioned methods, so while after Altman model application, the investigated firms are non financially distressed, in case of second model applying the great part of firms have medium financial problems.

Keywords: corporate bankruptcy, small and medium-sized enterprise, credit risk, Z-score, discriminant analysis model

JEL classification: G3, G30, G32, G33

1. Introduction

Financial stability and sustainability has become an important objective and issue for company's managers and financial analysts in recent years, so the continuous tracking of bankruptcy risk became a significant deal in corporate sector. The assessment of this, is much more important in case of small and medium-sized
enterprises, because in Romania small and medium-sized enterprises play especially role in job creation and economic growth stimulation. Therefore, the aim of this paper consist is examination of level of bankruptcy risk of small and medium-sized enterprises by using two methods. Bankruptcy forecasting techniques can help managers and analyst in detection in time of financial difficulties, so they often are associated with early warning mechanism (Ahn et al. 2000).

Present study was carried out by using two bankruptcy risk quantifying methods, ones commonly known by economists, the Altman's Z-Score method developed in 1968 and the second method developed by Teti et al. (2012), which was firstly used on basis of Italian small and medium-sized enterprises' annually financial reports between 2006 and 2009.

2. Review of literature

The definition of situation of bankruptcy is quite different in international literature. According to Kraus and Litzenberger (1973), we can distinguish several forms of bankruptcy situation. Some of these can be identified with: high level of indebtedness, financial deficit, insolvency, non-performing loans, and liquidity problems. According to Farlex Financial Dictionary, the business failure or bankruptcy 'refers to a company ceasing its operations following its inability to make a profit or to bring in enough revenue to cover its expenses' (The Farlex Financial Dictionary, 2011).

Examination of Romanian small and medium-sized enterprises' bankruptcy risk is particularly important because in Romania more than 90% of employees work in various areas operating small and medium-sized enterprises and these companies have also a major contribution to the evolution of Gross Domestic Product. Due to the special characteristics of small and medium-sized enterprises, they are more sensitive and more vulnerable to changes of economic environment factors. Small and medium-sized enterprises are less diverse, so their activity restructuring and reduction can be more elaborate.

In this article, we consider small and medium-sized enterprises those companies that fit with a European Commision 2003/361/EC Regulation, according to with small and medium-sized enterprises are those companies which has fewer than 250 employees, their annual turnover not exceed 50 million EUR and total assets value is below than 43 million EUR (European Commision, 2003).

Since the recently debuted financial global crisis, the quantification of bankruptcy risk and its continuous monitoring has gained an important role, so this is why in present study I try to evaluate the risk of bankruptcy by implementing two methods, firstly a general bankruptcy forecasting method and secondly a small and medium-sized specific method. The reason why I used the second method is the fact that in the international literature recently grows up the number of arguments according to with small and medium-sized businesses require a specific financially and bankruptcy forecasting approach. After their research on on U.S small and medium-sized enterprises' market, Altman and Sabato (2007) conclude that both in the bank rating and in overall common business rating, small and medium-sized businesses require a specific bankruptcy and credit risk treatment (Altman and Sabato, 2007).

3. Research methodology

First I attempt to evaluate the bankruptcy risk by using the well-known Altman's (1968) model, which permits a commonly risk analysis independently from the size of the company, on the other hand I apply Teti et al. (2012) developed model, which allows a specific approach for small and medium-sized enterprises' bankruptcy risk.

The analysis of bankruptcy risk was carried out on basis of 120 small and medium-sized enterprises annual simplified financial reports registered in Bihor County. The companies involved in present study are operating in various fields of national economy, of which 26 are activating in manufacturing industry (21,67%) and 94 companies are working in retail and wholesale trading (78,33%). The data of analyzed enterprises' were ensured by their simplified financial statements. The financial data were collected for 4 years from 2009, after debuting of financial crisis to 2012.
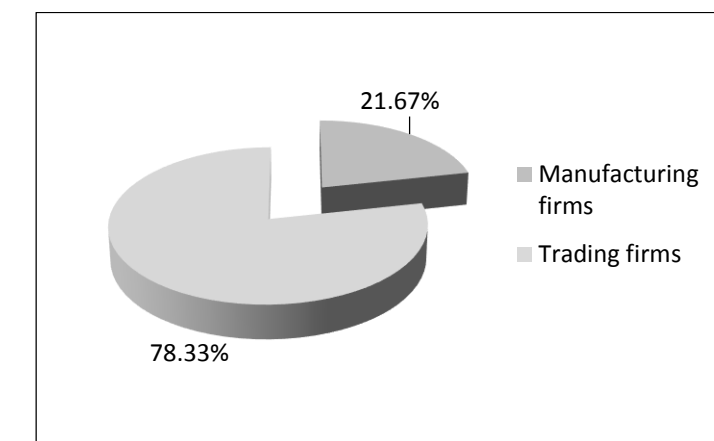
Figure 1: Distribution of investigated firms operating sectors
Source: Own calculation

The bankruptcy risk prediction can be performed using several methods. The domestic and foreign literature mentions different methods. Among them, the corporate bankruptcy prediction models can be divided in two major groups, on the one hand we can talk about methods which have been identified and validated by using discriminant analysis statistical method and on the other hand methods that are based on logistic regression, which are sometimes called as logit models (Sirirattanaphonkun & Pattarathamams, 2012). The main characteristic of models based on discriminant analysis is that they attempt to predict the bankruptcy risk by taking into account, with different weights of different financial ratios. These ratios are indicators which can be determined on basis of small and medium-sized
enterprises' simplified financial statements. According to Fulmer, Moon, according to Gavin and Erwin (1984), the models based on discriminant analysis are useful when the aim is listing of specific variable in a particular group, for example good or bad, solvent or insolvent. The Altman's Z-Score model is based on this statistical method. In the foreign literature we can find more reviews that argues the strengths and weaknesses of above mentioned methods. According to Terdpaopong (2011) the logistic regression based models are more flexible than models based on discriminant analysis so in this way models have the ability to avoid the impact of the lack of multivariate normality, outliers, multicollinearity. Several foreign research, Ooghe et al. (1995), Mossman et al. (1998), and Charitou Trigeorsis (2002) Beccheti and Sierra (2002), shows that the results obtained by using of discriminant analysis models and logistic regression based methods has no significant differences. In this study has been applied two discriminant analysis based methods, the well-known Altman's Z-Score model which tries to predict bankruptcy risk by using five financial variables and Z value model, and model developed by Teti et al. (2012) which was tested on Italian small and medium-sized enterprises. Based on Altman's (1968) and Terdpapong and Mihret (2011) Thai small and medium-sized enterprises methods, the second used model takes into account 4 financial ratios with different weights.
The Altman Z-Score value can be described as the following formula (1):

$$\textbf{Altman Z-Score} = 1{,}2X_1 + 1{,}4X_2 + 3{,}3X_3 + 0{,}6X_4 + 0{,}999X_5 \quad (1)$$

where,

X_1 = Working Capital/Total Assets
X_2 = Retained Earnings/Total Assets
X_3 = Earnings Before Interest & Tax /Total Assets
X_4 = Market Value of Equity/Debt
X_5 = Sales/Total Assets

If the Altman's Z-Score value is located above 3 there is no bankruptcy risk, so the company works properly. When Z-Score values are moving between 1,81 and 2,99 means that companies face difficult financial situation characterized by declining of performance, the company is on the threshold of the bankruptcy. Altman places companies with such performance in "grey zone". If the Z-Score value is situated below 1,81, the risk of bankruptcy is obvious (Altman, 1968, 27 p.).

The bankruptcy prediction model used for Italian small and medium-sized enterprises developed by Teti, Dell 'Acqua and Brambilla (2012) can be described by the following formula:

$$\text{\textbf{Italian SME's Z value}} = -5{,}57\ X_1 + 11{,}31\ X_2 + 0{,}03\ X_3 - 0.01\ X_4 \qquad (2)$$

where,
X_1 = Debt/Total Assets
X_2 = Return on Sales (ROS) = Net result / Sales
X_3 = Earnings Before Interest & Tax (EBIT) /Interest expenses
X_4 = Working Capital/ Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA)

Teti et al. (2012) after their research on Italian small and medium-sized enterprises concluded that those firms which have Z value greater than -2,50, the risk of bankruptcy is very low. If Z value is situated between -3,75 and -2,49, the bankruptcy risk is medium, which can be associated also with deterioration of corporate performance and earnings. If Z value is situated below -3,76, the risk of bankruptcy in case of those small and medium-sized enterprises it is obvious.

The analysis of small and medium-sized enterprises bankruptcy risk was performed using R statistics software system, which one of the greater advantages is that is an open source program, dispose with modules necessary for this study. Another great benefit of this software is that can be linked with Excel Spreadsheet. In this study, the 'StatDA' modules were used.

For presenting the evolution of annual bankruptcy risk of investigated small and medium-sized enterprises, I have used a complex diagram called edaplot, which shows the distribution of data by boxplot, histogram and point cloud.

4. Results of the research

For bankruptcy risk quantifying two methods were applied, first the well known Altman's Z-Score bankruptcy forecasting method and Teti et al. bankruptcy risk prediction model, which suits for small and medium-sized enterprises bankruptcy risk quantifying. The second one was developed on basis of Italian small and medium enterprises financial statements between 2006 and 2009.

The main statistical characteristics of applying those two methods are presented in Table 1. and Table 2.

Table 1: Bankruptcy risk main statistics (Altman bankruptcy risk model)

	Manufacturing firms				Trading firms			
Years	**2009**	**2010**	**2011**	**2012**	**2009**	**2010**	**2011**	**2012**
Minimum	0,52	0,83	1,32	1,25	0,67	0,98	0,61	0,89
Quartile 1	2,55	2,70	2,81	2,34	2,68	2,89	2,78	2,68
Median	3,30	3,23	3,55	3,13	3,61	3,58	3,99	3,53
Arithmetic Mean	3,66	4,13	3,96	3,71	4,33	4,23	4,56	4,27
Quartile 3	4,38	5,38	4,61	4,25	5,48	5,15	5,67	5,22
Maximum	8,66	8,93	9,45	11,02	13,93	13,39	14,39	13,89

Source: Own calculation

The evolution of Z-Score values after applying Altman method to manufacturing and trading operating small and medium-sized enterprises are illustrated in Table 1. and Figure 2. Both the table and figure clearly shows that the Z-Score values' interquartile range are situated between 2,34 and 5,38 in the case of enterprises operating in manufacturing sector in the investigated period. In case of small and medium-sized enterprises operating in trading sector, the Z-Score in the investigated period is situated between 2,68 and 5,67, which means that although slightly, but examined trading companies dispose with favorable situation than manufacturing companies regarding the bankruptcy risk. The value recommended by Altman for companies with good financial position is situated above 3. After investigating the trend of lower quartile during the investigated period in case of manufacturing firms, we find a slightly increase of values in 2010 and 2011 compared to 2009 and reducing of Z-Score values in 2012, that suggest that the situation is better in years 2010 and 2011 than in the years 2009 and 2012 regarding to bankruptcy risk. By analyzing the upper quartile values, we find that the highest values were reached in 2010 and a decline of values in 2011 and 2012. By examination of the average value it is clear, overall, the investigated small and medium-sized enterprises operating in manufacturing sector reached Z-Score values above 3 in analyzed 4 years, so we can conclude that these companies are not threaten by bankruptcy risk. By analyzing in evolution, the average shows the best possible values in 2010. We can get similar findings after examinations of the point cloud and the boxplot diagram. Looking at the boxplot diagram, we can see that the manufacturing small and medium-sized enterprises' Z-Score values, only in 2012 year follow distribution closer to the normal distribution.

Figure 2: Evolution of bankruptcy risk of manufacturing and trading firms by using Altman default risk model (2009-2012)
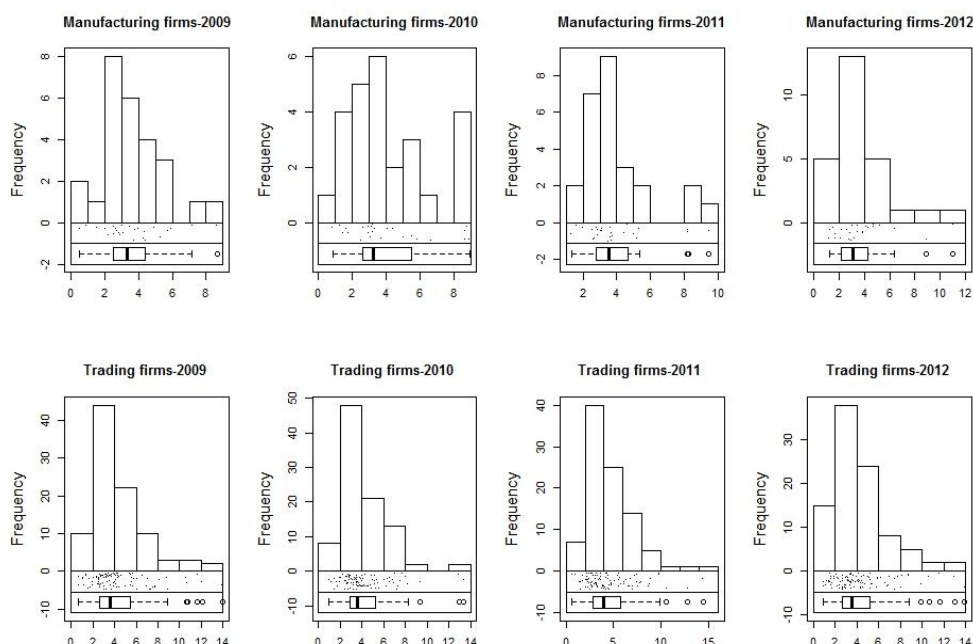
Source: Own calculation

In case o trading companies, looking at the lower quartile, it can be founded that in 2010, the lower quartile increase slightly and then decrease in 2011 and 2012, but nor in a year do not reached the limit value of 3. In all 4 investigated years, the upper quartile reached values above 5. The evolution of this is also fluctuating during the investigated period. We can see a decrease in 2010 followed by an increase in 2011 and a further a decline in 2012. We can find similar developments in evolution of Z-Score average values, in 2011 reaching the greatest value 4,56. The average for each 4 examined years take values above 4, which indicates that compared with firms operating in manufacturing sector, trading firms are better situated in terms of bankruptcy risk. We can see similar findings after analyzing boxplot and point cloud. By examining of histogram, we can find that compared with manufacturing firms, trading small and medium-sized enterprises Z-Score distribution is closer to normal distribution, during the investigated 4 years.

Table 2. and Figure 3. presents the evolution results Z value of bankruptcy risk after applying of Italian bankruptcy risk prediction model, which is small and medium-sized enterprises risk specific model. The study is also based on Bihor County's 120 manufacturing and trading small and medium businesses' annual simplified financial statements.

Table 2: Bankruptcy risk main statistics (Italian SME's bankruptcy risk prediction model)

Years	Manufacturing firms				Trading firms			
	2009	2010	2011	2012	2009	2010	2011	2012
Minimum	-11,01	-7,92	-7,58	-7,75	-10,96	-11,74	-8,31	-12,38
Quartile 1	-4,14	-4,97	-4,60	-4,14	-4,87	-4,56	-4,52	-4,73
Median	-2,28	-2,74	-2,44	-2,57	-3,99	-3,39	-3,21	-3,13
Arithmetic Mean	-2,26	-2,88	-2,55	-2,66	-3,56	-2,98	-2,99	-2,79
Quartile 3	-0,83	-1,68	-1,41	-1,59	-2,56	-1,86	-2,09	-1,76
Maximum	14,01	2,81	6,20	1,92	8,07	7,96	12,22	13,89

Source: Own calculation

In case of manufacturing small and medium-sized enterprises, we can see that in the four examined years, the interquartile range of Z value is situated between -4,97 and -0,83, while trading small and medium-sized businesses' interquartile range lies between -4,87 and -1,76. Based on it, it can be concluded that manufacturing firms dispose with a better position regarding to the bankruptcy risk, because the upper quartile values are greater than -2,50 points. The lower quartile values for examined each 4 years show values below -3,76. If we analyze the evolution of this, we can find that 2009 and 2012 shows a better situation than years 2010 and 2011 on this aspect. If we analyze the upper quartile we can see that it takes values greater than -2,50 in the investigated period, which is favorable aspect. The greatest value is recorded in 2009 and the lowest one in 2010. By analyzing the evolution of average we can conclude, that the companies operating in manufacturing sector only in 2009 record values above -2,50 (-2,26), while in other three years the average is situated below -2,50. This means that between 2010 and 2012, the small and medium-sized businesses have a medium bankruptcy risk level, which is reflected in the deterioration of performance and earnings too. In evolution, we can see that the year 2010 is the worst possible in terms of bankruptcy risk, although this not clearly indicates the danger of bankruptcy, because the average values is situated above -3,76 limit value. We can find similar evolution by investigation of point cloud and boxplot. By looking at the edaplot complex diagram, we can see that in the case of manufacturing firms, the Z values do not follow a normal distribution in analyzed period.

In case of trading small and medium-sized enterprises, the lower quartile shows an increase in 2010 and 2011 and then a decrease in 2012, in all analyzed 4 years recording values below -3,76. The upper quartile evolution shows excepting year 2009, values situated above the -2,50 limit value, which is a positive aspect. The best value is recorded in 2010 and 2011 in case of trading small and medium-sized enterprises.

Figure 3: Evolution of bankruptcy risk of manufacturing and trading firms by using Italian sme's bankruptcy risk model (2009-2012)
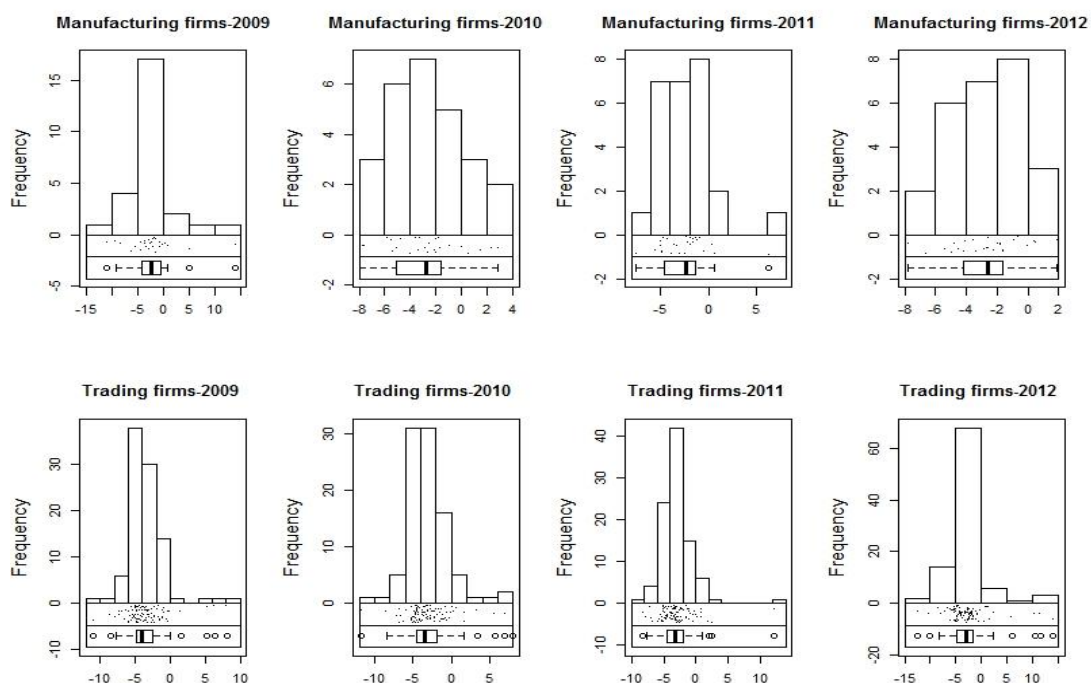
Source: Own calculation

After analyzing the evolution of arithmetic mean of Z values it can be observed that unfortunately, during the analyzed 4 years, the values do not reach values above -2,50, in all 4 years they remain below this target value. In the years 2010 and 2012 the values are closer to the expected above -2,50 value. Regarding to this, we can conclude that the results of Italian bankruptcy prediction model shows that investigated small and medium-sized businesses have a medium risk bankruptcy risk level, because the average values are situated between -2,49 and -3,75. This evolution is most probably influenced by very high and very low outlier values, which are characteristic for some trading companies' Z value. After the examination of point cloud, boxplot and histogram we can see same findings. Looking at the edaplot complex diagram we can see that in the case of trading companies, the Z values follow distribution closer to the normal only in 2011.

After application of these two bankruptcy forecasting methods, we can get the conclusion that the methods retrieve different results. While the results of Altman's method during the investigated 4 years show that both manufacturing and trading companies dispose with favorable financial position in terms of bankruptcy, the results recorded by application of Italian Z value bankruptcy prediction model shows that both manufacturing and trading small and medium-sized enterprises are characterized by a medium bankruptcy risk level, except the manufacturing companies in 2009. This means, that the second bankruptcy prediction technique identifies the bankruptcy risk earlier than the first method, so this method probably suits better for small and medium-sized enterprises' specific features. The application of first method demands more caution from analysts and managers.

5. Conclusion

Almost in all European Union member state, it is recognized fact, that the small and medium-sized enterprises represent the driving force, the backbone of the economy, so the examination of these small businesses' financial position and bankruptcy risk factors is essential.

In this study, after application of two bankruptcy forecasting methods based on discriminant analysis statistical method, I found different results. After applying the well-known Altman method, I found that neither manufacturing nor neither trading investigated small and medium-sized enterprises are not in danger of bankruptcy risk. By comparing enterprises operating in these two industries, I conclude on basis of average values, that trading small and medium-sized enterprises have a better financial position than manufacturing firms because the average Z-Score indicates higher values for these companies. The results of Z value retrieved by applying the second bankruptcy forecasting method are different. According to this method, the enterprises operating in manufacturing sector dispose with a better financial position that trading companies. The second method results show that both manufacturing and trading companies are characterized by a general, medium bankruptcy risk level, which is also reflected by the deterioration of performances and earnings. The average value shows acceptable result on aspect of bankruptcy risk, higher than -2,50 only in the year 2009 for manufacturing companies. By comparing these two industries, it can be concluded manufacturing firms have a better financial position than trading firms.

Comparing these two applied methods, I consider that the second one can quickly detect the bankruptcy risk, so the usage of this model may be preferable in case of small and medium-sized enterprises. Applying of the first method need more caution from analysts and managers. In my opinion, present research supported the fact that small and medium-sized businesses require a special approach regarding to the bankruptcy risk quantifying.

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FINANCIAL PERFORMANCE ANALYSIS AND BANKRUPTCY PREDICTION IN HUNGARIAN DAIRY SECTOR

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Abstract:
The main purpose of this study is to perform a comprehensive and comparing analysis of the most significant Hungarian-owned companies in the Hungarian dairy industry from financial point of view. It is demonstrated that the industry calls for strengthened focus because of the degree of concentration in the sector and the resulting sharp competition. The preliminary sample for the analysis is framed on the basis of three criteria: amount of the subscribed capital, sales revenues and product structure. Those companies are regarded as competitors that have subscribed capitals in excess of HUF 250 million, consistently high levels of sales revenues and diversified product structures. The preliminary sample consists of 7 companies. In 2012, their total sales revenues were as high as about 50% of the overall amount of sales revenues in the sector. Three of the 7 companies are possessed by foreign owners in full or part, whereas 4 of them belong to Hungarian owners. In 2012, Hungarian-owned companies covered more than one-third of the combined sales revenues of the 7 leading companies. Hence, the competitive positions of these 4 companies based on their financial positions are examined. These calculations have relied on the annual reports for the period of 2008–2012 (balance sheets, income statements, cash flow statements). The research has implemented a comprehensive and comparative financial analysis. The main question is what the key financial characteristics of the Hungarian-owned companies are. Financial indicators are calculated and their time-series analysis is accomplished to describe the sample companies' capital structures, liquidity and profitability. Using comparative analysis of the applied financial ratios the study determines (1) which company has the most advantageous financial conditions for the successful operation; (2) which companies have disadvantageous financial situation; and (3) which companies are in potential financial distress situation. Potential bankruptcy positions are examined by the applications of Altman and Springate models.

Keywords: financial analysis, liquidity, profitability, bankruptcy models, dairy industry, Hungary

JEL classification: G30; G33; M21; L66

1. Introduction
The dairy industry has been selected for this analysis because of the significance of the sector in the national economy, the high level of competition in this industry and the associated potential points of interest.

The analysis has been designed to describe the macroeconomic background of the segment, reveal the key operating characteristics of the leading actors of the Hungarian dairy industry, and throughout the past 5 years assess the comparative market positions of the most significant Hungarian-owned competitors on the basis of selected financial indicators.

According to the most recent report of the Ministry of Rural Development (2012), which also considers the data of the Central Statistical Office of Hungary and the Research

Institute for Agricultural Economics, it can be claimed that the share of agribusiness within the national economy as a whole has grown for output, gross added value and employment, too. The percentage rate belonging to this sector in the national economy was the highest for output (16%), yet it had significant weights in both gross added value and employment (12% and 15.5%), as well. In the past few years, 30% of the total output of agribusiness has originated from food processing activities on the average. In view of household expenditure, food industry can be considered to be an important sector. In recent years, the average spending on food, beverages and tobacco products has been 24% of the domestic consumption expenditure (Ministry of Rural Development, 2012:5). This dominant role of the industry is further underlined by the increasing export share of the agricultural and food industry products, which today reaches up to 10%.

Within food processing, it is reasonable to study the significance of milk processing and the competitiveness of the companies operating in dairy industry. The report of the Ministry compiled with the use of information provided by the Central Statistical Office of Hungary reveals that the share of the dairy industry from the total production value of the food industry was 9.5% and 9% at current prices in 2011 and 2012, respectively. The average export rate of the dairy sector in 2012 was 15.7%, which made up 40% of the export rate of the entire food industry.

In the 2011 and 2012 sales revenue list of top Hungarian companies, approximately 10% of the leading food processing companies came from the dairy segment. Another fact, however, is that while in terms of sales revenues there were 4–5 milk processing companies among the 500 top-ranking corporations, only one of these companies could be found in the list based on profit after taxes. This initial point of interest clearly highlights the importance of this research.

2. Literature review and research sample

The particular characteristics of the Hungarian dairy sector, the micro- and macroeconomic environment of the companies of the sector, as well as the specific features of the business operations of the dairy industry companies have been studied by a number of researchers.

Vágó (2005) gives estimations in relation to the potential future tendencies of the Hungarian dairy market and the price of raw milk in the light of the EU legislation pertaining to the dairy market. Quoting Kartali (2004) this study describes concentration in the domestic milk processing industry through the company-level proportions of sales revenues. According to Kartali (2004) in 1998 and 2002 the top 10 companies had a combined 63.5% and 78.2% share of the sales revenues of all the companies in the sector, respectively. This outstanding concentration of sales in the industry and the resulting strong competition support the relevance and importance of this study again.

Popp et al. (2009) summarise the potentials to improve competitive chances in the Hungarian food industry, and analyses the major problems of the dairy sector. On the basis of this latter study, in 2009 the 50 dairy companies could still be described as showing high concentration alongside the low utilisation rate of capacities and poor cooperation among domestic milk processing companies in the field of the rational division of work. The dairy market largely lacks flexibility: neither producers, nor processing companies are able to respond to market changes at a proper pace. The bargaining position of the processing companies against producers is relatively strong. In these times, the key targets of corporate strategies are the more efficient utilisation of capacities and product development. According to the authors, the main reasons underlying low growth potentials are obsolete technologies and the low level of innovation.

A publication by Popp et al. (2010) examines the weakening of the competitive position of the entire dairy sector and the causes of the associated processes. After a detailed overview of the Hungarian dairy market, the foreign trade structure of milk and dairy

products, the analysis describes the potential effects of the gradually increase of the milk quota. In association with the competitive position of processing companies, this paper also emphasises the high degree of concentration among the companies.

In the initial phase of my research, I relied on the Opten corporate information database to evidence that in recent years the sector had been characterised by sharp competition concentrating around just a handful of companies. Since 2010, there have continuously been more than 100 companies with core activities described as "manufacturing of dairy products" in Hungary, and approximately 30 of them have sales revenues consistently over HUF 100 million, while the subscribed capitals of 15 companies exceed HUF 250 million. When examining subscribed capital and sales revenues all together, the following figures can be presented for the dairy industry (Table 1).

Table 1: Degree of concentration of sales revenues in the Hungarian dairy industry

Criteria of analysis	Sales revenues in 2011(HUF)	Sales revenues in 2012(HUF)
I. Entire sample (2011: 104 companies, 2012: 115 companies)	249 milliard	262 milliard
II. Companies with subscribed capitals over HUF 250 million (15 companies)	209 milliard	218 milliard
Concentration II/I (%)	*83.9%*	*83.2 %*
III. Top companies on the basis of sales revenues (5 companies)	146 milliard	150 milliard
Concentration III/II (%)	*70.1%*	*68.9%*
IV. Top companies on the basis of sales revenues, featuring diversified product structures (7 companies)	119 milliard	126 milliard
Concentration IV/II (%)	*56.9%*	*57.8%*
Concentration IV/I (%)	*47.8%*	*48.0%*

Source: Own calculations on the basis of Opten data

A further important point of the analysis has been that the companies in the examined sample can be considered to be competitors, and therefore the respective product structures have also been taken into consideration. Companies with diversified product structures, high levels of subscribed capitals and sales revenues were selected. In both years, the 7 companies so identified had a nearly 50% combined revenue share in the entire sample, and represent more than 56% of the total sales of the 15 leading companies. According to my calculations, the high-level concentration in the market can still be justified; consequently, the analysis of the strong competitive situation also needs to be assessed.

The following table shows the sales revenue figures and ownership of the 7 companies in the past 3 years (Table 2). The company names have been replaced by the initials of the respective names.

Table 2: Sales revenues and ownership of leading dairy industry companies with diversified product structures

(Data in million HUF)

Companies	2010	2011	2012	Ownership
SM	37 248	35 861	40 147	mixed
FR	29 416	28 740	26 329	foreign
TT	17 046	21 069	23 443	Hungarian
PT	12 728	15 559	16 634	foreign
MN	6 520	7 959	8 487	Hungarian
NT	7 581	7 071	7 795	Hungarian
NU	3 273	3 459	3 985	Hungarian

Source: Own compilation on the basis of Opten and www.e-beszamolo.kim.gov.hu data

In terms of ownership, the 7 companies can be divided into two groups. Three firms are in foreign or mixed ownership, while 4 companies belong to Hungarian owners. Table 3 shows the profitability and operating cash flow figures of the companies for 2012.

Table 3: Profitability and operating cash flow figures of leading dairy industry companies with diversified product structures in 2012

(Data in million HUF)

	SM	FR	TT	PT	MN	NT	NU
Operating profit	-203	-1560	783	-321	122	185	-248
Net profit	-526	-521	998	-278	-250	162	-262
Operating cash flow	1384	1939	1243	727	-221	210	191

Source: Own compilation on the basis of www.e-beszamolo.kim.gov.hu figures

It is obvious that these corporations – with the exception of two Hungarian-owned companies – were loss-making in 2012, while their net cash flow values arising from their operations were generally positive. The Hungarian-owned firm designated as TT has shown outstanding performance, and therefore it is reasonable to conduct further studies. The second phase of the research has narrowed down the sample to the group of Hungarian-owned companies (TT, MN, NT, NU), and a comparative analysis based on the respective financial positions has been carried out for 2008–2012. The main question is whether the Hungarian-owned companies can be regarded as competitive with respect to their capital structures, liquidity and profitability, or alternatively, due to their unfavourable financial positions, they struggle for survival in the market.

3. Methodology

To measure liquidity and profitability, the internationally accepted and applied means of financial analysis are used (Brealey and Myers, 2003; Gitman, 2002:49-66; Ross et al., 2002:62-72). The starting point of the comparison of companies is the evaluation of historic performance. The analysis of liquidity first examines the capital structure, and the debt ratio is useful in assessing the proportion of total liabilities to total assets. Then, the values of the balance sheet-based quick ratio are compared, and the operative cash flow coverage of total liabilities is analysed. With the combined review of the three indicators, the main characteristics of the liquidities of the companies in the sample are presented,

and the individual situations of the companies are compared. For the analysis of profitability, the return on equity and cash return on equity indicators are calculated, and the outcomes are analysed as described in the foregoing. As a result of the analysis, the study determines (1) which company has the most advantageous financial conditions for the successful operation; (2) which companies have disadvantageous financial situation; and (3) which companies are in potential financial distress situation. Potential bankruptcy positions are analysed by the applications of Altman and Springate models (Altman et al., 1977); Springate, 1978). Formula of the applied Altman model is

$Z = 0.717A + 0.847B + 3.107C + 0.420D + 0.988E$,

where A is net working capital/total assets; B is profit after taxes/total assets; C is operating profit/total assets; D is equity capital/total liabilities; and E is sales revenues/total assets.

The model can be used for private (not subscribed at any stock exchange) production companies, and the $Z<1.23$ value indicates bankruptcy threat.

On the basis of Springate's model

$Z = 1.03A + 3.07B + 0.66C + 0.4D$,

where A is working capital/total assets; B is operating profit/total assets; C is profit before taxes/short-term liabilities; and D is sales revenues/total assets.

In the Springate model, the $Z<0.862$ value suggests bankruptcy threat. The accuracy of the prediction of models was reviewed by Kidane (2004), which determined a value over 80%.

4. Results

This chapter evaluates the relevant data for the liquidity and profitability of the leading, Hungarian-owned companies of the dairy industry in the period of 2008–2012.

4.1. Time series data of liquidity

The graphs below present time-series changes in the capital structures of the examined companies, their liquidities based on the respective balance sheets and cash flow statements.
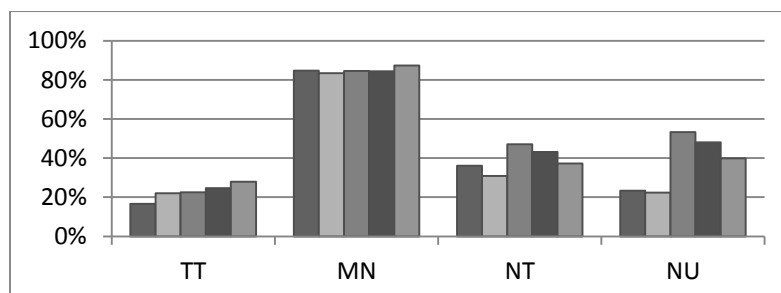
Figure 1: Debt ratios of the firms concerning 2008-2012 period
Source: own compilation
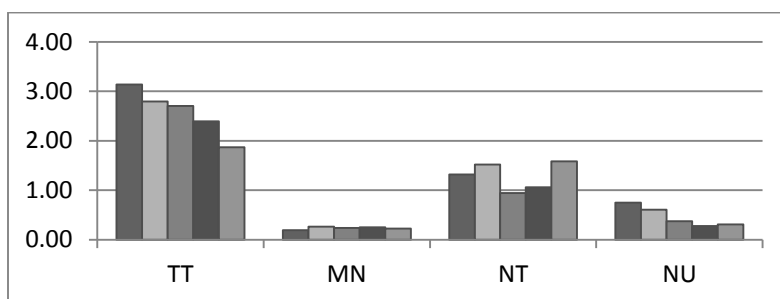
Figure 2: Quick ratios of the firms concerning 2008-2012 period
Source: own compilation
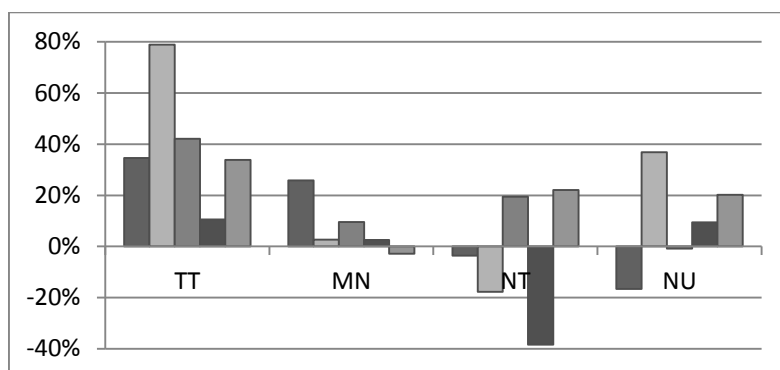
Figure 3: Operative cash flow/total liabilities of the firms concerning 2008–2012 period
Source: own compilation

In the light of the data of the graphs, it can be clearly ascertained that the TT company has the most favourable capital structure and short-term solvency, while the highest value of operative cash flow margins also belongs to this company. The debt ratio is low and steady, the quick rate has a slight downward trend, yet it does not jeopardise the stability of the current asset coverage ratio of short-term liabilities. It can be concluded that in spite of the major fluctuations the operative cash flow steadily secures all the liabilities. On the whole, the TT company features outstanding liquidity.

In terms of liquidity, the least favourable position is occupied by the MN company. The level of its liabilities is permanently over 80% of the aggregate value of assets. Further analysis unveil that short-term liabilities tend to be dominant, including the relatively large value of short-term bank loans. Short-term bank loans tend to exceed the value of current assets from year to year, and as a result the continuously negative value for net working capital also indicates the existence of problems. A closely associated phenomenon is that the value of the quick ratio is much smaller than the minimally expected 1 value. The operative cash flow margin further erodes the evaluation of liquidity, because it has a consistently sliding value, and in 2012 the company was unable to produce any positive operating cash flow balance. It means that the company will be forced to take out additional loans in case it is capable of surviving the given competitive situation at all.

NT's liquidity position can be regarded as averaging. In view of the value of the quick ratio under the acceptability threshold and its strongly fluctuating operative cash flow margin, the NU company should also be followed closely.

4.2. Time series data of profitability

The following graphs show the time-series changes in the return on equity and cash return on equity for the studied companies. In this respect, the study examines the returns on equity are strengthened by the operative cash flow rates, or this latter parameter leads to a more favourable evaluation of the companies in the sample.
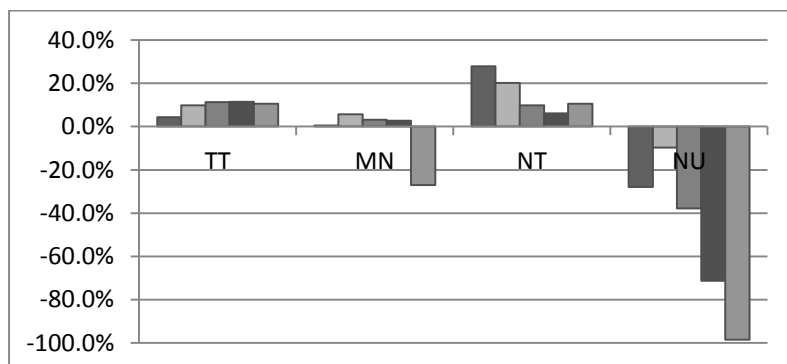
Figure 4: Net profit/equity of the firms concerning 2008–2012 period
Source: own compilation
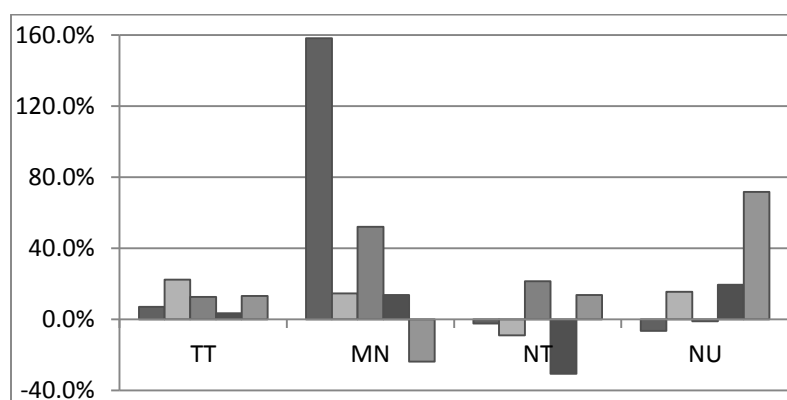
Figure 5: Operative cash flow/equity of the firms concerning 2008–2012 period
Source: own compilation

The calculations apparently reflect that even in terms of these profitability figures TT keeps its leading position, both indicators show favourable and steady values. In the case of MN, however, both indicators are affected by changes of unfavourable tendencies, meaning that in 2012 the values of both indicators turned negative, and it was especially the value of the operative cash flow/equity whose drastic drop suggested aggravating problems in business operations. It has been undoubtedly demonstrated that for the MN company it is reasonable to examine the given situation with reliance on bankruptcy prediction models.

NT's return on equity values is positive, whereas the cash return on equity rates are periodically fluctuating, and therefore its situation can be regarded as averaging on the basis of its profitability, as well. On the other hand, NU proves to be consistently and increasingly loss-making throughout the entire period under review. This undesirable tendency is mitigated only by the cash return on equity values, because as a result of the net operating cash balances the company is still able to arrive at an acceptable level.

At this point of my study, I am able to answer the main questions raised.

(1) It can be ascertained that on the basis of the examined parameters the TT company has the most favourable financial situation in the sample of leading, Hungarian-owned companies of the dairy industry. This finding can also be supported by the export rates within sales revenues (Table 4).

Table 4: Export proportions of total sales concerning 2008–2012 period

Export proportion	2008	2009	2010	2011	2012
TT	5.63%	1.83%	3.82%	4.65%	4.16%
MN	2.96%	2.46%	2.19%	1.24%	0.70%
NT	0.51%	0.25%	1.97%	1.42%	2.79%
NU	8.95%	5.34%	1.10%	1.72%	1.75%

Source: own compilation

(2) Within the samples, the most unfavourable financial position belongs to the MN company. Both its liquidity and profitability reflect serious problems in funding and business operations. A determining constituent in its capital structure is the volume of short-term bank loans that needs to be further increased due to the 2012 losses and the lack of operative cash flow. The financial position of the NU company has similarly been found to be unfavourable, yet the examination of the capital structure has revealed that the company has no bank loans, but its liabilities to the parent company offer a solution to funding problems, and therefore the survival of this firm in the market depends on the business management and decision of the parent company.
(3) Consequently, the Altman and Springate's bankruptcy prediction models have been calculated for the MN company.

4.3. Results of the bankruptcy prediction models

The tables hereunder was compiled to demonstrate the results of bankruptcy prediction performed in relation to the 2008–2012 figures of the MN company, and evaluate the obtained data.

Table 5: The results of the Altman model

	Parameters	2008	2009	2010	2011	2012
0.717	Net working capital/Assets	-0.40	-0.36	-0.40	-0.36	-0.41
0.847	Net profit/Assets	0.00	0.01	0.00	0.00	-0.03
3.107	Operating profit/Assets	0.04	0.06	0.05	0.07	0.01
0.420	Equity/Liabilities	0.16	0.18	0.18	0.18	0.12
0.998	Sales/Assets	1.91	1.23	1.03	0.93	0.88
	ALTMAN Z	**1.80**	**1.24**	**0.97**	**0.95**	**0.66**

Source: own calculations on the basis of the annual reports

Table 6: The results of the Springate model

	Parameters	2008	2009	2010	2011	2012
1.03	Working capital/Assets	-0.40	-0.36	-0.40	-0.36	-0.41
3.07	Operating profits/Assets	0.04	0.06	0.05	0.07	0.01
0.66	Profit before tax/Short term liabilities	0.00	0.01	0.01	0.01	-0.04
0.40	Sales/Assets	1.91	1.23	1.03	0.93	0.88
	SPRINGATE Z	**0.47**	**0.31**	**0.15**	**0.21**	**-0.06**

Source: own calculations on the basis of the annual reports

For Altman Z, the threat of bankruptcy is indicated by values under 1.23, whereas for Springate Z the corresponding indicator is 0.862. In the light of our calculation, the insolvent situation of the MN company can be regarded as proven. In the Altman model and the Springate model, for this company bankruptcy has been pending since 2010 and 2008, respectively; moreover, it can be claimed that the Z values have deteriorated consistently from year to year, meaning that the occurrence of a state of actual insolvency is increasingly probable.

5. Conclusions

This study was conducted to reveal the particular characteristics of an economically very interesting branch of Hungarian food processing, dairy industry. The high degree of sales revenue concentration was demonstrated alongside the existence of very sharp competition in the sector. The research analysed Hungarian-owned companies that have high levels of sales revenues and subscribed capitals, as well as diversified product structures. The liquidity situation and profitability processes have been examined in the 2008–2012 period with the application of comprehensive and comparative financial analysis. The financially most competitive company (TT) and the company with the most unfavourable financial position (MN) were unambiguously identified. In the case of the MN company, the results of the bankruptcy prediction models served further, convincing evidence for serious problems in financing and business operations. The most important outcome of our research is that the conclusions of the comparative analysis performed with the use of financial indicators are confirmed with reliance on the bankruptcy prediction models. On the other hand, an additional orientation of the study can be the calculation of free cash flow to firm data for the TT company, and the estimation of the market value of equity. Finally, further valuable information can be obtained in relation to the sector and competitive situation in case the sample is broadened with the ignorance of ownership criteria.

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ANALYSIS OF WORKING CAPITAL MANAGEMENT OF LEADING COMPANIES IN THE HUNGARIAN DAIRY SECTOR BETWEEN 2008 AND 2012

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Abstract: *This study analyses trends in the working capital management of those Hungarian dairy companies that feature the highest levels of sales revenues in the domestic market and diversified product structures. In view of the significance of food industry in the national economy, a particularly important question to examine in this context is to see what impacts the economic crisis has had on the business operations of the dominant companies of the sector, what processes it has triggered in working capital management. In 2012, 44 of the 500 companies with the largest amounts of sales were operating in the food processing sector. Within the group of these 44 enterprises, dairy companies had an 11% share. On the other hand, 82% of the total sales revenues of the dairy industry was given by the 15 companies where the individual amounts of registered capital are over HUF 250 million, which reflects a strong sales revenue concentration. Therefore, it has been an interesting aspect to study how in such a concentrated sector the leading companies shape their working capital management, what processes can be observed in this respect. This study has relied on the annual reports, i.e. the balance sheets and profit & loss accounts of the companies for the fiscal period of 2008–2012. The research methodology of the analysis is based on the review of financial indicators internationally accepted and used in connection with working capital management. Moreover, the study determines a cash conversion cycle, and in this context the inventory and receivables turnover, as well as the payables turnover. It has been assessed what changes the above-mentioned indicators of the competitors belonging to the target group of analysis have undergone, if there has been a general tendency of changes to be identified. For outstanding values it has been analysed what the large-scale changes could have been caused by. Fundamentally, I have aspired to reveal whether there has been any uniform tendency in the working capital management of the leading dairy companies, and if the improvement of efficiency via the regulation of working capital management is considered as a pronounced element of their corporate strategies. The closing section of this study summarises the conclusions drawn from the data of the analysis conducted, and the major characteristics of the working capital management for the leading companies of the Hungarian dairy industry with diversified product structures are highlighted.*

Keywords*:* cash conversion cycle, financial analysis, effectiveness, working capital, industrial organisations, Hungary

JEL Classification Codes: M21, L66

1. Introduction

This study has been conceived to analyse the working capital management of those Hungarian, dairy companies that featured the largest amounts of sales revenues and diversified product structures in the period from 2008 until 2012. Such a review of the dairy industry as a sector has been considered to be important due to its significance in the national economy, the high level of market competition and the potential, inherent points of interest the analysis have been expected to unveil.

Like in other EU member states, dairy processing companies in Hungary also form a segment of high concentration. Nevertheless, in the Hungarian market, with the relatively large number of companies, the given degree of concentration is somewhat surprising. The comparatively strong bargaining position of processing entities seems to be the reason; that they seem to transact with rather unorganised, defenceless producers. A general tendency is that capacities of milk processors are under-utilised – a situation that the companies concerned wish to change in order to increase their sales revenues. This latter aspiration is mostly regarded as means of boosting their profits, whereas acquisitions and mergers are not regarded to be expedient solutions. Therefore, in recent years milk processing companies have focused on increasing their profits as their main objective. Furthermore, product development and the introduction of new forms of packaging have also been targeted by these companies in spite of the fact that the innovation activities of Hungarian milk processing companies generally lag behind those of the competitors (Popp, Potori and Papp, 2010).

The degree of concentration among dairy companies and the sharpness of market competition are also confirmed by the sample of business entities used for the purposes of the study. With reliance on the Opten corporate information database, it has been ascertained that currently in Hungary there are 147 business entities that are involved in the "manufacturing of dairy products" as their core activity. From among these companies, there are 20 enterprises with capital stock (registered capital) in excess of HUF 100 million, and the capital stock levels of only 15 companies (10% of the sample as a whole!) are over HUF 250 million. When the amounts of capital stocks are assessed in combination with the sales revenues in 2012, it can be ascertained that this 15 companies represent 82% of the sales revenues of the dairy industry in total. Consequently, the assumed high-level market concentration can be regarded as confirmed, and for this reason it is worth analysing the companies of the sector, because due to this strong concentration just a handful of dominant enterprises with outstanding sales revenues make up the majority of operations in the sector. When defining the set of sample companies for this research, in addition to the amounts of registered capitals and sales revenues I also considered that the companies subjected to the analysis should have diversified product structures, because I thought that only companies operating in the same submarkets could be efficiently compared. In terms of the registered capital, there has been only one company where the given criterion, i.e. the value of the registered capital should be over HUF 100 million, was not met. This enterprise is the E company, which has been included in the sample for its large sales revenues; on the basis of the level of sales, it perfectly matches the other companies forming the sample, as it ranks 5th among the 8 companies concerned. Although with a smaller amount of registered capital, this company has a major share from the sales revenues of the entire sector, and therefore, in my opinion, it needs to be involved in the sample. Another aspect that justifies its presence in the sample is that the large volumes of sales are accompanied by a diversified product structure, meaning that from milk through yogurts and sour creams to milk desserts the enterprise manufactures everything. For 2012, the combined sales revenues of the companies forming the sample make up nearly 60% of the total sales revenues of the dairy industry, which further confirms the assumed concentration of the domestic dairy industry.

On the corporate level, the economic crisis of 2008 primarily impacted sales revenues and profitability by deteriorating the effective demand. Therefore, this study has been designed to assess the factors that shaped the working capital management of the 8 leading dairy companies selected for the sample, changes in the cash conversion cycle, as well as the activity ratios that influenced them. Enterprises have various means to achieve increase in sales revenues, and I have wanted to know how the crisis affected the turnover ratios.

2. Literature review and research methodology

As an impact of the economic crisis emerging in 2008, the set of funding sources that could be utilised by the actors of economic life became smaller. For this reason, the providers of funds tended to subject the demanders of financing to stricter review. Since the conditions of external funding became much more rigorous, enterprises were to focus on their internal resources to an increasing extent, and therefore it came to be more and more important for them to see their own situation clearly (Fenyves and Tarnóczi, 2011). Working capital is an essential component of the efficient operation of any enterprise, because the best returns can be fundamentally achieved by avoiding investments in assets that bring small incomes or no earnings at all. Another aspect to be specifically considered is that the cheapest possible assets are worth being used for financing short-term assets. If an enterprise invests into current assets in suboptimal volumes, and/or these assets are not of the most efficient composition, operation-related risks tend to rise, which can deteriorate the profitability of the company. Because of the difficulties of financing short-term assets and bad decisions in relation to funding, interest expenditures may increase to remarkably high levels, similarly to the financial risks of the enterprise (Gitman, 2002).

The study of working capital management in fact embraces the economics of the production process. Its focal points are inventory management, the crediting policy of the enterprise and the management of liquid assets. Besides, it examines the associated funding decisions, and therefore it can be claimed that it concentrates on the economic aspects of production (Ross, Westerfield and Jordan, 2002).

The elements of working capital management include current asset financing and management, as well as control over the level of short-term liabilities. The associated decisions determine whether the enterprise can survive in the long term, i.e. they are principal tasks that managers need to handle (Ross, Westerfield and Jordan, 2002).

The following table shows the companies involved in the analysis and their sales revenue figures, as well as changes in them from 2008 to 2012. In the order of their 2012 sales, the studies companies have been designated as A, B, C, D, E, F, G, H companies.

Table 1: Corporate target group of the study (data in HUF 1000)

Company	Sales revenues 2008	Sales revenues 2009	Sales revenues 2010	Sales revenues 2011	Sales revenues 2012	Average sales revenues
A	43 144 733	37 849 216	37 247 841	35 861 053	40 147 161	38 850 001
B	36 499 660	28 930 657	29 416 093	28 740 198	26 329 142	29 983 150
C	16 948 401	15 695 535	17 046 245	21 068 774	23 442 839	18 840 359
D	13 506 850	12 176 702	12 727 956	15 558 526	16 634 528	14 120 912
E	3 702 999	3 502 652	6 513 182	9 515 797	10 183 479	6 683 622
F	5 830 115	5 600 775	6 520 368	7 959 460	8 486 968	6 879 537
G	14 209 617	8 829 570	7 581 490	7 070 978	7 794 903	9 097 312

Company	Sales revenues 2008	Sales revenues 2009	Sales revenues 2010	Sales revenues 2011	Sales revenues 2012	Average sales revenues
H	3 140 804	2 861 768	3 273 388	3 459 384	3 984 962	3 344 061

Source: made by the author

Below, a list is shown of the financial indicators that characterise working capital management, and have been used and described for the purpose of this analysis.

Table 2: Analytic framework of the study

Financial indicators	2009								2012							
	A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	H
Inventory turnover																
Receivables turnover																
Payables turnover																
Cash conversion cycle (day)																

Source: made by the author

The inventory turnover has been calculated as the ratio of net sales revenues to the average value of inventories. The average values have been established as the simple arithmetic average of the amounts for the year under review and the previous year. The receivables turnover is in fact the ratio of net sales revenues to the average amount of trade receivables. The average values have been calculated similarly to those for inventories (Katits, 2002).

The payables turnover is the ratio of net sales revenues to the average amount of trade payables (Bélyácz, 1999). The average values have been calculated similarly to those for inventories.

The cash conversion cycle reflects the number of days that have to be bridged with the application of funding sources due to the given logistic processes, i.e. it quantities the duration between the payment of trade receivables and trade payables (Banomyong, 2005). Its calculation formula: inventory turnover in days + accounts receivable turnover in days – accounts payable turnover in days (Ross, Westerfield and Jordan, 2002).
From the performed calculations, conclusions have been drawn in relation to the working capital management of leading dairy companies and the processes triggered by the economic crisis, and besides a tendency that can be regarded as general has been described. In this context, the direction of changes from 2009 to 2012 has been examined. In addition to the assessment of cash conversion cycles, important points of the study have been the inventory and receivables turnover, as well as the payables turnover, as suggested by Nobanee and AlHajjar (2009). The reason is that in view of the cash conversion cycles the time period elapsing between the payment for base materials and the collection of receivables should be minimised as far as it is possible under the given sectoral conditions so that the funding sources required for bridging the time gaps of the logistic processes could not widen.

3. Results of the research

Hereunder, the values that have been calculated with the use of the data of annual reports for 2008–2012 as the results of my research are discussed. Changes in these calculated values are presented for the period of 2009–2012 in order to establish the direction, tendency of changes. As a result of the calculation of average values, the values of the indicators could be determined as early as from 2009.
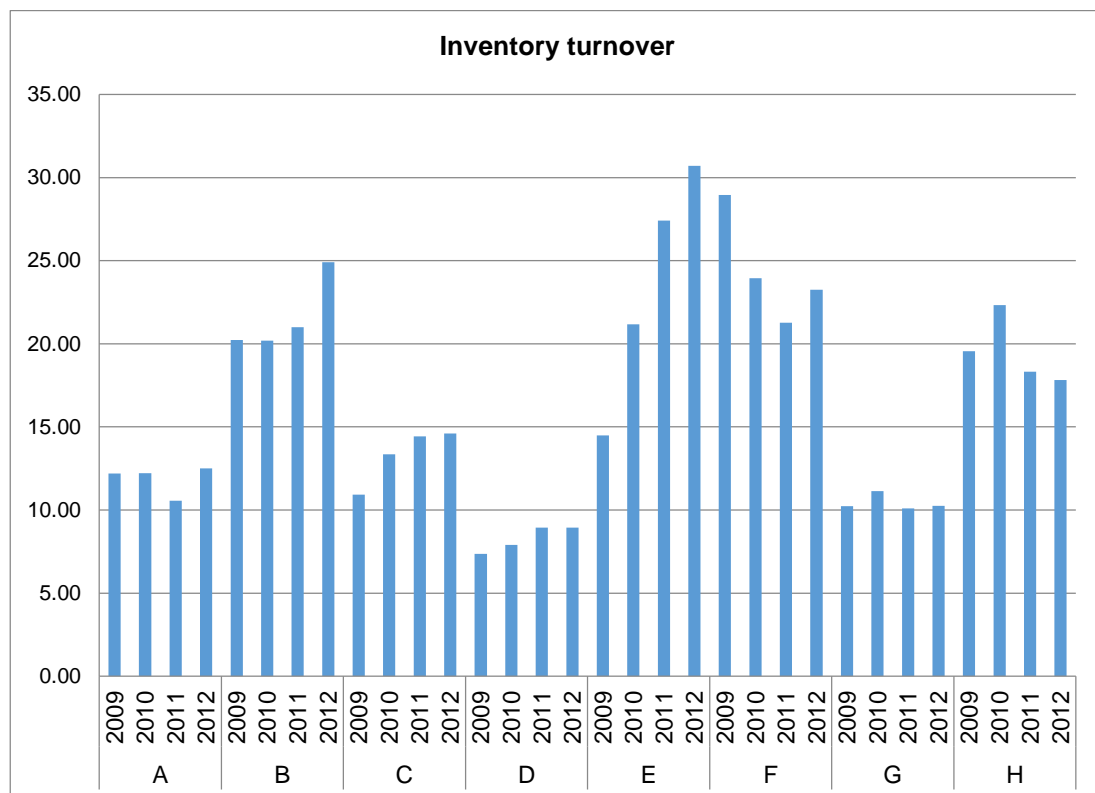
Figure 1: Results of the research: changes in the inventory turnover
Source: made by the author
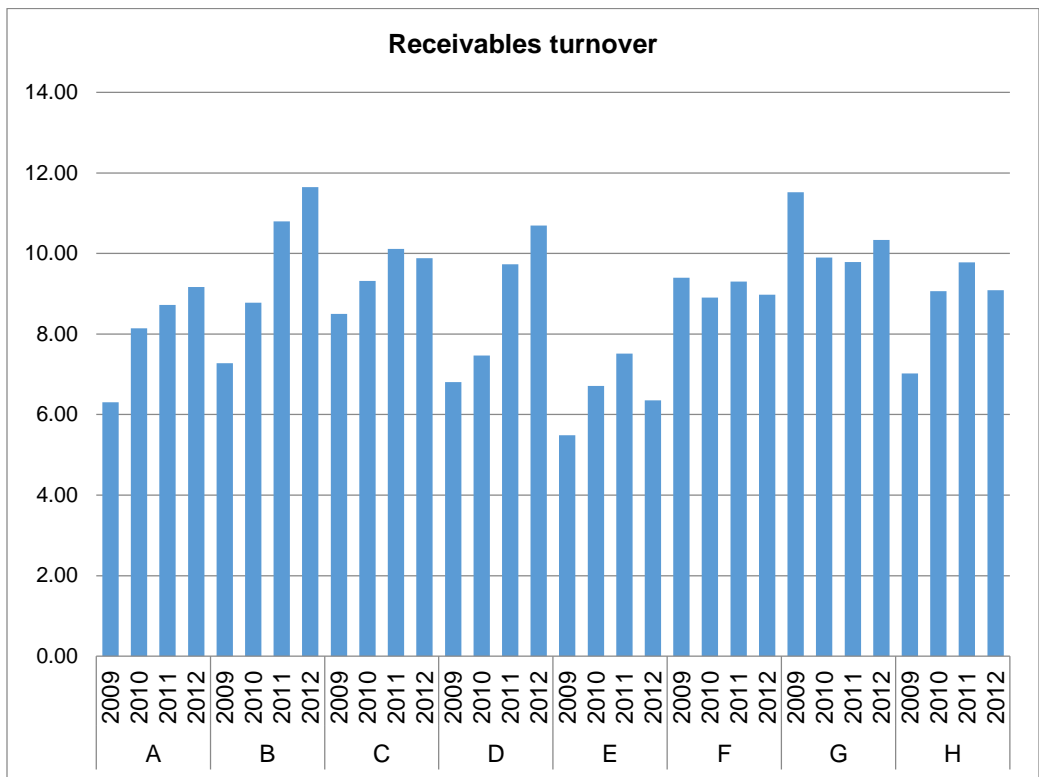
Figure 2: Results of the research: changes in the receivables turnover
Source: made by the author
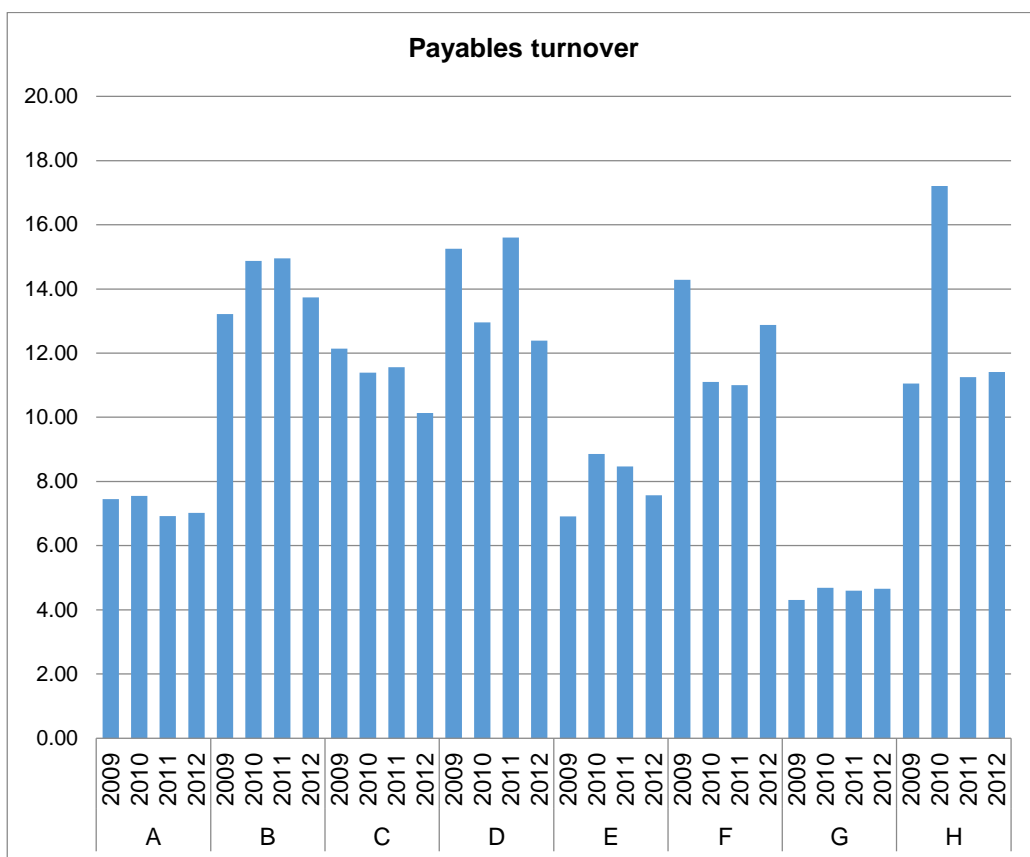
Figure 3: Results of the research: changes in the payables turnover
Source: made by the author
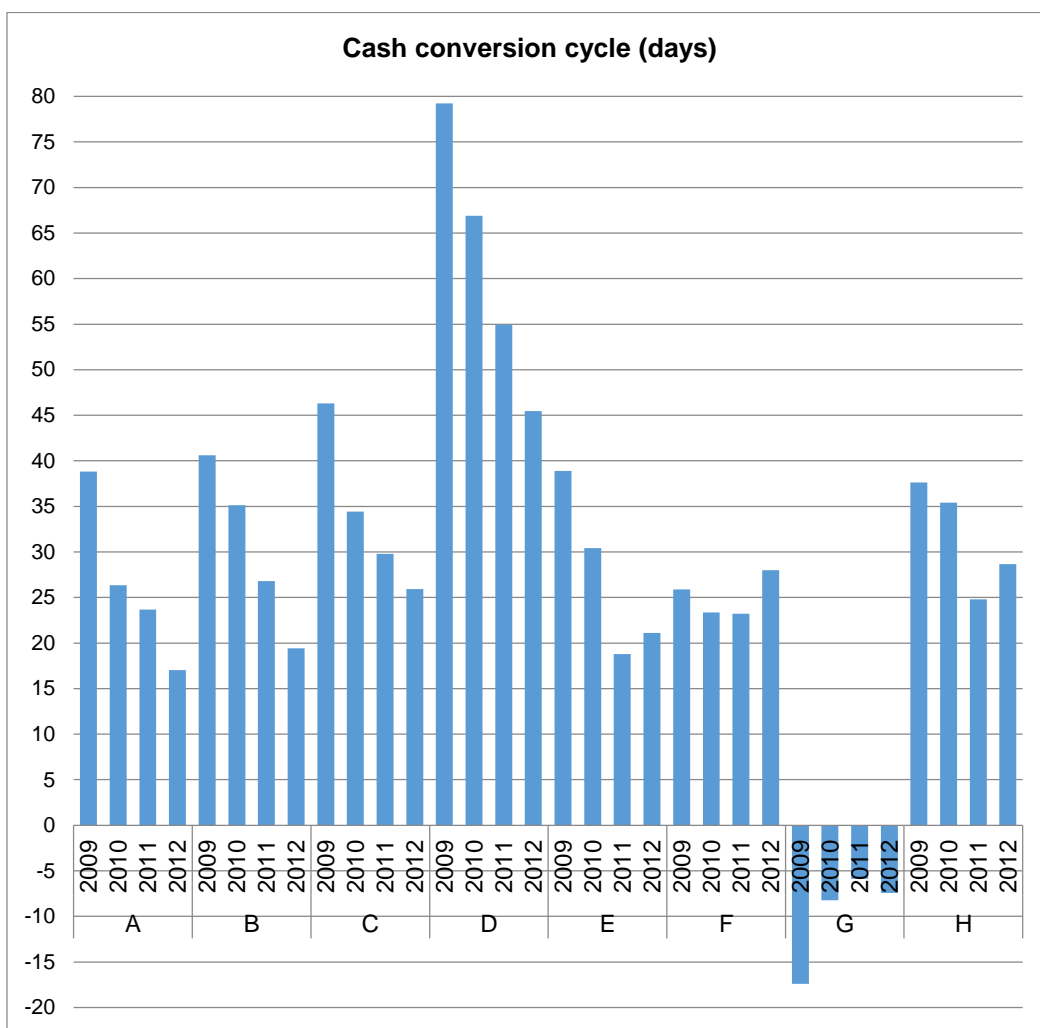
Figure 4: Results of the research: changes in the cash conversion cycle
Source: made by the author

In the case of the inventory and receivables turnovers, higher values are regarded to be better, because it means that the inventory period and average collection period is short, i.e. the enterprise produces more efficiently and quickly, shorter times elapse between the purchasing of base materials and the selling of finished products. Besides, it is capable of collecting the receivables earlier, it has a better bargaining position against its customers. At the same time, flexible customer relations can potentially add to sales, and therefore the assessment of the receivables turnover sectoral characteristics and customer demands have to be taken into account, as well.

In contrast, the payables turnover is deemed to be more favourable in case the corresponding values are small, because it means that the terms of payables are longer, i.e. suppliers need to be paid later.

For cash conversion cycles, short values are more favourable, because the longer the cash conversion cycle of an enterprise is, the larger demand it has for sources of funding. Moreover, it also influences profitability, because the quicker the company can sell its inventories and collect its receivables, the smaller the total value of assets will be with

unchanged sales revenues, and consequently the higher the profitability of assets as a whole will rise (Ross, Westerfield and Jordan, 2002).

In association with the values for the cash conversion cycle, it can be seen that with the exception of the F and G company for all the other enterprises the 2012 values were well under the 2009 level, which means that almost all the companies involved in the analysis could consistently reduce its cash conversion cycle. The examination of the inventory and receivables turnovers has suggested that this tendency – except for the F and G company – was accompanied by a massive rise in the receivables turnover, as well as the decrease of the payables turnover, save for the E company. In relation to the changes in the inventory turnovers, it can be observed that for companies wherever the cash conversion cycles dropped – with the exception of the H company – the efficiency of production improved, i.e. the inventory turnover increased. It means that the enterprises made efforts to better their production efficiencies, aspired to shorten the production process. It is further confirmed by the fact that it did not bring about any general drop in sales revenues, or in other words it does not suggest that the value of inventories would have decreased due to a fallback in the turnover. Besides, enterprises generally made their crediting policies stricter, that is they set shorter terms of payment for their own customers. In addition, they tried to reinforce their bargaining positions against suppliers, and all of them seem to have succeeded in this respect. This tendency is in line with the processes described in the associated literature, because most of the suppliers are milk producers who – according to Popp, Potori and Papp (2010) – are unorganised and relatively defenceless.

In the light of the results, as irrespective of the given tendencies, the G company needs to be highlighted, because all through the analysed interval its cash conversion cycle remained in the negative side. It is a consequence of its receivables turnover being much higher than the payables turnover, which means that the production process and the period from selling until the collection of receivables are funded by the suppliers. It is an uncommon outcome both in the sector and on the level of the national economy; looking at the company's reports, it can be suggested that the reason underlying longer payable periods to suppliers is presumably the high degree of indebtedness, which in turn has emerged due to the large amounts of bank credits owed. This situation can be sustained in the short term, because in view of the given bank credits and overheads the company tries to pay to the suppliers as late as it is possible, and furthermore there is a risk of becoming incapable of settling its debts. Moreover, it is unable to satisfy the special customer demands and conditions of the largest retail chains, and therefore it can lose markets, which may lead to the drop of sales. This latter assumption can be justified by assessing the sales revenues of the enterprise, because between 2008 and 2012 the net amount of sales diminished by 36%.

It is to be also remembered that the enterprises are not involved solely in price competition in most markets. In addition to prices, they also compete in the field of commercial credits, meaning that any excessively rigorous customer policy may lead to a loss in the market share in case the customers decide that they want to purchase from other enterprises that offer products of similar price-to-value ratios, but follow less strict crediting policies. It would further decrease the sales revenues of the enterprise.

From among the companies with positive cash conversion cycles in the sample of the analysis, the F company is the only one whose cash conversion cycle increased- though minimally- between 2009 and 2012. In the light of the available data, the underlying reason was the decrease of the inventory and receivables turnovers. As the payables turnover decreased in the period under review, it is obvious that the increase in the cash conversion cycle came from the reduction of the two other turnovers. It means that both the efficiency of the crediting policy and the effectiveness of production weakened, which could not be counter-balanced by the company's delayed payments to its suppliers. In consequence,

the two options for boosting efficiency are the adoption of more rigorous crediting policy and the improvement of production efficiency.

4. Conclusions

This study has been dedicated to the analysis of the working capital management of dairy companies within Hungarian food processing, as these entities are attributed significance in the national economy. The selection of the sample has confirmed the existence of sectoral concentration and a strongly competitive situation. 8 companies have been subjected to comparative analysis with reliance on the indicators used in the domestic and international literature.

In the light of the obtained results, the general tendencies to be established is that the companies could reduce their cash conversion cycles in the period from 2009 to 2012, which was achieved by the combined effect of rising inventory and receivables turnovers and diminishing payables turnover. Since it was a tendency prevailing at nearly all the companies, they were not to be afraid of any loss of market as a consequence of their adopting more rigorous crediting policies. As a result of the economic crisis, the enterprises turned to internal sources of funding, and started to optimise production processes, similarly to the deviation between the terms of the credits they provided and the terms of the payment of suppliers. This latter time interval could be extended partly owing to the fact also highlighted in the associated literature that Hungarian milk producers were unorganised, and had weak bargaining positions vis-á-vis processors (Popp, Potori and Papp, 2010).

One company shows notable results, because in the case of the G company the cash conversion cycle has been negative, which is caused by the high ratio of indebtedness, since the company has a large volume of bank credits. For this reason, the enterprise tries to defer payments to suppliers as far as it is possible, while it is not absolutely sure that it always has sufficient funds for the payment of debts. At the same time, the proper fulfilment of the conditions of supply to large retail chains as the company's suppliers has also become uncertain, which may lead to a loss of markets. Similarly, overly strict crediting policies can potentially lead to market loss, as it has already been demonstrated in connection with the evaluation of results.

Any increase in the inventory turnover suggests improvement in the efficiency of production with respect to the fact that most of the companies realised increasing sales between 2008 and 2012.

Consequently, the leading dairy companies involved in the study can be claimed to have had the aspiration to better their efficiencies as a result of the crisis, and almost all of them have been able to meet this effort successfully.

To round off these results, a further orientation of research could be the detailed analysis of profitability. The analysis of the cash conversion cycle has pointed out that by cutting this factor the profitability of the enterprise can be improved even if all the other factors remain unchanged. The calculation of the profitability indicators described in the Hungarian and international literature would confirm or disaffirm the applicability of this assumption to Hungarian dairy industry.

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AGGREGATE RATING MODEL IN THE TOURISM INDUSTRY

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Abstract. *In the paper the authors present a model aggregate rating based on credit-scoring models, banking models and their rating model. Multi-criteria approach and an aggregate model better capture business risk of the company.*

Keywords: rating, credit-scoring models ratings, profitability, liquidity, solvency

1. Literature Review

Between bankruptcy risk and there is a direct relationship of proportionality, namely: the activity involves less risk, the possibility of bankruptcy is lower and vice versa.

Before granting loans, banks are trying to assess business risk, being particularly concerned with default risk and risk of default by borrowers. One way business is credit risk assessment - scoring that can be expressed as a notation of assessment or evaluation of the attributes of the applicant to grant credit, aims to establish a hierarchy of credit applicants in a note or score.

For this purpose are required:
- Establishment of a number of variables (wealth, income level, stability of work and home, age, familiar tasks, behavior and relationships with banks as debtors etc.).
- Issuing a system allowing the implementation of the aggregation of variables in a joint, overall expression.

In this connection it is emphasized deficiencies arising from the transposition. It has a contradictory situation. The rankings can be as precise as the notation for each variable, as it can become confusing note resulting from aggregation, whereas aggregation as a way of generalization, it means loss of information, giving the concrete sides disclosed by them.

Aggregation brings the same denominator, but leads to loss of identity of subject characteristics. Compensation phenomenon, which is produced by aggregation, may overshadow the essential sides being covered by the appreciation of other features, insignificant purpose: minimal risk.

The overall system efficiency is closely related to consideration of the most significant factors that can be variables of the system, and optimize the aggregation. System, the whole of it, is an expression of the Bank's credit policy reconsideration based on periodic statistical data and processed by specific methods: multiple regression or technically known as multiple discriminant analysis MDA (Multiple Discriminant Analysis).

Scoring method is based on block rates (indicators) determined statistically weighted by some coefficients in a mathematical model can be determined with a certain probability of future health businesses. In business it is important that management decisions be based on the rating analysis.

The literature opinions are divided on the performance rating models. The most famous Romanian models are: the Ion Anghel Gheorghe Băilăşteanu model, model Ivoniciu Paul. Credit scoring models developed by specialists stain are: the Altman model Stickney, model Robertson Conan-Holder model. Remember the model of banking models: BCR, Banca Transilvania model, model Credit Europe model Piraeus Bank and others.

2. Method and Results

In research conducted we considered several tourism businesses, and built a model aggregate rating based on three levels of rating:

- Model of Rating;
- Model aggregate banks Romanian Commercial Bank and Piraeus Bank;
- Aggregate credit scoring model Ion Anghel and Stickney.

The rating is based on three categories of indicators grouped into indicators of liquidity and profitability, and solvency. For each group of indicators were established seven qualifiers as very good, good, above average, average, below average, poor and very poor, and their respective scores. These qualifications were equivalent to 5 grades AE related to banking and credit scoring models as "Very Good" and "Good" = A, "above average" and "average" = B "Below Average" = C, "Low" = D and 'Very Low' = E.

The Rating Model

Next were given scores ranging 3-15 points, broken down by categories of AE ratings as listed below.

A	B	C	D	E
15-13 pct	12-9 pct	8-6 pct	5-3 pct	<3

Ratings of the companies during the period 2003-2012, following the application of rating model falls within the rating category E, in the years 2003, 2005, 2006, 2007, 2012, and the rest of the year falls within the rating category B.

Rating model was built based on 5 indicators: Overall Solvency Ratio; Total Return Ratio; Return On Equity; Current Liquidity Ratio and Return On Assets.

Overall Solvency Ratio explain how the total assets of the entity may cover the total debt. The indicator measures the security enjoyed by the company to the bank and creditors; extent to which debts can be covered on account of assets. The indicator is calculated as a percentage ratio between net assets and total assets.

Confidence interval for this indicator has been split into 5 values which were awarded points according to the following scale:

Values	80%	105%	130%	155%	180%
Points	1	2	3	4	5

In the case of the analyzed period 2003 - 2012 the indicator throughout the period under review was higher than 180%, partly rating is 5.

Total Return Ratio is determined as a percentage ratio between gross result of the exercise and total revenue. Indicator highlights the contribution of property items from the results.

For this indicator has established the following scale:

5	4	3	2	1
> 12,1 %	8,1 - 12 %	5,1 - 8 %	2,1 - 5 %	0 - 2,0 %

The score is calculated consistently on almost all the period, giving the minimum score, except to meet in 2003 and 2011, when the score given was 2.

Return On Equity (ROE) emphasizes the efficient use of capital to shareholders and is calculated as the ratio between the net profit of the company and its capital.

The scores awarded for this indicator are:

5	4	3	2	1
>25	15<25	10<15	5<10	<5

Indicator values are less than 5 throughout the period under review, the score given is the one.

Current Liquidity Ratio reflects on the one hand the ability of current assets to current liabilities of the entity's face on the other hand shows the cash resources through current assets. In other words the current liquidity ratio measures the entity's ability to pay short-term debts. The higher the current liquidity, the entity is able to pay its obligations in 12 months demanding the balance sheet date. Current liquidity while assessing the effectiveness of an entity's operating cycle or its ability to transform production into cash.

The scores awarded are:

5	4	3	2	1
>2,5	2<2,5	1,5<2	1,5<1	<1

In the case of analyzed current rate experienced a positive development in the period under review, with the exception of 2012.

Return On Assets is the best known performance ratio of the rates of return on the system. Rate measures the profitability of the entire capital invested in the entity and determine the ratio of net result for the year and total assets of the entity.

For this indicator has been awarded the following scores:

5	4	3	2	1
>20	14<20	9<14	4<9	<4

The analysis carried out showed that the indicator values are less than 4 throughout the period under review, so the score given is 1.

Based on established intervals were given rating categories below:

Categ. A	Categ. B	Categ. C	Categ. D	Categ. E
20<25	15<19	10<14	6<9	<=5

By adding the scores obtained for each category of indicators were obtained following the following category scores aggregated rating:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total points	9.00	10.00	9.00	9.00	9.00	10.00	10.00	10.00	12.00	9.00
Categories	D	C	D	D	D	C	C	C	C	D

The total score is determined according to the rating entity as follows:

A	B	C	D	E
15-13 pct	12-9 pct	8-6 pct	5-3 pct	<3

Aggregate grade rating granted analyzed period 2003 - 2012 is:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Aggregate Rating	E	B	E	E	E	B	B	B	B	E

Rating obtained by the company during 2003-2012, falls within the rating category E in 2003, 2005, 2006, 2007, 2012, and the rest of the year rating falls within the rating category B.

Under category B, the entity in this class have a rating and a good repayment capacity. The overall rating granted in the period under review the company has a good debt repayment capacity, both short and long term. The level of return on capital invested in the company's environment. For entity of category B are projected losses and related risk exposures for this category is considered low.

Entities category's financial performance related problems. Losses are in most cases are imminent.

The Banks' Aggregate Rating: Romanian Commercial Bank and Piraeus Bank

- *Romanian Commercial Bank Model*

After applying the model rating BCR have the following values:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Category	D	C	C	D	C	B	B	B	A	C

Ratings of the companies analyzed during 2003-2012 oscileză, after applying the rating model, and is in category A rating for 2011, B for 2008-2009 and 2004-2005, 2007, 2012 is in category C and the years 2003, 2006 rating category D.

BCR - Erste fall economic agents who use credit worthiness into five categories based on the scores of financial criteria, quantifiable analysis result nonfinancial criteria, quantifiable. Depending on their score, the loan will be classified in one of the categories of financial performance using the following scale:

Rating	Categories	Credit rating	Values
0.27-0.54	A	Standard	1,00-1,80
0.55-0.81	B	Observation	1,81-2,60
0.82-1.08	C	Substandard	2,61-3,40
1.09-1.35	D	Doubtful	3,41-4,20
>1.36	E	Loss	4,21-5,00

Scores are given increasing, so a company get a low score will be put into a higher category of creditworthiness.

- *PIRAEUS BANK Model*

After applying the model PIRAEUS BANK ratings were recorded during the following ratings to the following:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Categories	B	B	B	B	B	A	A	A	A	A

During 2003-2012, the company falls under the category rating in the years 2008-2012, and the remainder of the company falls within the rating category B.
By adding the scores obtained for each category of indicators were obtained following category scores aggregated following rating:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total points	5	6	7	7	7	7	6	6	6	6
Banking Aggregate Score	C	B	B	B	B	B	B	B	B	B

The total score is determined according to the rating entity as follows:

A	B	C	D	E
10-8 pct	7,9-6 pct	5,9-4pct	3,9-2 pct	<2

Category B includes clients financial whose performance is good or very good, but not can maintain this level over a longer period.
Category C is for customers with Financial satisfactory performance, but with a clear trend of worsening.

- *Aggregate Credit Scoring Model: Ion Anghel şi Stickney*
  - In Anghel Model

After applying the model analyzed enterprises Ion Anghel recorded the following ratings:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Credit scoring	B	A	A	A	A	A	A	A	A	A

Rating obtained by the company during the period 2004-2012, following the application of Model Ion Anghel, fall into the category rating and in 2003 companies fall into the rating category B.
During 2004 -2012 the company analyzed is in an area of non-bankruptcy, and in 2003 the business is in the area of uncertainty.

  - Stickney Model

After applying the model analyzed Stickney rating companies obtained the following ratings society during the next:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Categories	C	B	B	B	B	B	B	B	B	B

He noted that during 2003-2012, the rating firms fall into category B rating, and in 2003 the rating is in category C.
During the analyzed period the probability of bankruptcy risk is high (rating given in most years is E and D), and the 2005-2008 default probability is lower, rating for the D.
By adding the scores obtained for each category of indicators were obtained following category scores aggregated following rating:

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total points	5	6	7	7	7	7	6	6	6	6
Credit Scoring	C	B	B	B	B	B	B	B	B	B

The total score is determined according to the rating entity as follows:

A	B	C	D	E
10-8 pct	7,9-6 pct	5,9-4pct	3,9-2 pct	<2

The categories of rating scores are weighted with 35% aggregate model to obtain the overall rating. The aggregate model of banks and credit scoring model were given scores ranging from 2-10 for each rating category in the table above. The categories of rating scores are weighted 35% and 30% aggregate model bank credit scoring model to obtain the overall rating. The aggregate model of banks and credit scoring model were given scores ranging from 2-10 points.

SINTHESYS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Aggregate Rating	E	B	E	E	E	B	B	B	B	E
Points (percentage 35 %)	0.35	1.40	0.35	0.35	0.35	1.40	1.40	1.40	1.40	0.35
Aggregate Banks	B	B	B	B	B	A	A	A	A	A
Points (percentage 35 %)	1.40	1.40	1.40	1.40	1.40	1.75	1.75	1.75	1.75	1.75
Aggregate CREDIT SCORING	C	B	B	B	B	B	B	B	B	B
Points (percentage 30 %)	0.90	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
TOTAL POINTS	2.65	4.00	2.95	2.95	2.95	4.35	4.35	4.35	4.35	3.30
GENERAL RATING	C	B	C	C	C	B	B	B	B	C

Entities have a *Class A* rating from the highest level featuring excellent repayment capacity , with no irregularities in payment of debts to the creditor. For this category is impossible to record losses.

Under *Category B*, entities have a rating and a good repayment capacity . The overall rating granted in the period under review the company has a good debt repayment capacity, both short and long term. The level of return on capital invested in the company 's environment. For entity of category B are projected losses and related risk exposures for this category is considered low.

Entities in *Category C* have a good rating but may have problems with financial performance. Repayment capacity is adequate, but problems can arise irregularities debts to the creditor, but they can be solved without rescheduling. For entities in this category is unlikely record losses and related risk exposure for this category is considered average but acceptable to creditors.

Category D groups the entities financial returns issues giving rise to irregularities in payment of debts to creditors sometimes solved by rescheduling payments showing increased vulnerability to market shocks . Of the exposure is great.

The *Category E* grouped enterprises with financial difficulties exacerbated who is on the verge of bankruptcy. To exit from the financial difficulties businesses are required to take urgent decisions to finance itself through major mergers of capital.

3. Conclusions

From the analysis performed the following aspects:

- Financial decisions should be based on a correlated system of indicators;
- A method of analysis is the rating business;
- Individual rating models capture only part of the financial health of businesses;
- Therefore it is necessary to build a model unit to capture over 60% of health enterprises.

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HUNGARIAN AND ROMANIAN COMPANIES FINANCIAL AND LIQUIDITY SITUATION IN THE LIGHT OF ECONOMIC CRISIS

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Abstract: *The behavior of the companies has changed in the last 5-6 years: they became cautious and suspicious about partners and other economic actors. This is a direct consequence of the large number of insolvent and liquidated companies, and other effects of the economic and financial crisis. The impaired financing options, the sharp fall of sales caused difficulties for companies. In general, the financial and liquidity situation of the companies is getting worse, so new financial policies are needed. To make the financial activities efficient, it is indispensable that the policy makers are aware of the real financial and liquidity situation of their own companies. But, in order to conduct successful business relationships, enterprises need to be aware of the financial situation of their partners as well. Intensified trade relations between the EU member states will require these companies to learn more about financial and liquidity situations. This present paper examines two countries, namely, a Hungarian and a Romanian region's commercial companies financial and liquidity situations of the 2010-2012 periods. The article presents the subject both from theoretical and practical data aspects too. Based on the available e-data reports, the investigation starts with the net working capital's examination. The working capital management has a crucial role in their financing policies. The size of the net working capital affects the degree of financial policy's flexibility. The negative net working capital calls the attention for financial problems. The study continues with the calculation of traditional liquidity ratios, which may also reflect the liquidity situation of the companies. It is recommended not to accept the results of these indicators without calculating any other liquidity ratios. These indicators show an actual situation, so they can distort reality (positive or negative). Other indicators and methods are needed to assess the real situation. The study was completed with the analysis of indebtedness and profitability as well. These indicators can play a big role in the financial and liquidity situation of the companies. The indebtedness ratio shows the presence of large foreign capital, which can help in difficult liquidity moments. But the large amount of foreign capital also presents a risk for the company. The effectiveness level of the company shows the company's profitability, which is essential for the long–term viability. This comparative analysis paper studies three key years of the economic and financial mondial crisis. The results, the trends of the indicators values hopefully will lead to an increase in trust between the partners.*

Keywords: liquidity, risk, working capital, indebtedness, Hungarian companies, Romanian companies.

JEL classification: G 32 – Financing policy

1. Introduction
The 21st century's first major economic – financial crisis shocked the whole world's companies and national economies, with effect of all actors in the economy. Among the companies the sales declined, the growing shortage of funds, conducted to liquidity gridlock and disruption. The banks introduced more tight lending conditions, so, these payment problems even more intensified and resulted in a large number of insolvency situations.

The crisis had started in the United States. Can be divided among the main causes of the outburst, due to the increasing consumption increased financing needs, the spread of uncontrolled and irresponsible bank lending, the excessive use of foreign financing, monetary policy was loose, falling real estate markets, etc.

The crisis quickly spread to Europe, which deeply schocked the nation's economy, especially in those countries that had high public debt, Iceland, Greece, Spain and Ireland. Several economies were approaching bankruptcy. Eastern Europe, including Hungary and Romania has not escaped the economic and financial crisis.

In Hungary the first impact appeared in the banking system, as the liquidity crisis. Other actors in the economy and society felt the effects of the crisis, by paralysis in lending, the loan portfolio decline and deterioration of credit conditions. Later, the risks of the banks have continued by non-payments. After the Icelandic crisis, Hungary seemed to be one of the riskiest economies, so the disinvestment huge proportions. Banks play an important role in supplying foreign exchange currency trading, which was frozen, as well as lending between banks faltered. Many commercial banks reported that they could not provide foreign currency loans. While there has been substantial growth rate of the forint and foreign debt traders were very extreme positions. (Bod et al , 2009).

The effects of the crisis quickly became palpable among the companies. The most significant and immediate effects were: the domestic and export sales drop and this created a serious financing problem. The supplier and customer stock levels increased significantly, the gridlock, the supplier prices increased, and the banks continued to tighten their credit conditions. In addition, as the households, the majority of companies have taken out a loan in foreign currency, and the repayment in local currency had strengthened the deteriorated liquidity situation.

The crisis also had similar effects in Romania too. Because of the major decline in sales, massive layoffs have been taken (especially in 2009). It was a hard blow to the country the almost complete freezing of the real estate market and an unprecedented decline in real estate prices.

A result of these factors, many companies have been in a hopeless situation, winding up has been carried out, or become insolvent. Since the beginning of the crisis, this process is still going on, still shows an increasing trend of enterprises erasure statistics.

In Hungary (according to the analysis of business information provider Bisnode), the number of forced removals, which had been introduced in 2012, increased significantly in 2013 , which affected more than 4 percent of the companies. From this, in 2013 nearly 2.5 % of the companies became insolvent. The construction industry is the most risky one in Hungary. The default rate of the sector is much higher than average, and almost reaches the value of 4.5 percent. Other risky sectors are even the accommodation and restaurant services , wood processing , mining and trade. In insolvency terms Jasz – Nagykun-Szolnok, Zala and Szabolcs -Szatmár -Bereg county counts are the most risky (Szabó Brigitta, Népszabadság, 22 January 2014th). .

In the past years, approximately 30 thousand companies in Romania had became insolvent , 10.4 percent more than in 2012, a third of them are commercially active (since the onset of the economic crisis, about 130 companies have came to this position). Most firms thought that situation were in Bucharest: 3,759 (5.44 per cent more than in 2012), followed by Bihar county 1,826 companies (39.5 per cent more than in 2012), Galati county company in 1509 (18 percent increase in). As in previous years, the commercially active firms were still the ones in the most financially difficult situations, 10,436 of them became insolvent in 2013, while in 2012 the number was 9,329. Active in the field of construction companies follow the line and the hotel and catering companies in the manufacturing industry (Népújság, January 2014th 21).

2. Examination of financial and liquidity situations of the companies

2.1. Working capital management
In this economic context, it is imperative that companies (regardless of their field of activity or size) on a daily basis are aware of their own and their partner's financial situation. As a consequence of the economic crisis, significantly impaired access to external sources of financing, and lenders had become much more cautious. This meant that the more thoroughly analyze the sources of external financing insurance claimants, and also need to be more aware of their position, to be well informed to submit loan applications to financial institutions (Fenyves, Tarnóczi, 2011).

The first sign of the financing problems appears in the current assets; therefore, an appropriate working capital management is essential for today's enterprises. The working capital actually represents current assets of the company, the funds, inventories, receivables and instruments, that is, the means by which it intends to use the company within a year.

Important indicators related to the working capital management is the net working capital, which can be determined as the difference between the company's current assets and short -term liabilities, that is, the current assets of the part that is not tied up in short-term obligations. The net working capital can be understood like the essence of working capital netting. We can say also that the net working capital is essentially the portion of current assets, which is financed by long -term financial instruments or equity, that is, long-term source. If the working capital and net working capital interpreted as specified above, then the working capital management of the company include the financing and management of current asset, and monitoring of short -term liabilities. Net working capital determined the flexibility of enterprise's financing policy. A company can conduct flexible financing policy, if the net working capital is positive. The decrease in financial flexibility and elasticity can project insolvency (Fenyves, Tarnóczi, 2011).

Management of working capital is closely related to liquidity management. Under the liquidity, we understand the company's ability to perform payment obligations in timely manner. Horcher (2005) determined the concept of liquidity, in the financial capacity of the company to understand and to be able to pay the short-term obligations. In his opinion, the company is then faced with liquidity risk when liquid funds are not sufficient to achieve the daily activities. This situation has affected the company's ability to grow (Horcher, 2005).

The liquidity management, that is, the ability to pay ongoing maintenance is a key area of corporate governance, as short -term; the company guarantees the existence and the sole basis for the long-term development. Loss of liquidity could lead to the company's losses. (Chorafas, 2002)

2.2. Liquidity ratios
Analyze the liquidity situation of the business has several options. Different indicators and methods are available to us, which have to be used with great caution and the results obtained should be interpreted with aggregate. The most common methods include traditional liquidity measures counting.

Table 1: Traditional liquidity ratios

General liquidity	Quick liquidity ratio	Cash-wide liquidity
$\dfrac{\text{Working capital}}{\text{Short term obligations}}$	$\dfrac{\text{Working capital – Stocks}}{\text{Short term obligations}}$	$\dfrac{\text{Funds + Receivables}}{\text{Short term obligations}}$

Source: Fenyves, Tarnóczi (2011)

National (Pálinkó, É. and Szabó, M. 2006; Horváth Zs. 2011) and the international literature is divided about acceptable values of the indicators, but is general, the following applies:

a) general liquidity: 1,5-1,8

b) quick liquidity ratio: at least 1

c) cash liquidity level: for this index will rarely find value, but has been said that 0.25 to 0.3 to be admissible.

We can see that if we take the lower limit of the first interval, it means that current assets should be financed at least 30 % of long-term supply. From all this it also follows that the net working capital can be interpreted as a liquidity measure, so, if the net working capital is inadequate, the company is in insolvency risk.

A positive net working capital can be interpreted that the company will probably be able to meet all of the financial assets during the year, or ability to pay. However, this is not necessarily true - as net working capital - as a general indicator of liquidity - not accurately determine the liquidity that it is only money and short-term investments (securities) is really liquid assets. The high net working capital may come from very high demands on staff investment (late payment or non - payment by the customer) and / or for a high stock level as well. It is evident that great care must be taken in interpreting the indicators of liquidity. The change in net working capital is not determined only by the current assets and current liabilities changes; but the equity and long -term liabilities, changes in non-current assets as well (Fenyves, Tarnóczi, 2011).

2.3. Foreign capital, risk

The financial situation of the company, of course is influenced not only by the composition and the management of working capital, but also by the evolution of the organization's revenue, by the capital structure (capital strength), the degree of indebtedness, the income position, efficiency, etc. All this testing is essential for assessing a fair and true financial situation. In heavier periods, or one investment implementation plan, companies are using foreign capital, bridging the shortfall needed money or taking advantage of opportunities, implement investments, hoping for a more profitable future. However, this risk is undertaken.

The finance risk is usually included with the chance and the danger. This means that if the economic environment is favorable, it allows you to achieve better results, but if the economic environment turns the wrong way, it can happen that a worse outcome can occur. This means that in order to achieve better results, companies have to take the risk. The management task is to find the optimal risk-taking level, that is not to give up on some of the income to, but keep it on a manageable level, the potential loss could occurring. You need to constantly monitor the status of the business (Tarnóczi, Fenyves, 2010).

The present study is a continuation of a previous article (Zsidó, 2014), in which the evaluation of liquidity situation of commercial companies in Hungary and Romania was based on the traditional liquidity ratios.

This study now extends and analyzed for 30 pieces of commercial activities companies in Hungary (Northern Plain Region) and 30 pieces of Romania (North Western Region), the financial and liquidity situation for the last three years (2010, 2011 and 2012) by analyzing the net working capital, working capital structure, debt levels and profitability.

3. Database features, methods of analysis used

According to the dates from the Central Statistical Office in Hungary (Központi Statisztikai Hivatal) and the National Bureau of Statistics in Romania (Institutul National de Statistica), I have analyzed the distribution companies from the scope of activity of both regions. It turns out that in both cases the vast majority of businesses engaged in commercial activities (Northern Hungary - more than 26 %, Northern Romania region 30 % of the companies).

The preparation and the analysis were made on the basis of the data delivered by the commercial business accounts data.

In Hungary, the companie's e-report were available at the Ministry of Public Administration and Justice and Company Information Service (Közigazgatási és Igazságügyi Minisztérium Céginformációs Szolgálata) website (http://e-beszamolo.kim.gov.hu/kereses-Default.aspx) and Opten Ltd website (http://www.opten.uk).

For Romania, the data were downloaded from the Ministry of Finance (Ministerul Finantelor) website (http://www.mfinante.ro/pjuridice.html?pagina=domenii), and as well as other database (www.listafirme.ro) worked. The database contains data from three financial years: 2010, 2011 and 2012th

The study, therefore, the Hungarians, the Romanians as NACE's (Standard Industrial Classification of Economic Activities) corresponding G - Wholesale and retail trade (45 -, 46 -, 47) undertakings engaged in activities. FILTER pre- determined some conditions, such as revenue size (corresponding to 350 thousand Euro value), the number (at least 9 people) of employees (Zsidó, 2014)

4. The results of the research

The two regions from 30 to 30 units, commercial enterprises randomly selected financial and liquidity position of the 2010, 2011 and 2012 financial years are shown in the following situation:

The importance of working capital in view of the first step, I examined the net working capital of the companies. We know that for a flexible financing policy implementation, the net working capital must be at least positive. The negative net working capital already signals financial problems.

Table 2: Negative net working capital ratio among the studied companies

	Hungary companies	Romanian companies
2010	33%	33%
2011	30%	33%
2012	26%	26%

Source: own calculations

In the years 2010-2011 more than 30% of the Hungarian and the Romanian companies had negative net working capital, which is already projected to serious financial problems. The negative net working capital ratio of 30 to 30 among examined companies in 2012 showed an improvement in both countries (regions).

Looking at the ratio of liquid assets (liquid assets ratio = Net working capital / Total assets * 100), we can see also an improving trend (Table 3.):

Table 3: The ratio of liquid assets ratio among companies in Hungary

	Hungarian companies		
	2012	2011	2010
≤10%	54%	54%	56%
10-30%	16%	13%	27%
30% ≥	30%	33%	17%
Total	100%	100%	100%

Source: own calculations

Table 4: The ratio of liquid assets ratio among companies in Romania

	Romanian companies		
	2012	2011	2010
≤10%	34%	40%	50%
10-30%	23%	27%	13%
30% ≥	43%	33%	37%
Total	100%	100%	100%

Source: own calculations

The liquid asset ratio shows the proportion of cash that serves the maintenance of liquidity, that is, which is paid to the urgent payment obligations. The liquid portion includes any device which can be made almost immediately in cash or with cash.

In this respect, we can observe a faster and better improvement in the case of Romania: until 2010, the liquid assets share is not less than 10 % for more than half of the examined enterprises of both countries; in 2012, 34% of the Romanian companies remained in this level, while the Hungarian enterprises remained at the 2010 level. Good as well as the multi- asset ratio of 30%, which 30 % of the Hungarian companies and 43% of Romanian companies reached in 2012.

In addition to the above indicators, it is indispensable to calculate the traditional indicators which provide essential liquidity, even these more tangible and perhaps more concrete picture of the liquidity position of firms.

Looking at the liquidity position of enterprises in the two regions, with the traditional liquidity indicators, really great, outstanding differences cannot be detected: the Romanian companies show a slightly better liquidity situation. About 60% of Hungarian companies are "at risk" level (it was in the period 2010-2012), the Romanian companies are around 40% to be said the same. About 20% of Hungarian companies and about 30% of Romanian companies were at an acceptable level. And good solvency situation we can talk about the investigated enterprises 20% and 30% (Zsidó, 2014)

According to the study made with traditional liquidity indicators (general liquidity and quick liquidity ratio) the liquidity position of commercial enterprises, shown the No. 1 . Figure:
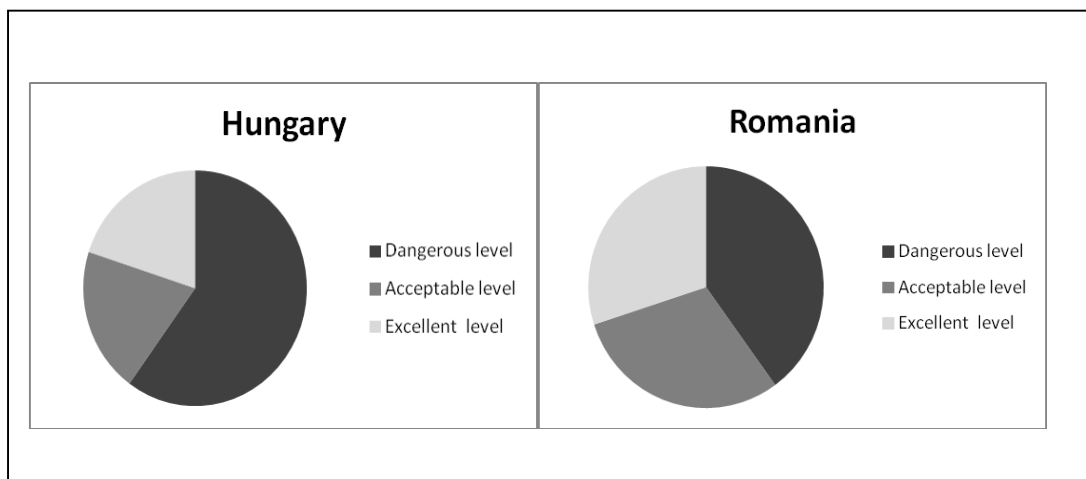
Figure 1: Companies liquidity situation based on the General liquidity and the Quick liquidity ratio analysis
Source: own editing

The financial and liquidity situation and the liquidity problems are directly affected by the debt level. The indebtedness level is reflected, in the No. 5. Table:

Table 5: Hungarian and Romanian companies indebtedness level

	Hungarian companies			Romanian companies		
Indebtedness level	2010	2011	2012	2010	2011	2012
0 – 20%	3%	3%	7%	0%	3%	3%
20% - 60%	47%	57%	53%	33%	37%	40%
60% - 70%	17%	17%	17%	30%	17%	10%
70% -	33%	23%	23%	37%	43%	47%
Total	100%	100%	100%	100%	100%	100%

Source: own calculations

An interesting situation shows the company's debt analysis: examining the values of the debt in three years of business, it is clear that the half of the Hungarian companies remained at an acceptable level, while the Romanian companies only approx. 30 % of all, were on acceptable level. The Romanian company's debt level is much more critical.
Despite this, the traditional liquidity ratios of the Romanian companies are better. Higher debt level, but it helps the liquidity situation. The question is how far this situation could and should be maintained. Risk -taking is almost essential for development, but there are rational limits, terms and conditions. First, the external financing used must lead to greater profitability.
Investigating the income situation of enterprises in terms of absolute income (profit or

974

loss) of the period from 2010 to 2012, 90 % of enterprises in both regions ended the fiscal year with positive profit before tax (profit).
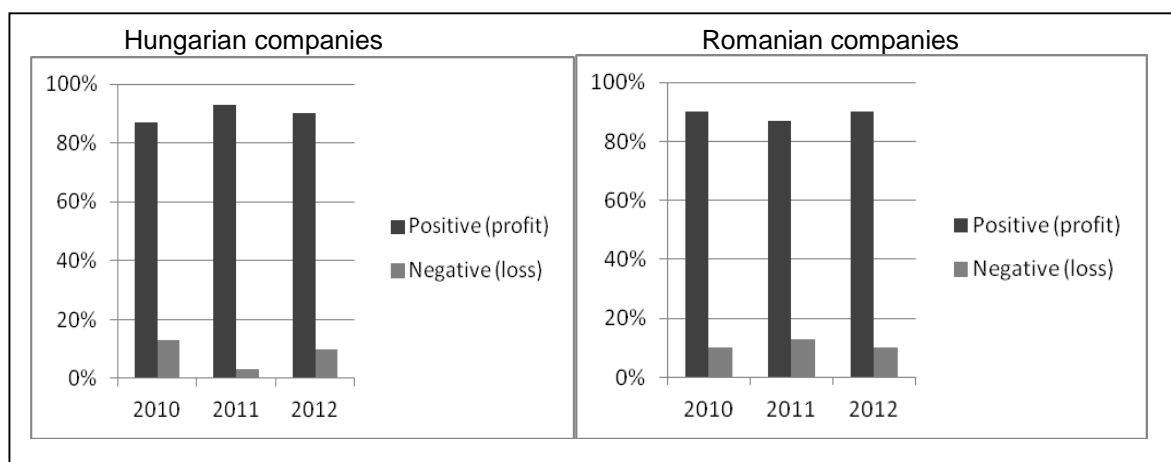
Figure 2:: Pre-tax profit situation for Hungarian and Romanian companies
Source: own editing

Of course, in itself a positive result does not necessarily mean good and stable income situation. A positive result means that the revenues of the company covered the cost. It's just enough to survive. The more important question is the net income profitability (net income profitability = result before tax / Income), so that the result is what% of revenue. The future development and competitiveness, income-generating capacity of the company will depend on the outcome to be invested. In this respect, the test 30-30 commercial enterprise net income profitability is illustrated in Figure 3:
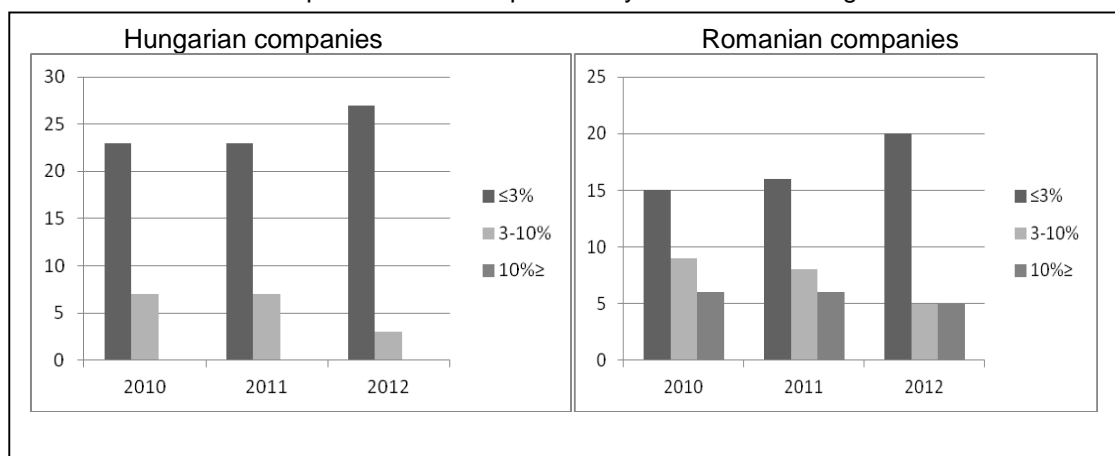
Figure 3: Net income profitability of Hungarian and Romanian companies in t he 2010-2012 period
Source: own editing

Profit before taxation is not very encouraging; the majority of the undertakings of the revenue situation is less than 3%. So what the No. 2. Figure seen that 90% of the

examined enterprises are profitable, the rather misleading. Not even one of the Hungarian companies net income profitability did not exceed the 10%. In all three years, the Romanian companies studied are approx. 5-6 who reached more than 10% of the index value.

5. Summary

Threatening liquidity ratios, high debt levels, low-margin ... not surprising under these circumstances the lot of number and still growing trend in discontinued companies.

In my view, the situation shows an alarming picture, despite the fact that these indicators should be interpreted with caution. In many cases, the liquidity problems stem from the fact that the period of recovery of the assets exceeds the maturity of the liabilities. This should be better coordinated, and should take the cash sales are more attractive to businesses of different instruments. Instruments such as discounts, transportation costs, the assumption of a specific package of goods sold free of other products, faster service, etc.. Should the other side, the vendor payment deadlines pushed out is encouraged.

To solve - to some extent - the general manifested liquidity problems, in both countries has been introduced the so-called cash-flow VAT, which is to be paid VAT on the sale, shall be paid only after the added tax revenue credited to the state budget. Of course, tax deductible on purchases can only be enforced if the acquisitions were offset against the value of the firm.

In practice, the companies often resort to barter transactions. These deals will help the continued functioning of the trade, despite the incomplete financial situations (Zsidó,2014).

The situation did not improve in -house simple, long, persistent and responsible work is only available in. A well- planned and sustainable central government help to consolidate, could make it more competitive for businesses. In this regard, welcomed available in Hungary, launched by the National Bank Growth Loan Program, which provides investments, working capital financing, etc. (http://www.mnb.hu/Monetaris_politika/novekedesi_hitelprogram).

Another indirect support, confidence would recover. Distrust of the entire national economy: it among the population, as the business circles. There is no trust against the nation's economic programs, not against the European Union's economic and social - economic programs either. As long as neither the public nor businesses see a way out of this situation in the near future, doubt, fear leaves its mark on the business activities. The success of entrepreneurial activity is highly dependent on the risk-taking. But in an uncertain environment and distrustful, who are those who take risks? And at what cost? And everyone on your skin?

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SECTION: MANAGEMENT, MARKETING, ECONOMIC INFORMATICS AND CYBERNETICS

SUB-SECTIONS: MARKETING I, II, ECONOMIC INFORMATICS AND CYBERNETICS

POSITIONING STRATEGIES DEVELOPMENT

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Abstract: *The positioning strategy has suffered serious changes in the last few decades, being influenced by the rapid development of competition and the growing focus on specific traits belonging to the market, to the consumer or to the product. The purpose of this paper is to present the developments of theoretical positioning strategies and the orientation from more simple, product oriented strategies, to ones more oriented towards the client and with a briefer period of time. The world is moving in a much faster pace than in the past, thanks to communication development so companies are obliged to adopt more specific strategies in order for them to be effective. This essay represents a literary review presenting a documentary research within the scientific articles and strategy and positioning books. The paper begins with the analysis of company strategies and the marketing strategies in general. The first author to group the product positioning strategies is Porter with his three generic strategies. Following the development of brands and because of the lack of competitiveness in the simple generic positioning strategies, this paper has also presented the newer positioning strategies proposed by Kotler, Treacy & Wiersema, and also more complex ones such as Bowman's Strategy Clock and Blankson and Kalafatis positioning strategy based on the type of the consumer. The fast expansion of local brands in all categories has led to mistakes in positioning strategies, categories also presented in the current essay. The results of this study show that new positioning strategies are more and more based on the consumer and market segments and on the product specification - which have also evolved in the last decades. Adaptability to fast changes in the competitive market will represent the future positioning strategies.*

Keywords: positioning strategy, positioning, brand strategy, market positioning

JEL classification: M31

1. Introduction

To succeed an optimum positioning on different markets, whether they are geographic, demographic, social or economic, in theory there are several strategies that can be adopted in the positioning policy of a brand. These strategies are adopted according to the objective of the company.

In achieving a strategic planning model, it begins with the first step, to specify a basic framework from which actions will be taken. The most approaches for measuring the strategic planning arise from a "global strategy" or a complex and long-term strategy, versus "incremental perspectives", strategy that grows together with the development of the company. In this respect, researchers developed indicators that analyze how close is the strategy adopted by the company, and by the companies in general, compared to strategy plan from the literature. Boyd et al (1998) shared the common planning model in four steps: specifying goals, strategy generation, strategy evaluation, and results monitoring. (Boyd & Reuning-Elliott, 1998).

In his article Cespedes et al (1996) mentions the importance of achieving a shorter term strategy and its strong influence of a shorter "window of opportunity" due to global competition, rapid development and distribution of technology and information systems now manage to copy with greater ease and speed any successful strategy. Thus, we can say that the competitive advantage is increasingly relying on companies' ability to

effectively achieve and track a series of strategic initiatives, applicable to the company also on the short and highly limited term (Cespedes & Piercy, 1996). Stalk and Hout (1990) mentioned that this strategy generates the increase of the opportunity cost of the company because the strategies based on a short and limited term position the company in a position of advantage over the competition, but the implementation of such strategies can increase costs compared to normal strategies adopted and not related to a limited term (Stalk & Hout, 1990).

The formulation and implementation of term became, therefore, more limited than before and already pronounced involvement is required from the management team to receive the approval to implement the strategy and to establish deadlines for this. In many situations the executive team, whether it is the marketing department or the sales or management department, is different from strategy formulation team, consisting usually of the management team, and, in our case, of the marketing department.

Cespedes et al have analyzed the link between strategy formulation and implementation in terms of the life of the products and their life cycles became lower. The mismatch between strategy formulation and implementation can lead to the loss of the advantage to be the first or the advantage to be the pioneer in the industry. Therefore the organizational and managerial separation of the formulation and of the execution of the marketing strategy has to be made. So each team will have a clear set of processes that have to go and deadlines that have to be respected. It has to be always followed the "formulation-implementation dichotomy" and efforts has to be made to reduce or eliminate it, thus achieving effective results in the implementation the company marketing. (Cespedes & Piercy, 1996).

2. The generic strategy

The basic theory in economics and marketing on the strategy is given by professor Michael Porter, which, in his publication Competitive Strategy in 1980, initiated the era of the three generic strategies in a company. Through these three generic strategies is presented how an organization can reach its customers compared to the competitors. These three main groups of strategies are: cost-rule strategy, differentiation strategy and focus strategy (Porter, 1980).
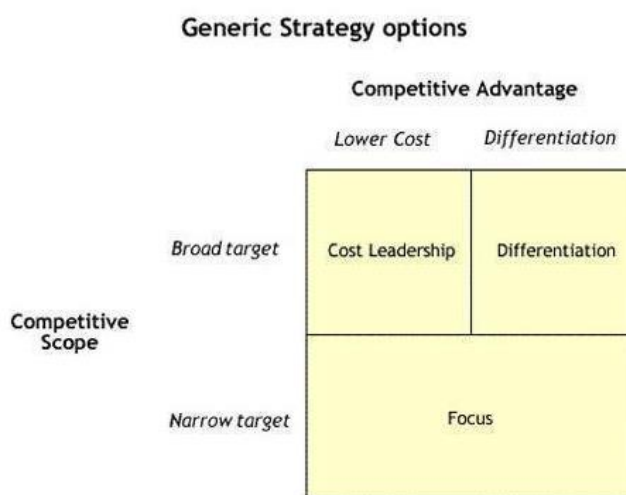
Figure 1: The three generic strategies of Porter
Source: (Porter, 1980, p. 11)

Meanwhile new theories have emerged that develop the basic concept of Porter related to the strategies that can be adopted by a company. Danny Miller explained in his article how adopting only of the generic strategies may damage the competitiveness of the company and how they may be affected due to the adoption of a strategy with many "key gaps". "With all the praise given to the concentration strategy, granting too much attention to the little things can be disastrous for the company. Most products have to satisfy an important market in many ways: with quality, reliability, style, innovation, comfort, service and price". (Miller, 1992, p. 39) If not all the important needs of clients are fulfilled, listed earlier, they will be expelled.

Another danger mentioned in Miller's work is the danger of imitation of the specialized strategies by the competitors. Not the same thing can be said about the mixed strategies. It is much easier to apply and copy strategies that are either of high quality or low price, while other factors are not taken into account. The companies that adopt such strategies are in big disadvantage compared to those who adopt mixed strategies in a way that they are adapted for them and thus become more efficient. The most successful strategies and those that can be copied by competitors in the hardest way are those who adopt and capitalize in the strategy the organizational abilities of several departments within the company: marketing, production, design, distribution and acquisitions. (Miller, 1992) These combined strategies not only provide a protection against the copy of the strategy by the rivals, but are also those most successful for the companies.

In his book Mazzucato (2002) explains how a valuable position in the market will attract competitors to copy the strategy used and the imitation of the strategy can be achieved in two ways:

- The first way is the "Cloning": the competitor positions itself so that has an exactly similar strategy
- The second way is the "Riding": the competitor tries to match the benefits of a successful position while maintaining its existing position. It adds new features, services or technologies to the already performed activities (Mazzucato, 2002)

The adoption of the supremacy strategy by costs is effective when consumers and the target market is very price sensitive and can increase the leadership advantage of the cost through economies of scale, new technologies or unique access to cheap materials and distribution channels. (Miller, 1992)

Also the adoption of the pure differentiation strategy can be applied only when it there is a very insensible market regarding prices, the situations which is valid in the domain of ultra-premium products - watches, cars, luxury houses. This is a pretty narrow target audience and to be able to sell in these markets requires huge investments.

The supremacy strategy by costs is very difficult to achieve. This is even more difficult in the case of emerging countries. We can even take the example of Baak and Boggs in the case of McDonalds when the company accessed the Chinese market for the first time. McDonald's restaurants in the United States and other developed countries focus on the speed of services (distribution economy) and on the supremacy by costs. In China, moreover, McDonald's found that customers were attracted by "clean environment, pleasant ambiance and polite staff", more exactly, the high quality services offered by McDonald's. (Baack & Boggs, 2008, p. 134)

Baak and Boggs (2008) analyzed the reasons why local companies from emerging countries cover consumer needs through locally manufactured products at a lower price than the   profit-oriented multinationals. The main reasons resulting from the article are: the consumers' demand, production and/ or distribution economies, preferential access to distribution or manufacturing channels, intellectual property risk, management

focus on cost control and employee productivity, unstable environment, positive unique features. (Baack & Boggs, 2008)

In situations other than those listed above, it is recommended the use of mixed strategies. Danny Miller (1992) recommends these six scenarios (Miller, 1992):

• When consumers are concerned of more characteristics of a product, such as price, quality, ease of use, design and features. These products are usually produced on long-term use such as furniture, home appliances and also short-term products such as packaged food and alcoholic and soft drinks.

- "When competitors can easily imitate pure strategies (eg.: when entry barriers are low, scale economies or learning economies are minimal and the protection of intellectual property are reduced)". (Miller, 1992, p. 40)
- When there is conflict between the achievement of different issues related to strategy and the achievement of a superior quality or of an attractive product at a lower price.
- When consumer preferences and competitors' offers require a wider range of applications and features - this situation applies in more complex industries (eg. technical) and when consumer demands are growing rapidly. This is applicable in the computer industry, the information technology industry and industries available for the public.
- When the company has become too narrowly focused around a single aspect of the strategy and requires greater openness and heterogeneity to remove stagnation (eg. Caterpillar company has diversified both products, services and providers in order to enter on new market segments) (Mylant, 2012) (Min, 2009).
- When the market is mature enough and the differentiation through innovative products or business processes is difficult. In these cases it is easier to differentiate yourself by completely different features than those practiced at the market. (Miller, 1992)

Mazzucato (2002) explains in his book that a sustainable strategic position on the market requires compromises. Choosing a unique position is not sufficient if a company follows a sustainable advantage. Compromises occur when activities are incompatible. Pure and Simple, a compromise means that more than one thing requires less than another. (Mazzucato, 2002).

The period of time that last a positioning strategy should also be taken into account by the marketing department. Mazzucato explains such a strategic position should have a horizon of a decade or more. The continuity favors the improvement of individual activities and fit on activities that allow the organization to build unique capabilities and skills tailored to the company's strategy. The continuity also reinforces the identity of a company. Also a reason for the continuity of the strategy is that frequent changes in position are costly. In these cases the company has to change both individual activities and the realignment of the entire system. Frequent changes in the positioning strategy or not choosing a different positioning right from the beginning inevitably leads to choosing a strategy of unconscious imitation on the whole line and with organizational dissonance. (Mazzucato, 2002)

It was very popular to achieve competitive advantage through lower prices or through offering more perceived value. For many business owners, however, these strategies were too general, and they wanted something with different value and price combinations in more detail.

3. New Positioning strategies

Kotler et al. (1999) presented a series of strategies through which marketing departments adopt these to influence consumers' perception of their products:

• Positioning based on the product attributes: usually this positioning is available at technical products and with complex attributes. (eg.: Duracell batteries that last longer than other batteries; a clear example can be seen on cars - BMW sometimes promotes only certain attributes, whether it is the indoor air conditioning of the stability of the car)
• Positioning based on benefits or needs they satisfy (eg.: Ariel offers the benefit to clean the dirtiest clothes thanks to the micro cleaning system from the product; Colgate provides the protection against cavities and gives a fresh breath)
• Positioning based on usage. This strategy creates a situation or an image that suggests the time when the brand has to be consumed. A very clear example is the advertisement for Kit Kat, with the motto: "Have a break, have a Kit Kat!" Also a strong brand that uses this positioning strategy is Red Bull, which is consumed before practicing sports to provide energy.

Figure 2: Kitkat commercial
Source: http://tech2notify.in/nokia-mocks-about-android-4-4-kitkat-samsung-in-twitter/.

• Position according to the user ("Johnson & Johnson has increased its market share from 3% to 14% just by the repositioning towards a new category of users, not just children, as it was before, but also towards adults who frequently wash themselves and need a gentle shampoo") (Kotler, Armstrong, John, & Wong, 1999, p. 452)
• Positioning based on activity, used primarily to sell expensive products, like Rolex is the official sponsor of the golf events.
• Positioning based on personality. The best known example is the Marlboro brand and the strong male character, the American cowboy. American Express is also associated with the image of the businessmen.
• Positioning based on origin. In this case the association is made with the country of origin of the brand and where it is produced. A clear example we can see in the case of the car manufacturer Opel - *Wir lieben autos*, indicating the German origin of the brand.

Figure 3: Opel commercial
Source: http://2013-geneva-motor-show.blogspot.ro/2013/02/opel-logo.html.

• Positioning based on another brand. An example here is the campaign conducted by Volkswagen at the acquisition of the Skoda brand. Text of the campaign was: "Volkswagen was so impressed that he bought the company". (Kotler, Armstrong, John & Wong, 1999, p. 453). Thus Skoda won the same confidence that Volkswagen had had before, the dealers reported sales growth of 50 %.
• Positioning based on the competition. This may be of two kinds. The positioning can be:

Figure 4: Whopper commercial
Source: … http://www.thedrum.com/news/2013/03/01/chip-shop-awards-ad-week-what-whopper-horse-it…….

- ■ Similar with the competition, and with quite better ones. In the first category are most brands which are positioned based on the competition. It is famous the situation in the food industry of hamburger brands - campaigns between the Hamburger from McDonald's or the Whopper from Burger King. Whopper promotes in the image below that is 100% from beef.

- ■ Differing from the competition. Also here it is famous the situation of the soft drink Sprite that came to be the third place according to market share positioning itself at: "The Uncola" (The soft drink that is not cola) (Boyd, Walker, & Larroche, 1998, p. 448)

Boyd et al. (1998) proposed in his book seven marketing strategies that are available in most cases of products and brands on the market:
1. Mono-segment type positioning (positioning on one market segment)
2. Multi-segment type positioning (positioning of attracting consumers from more market segments)
3. Waiting positioning (is used to minimize respond time switching from multi-segment to mono-segment positioning)
4. Imitation positioning (positioning similarly and depending on another successful brand on the market).
5. Anticipation positioning (positioning the brand in anticipation or expectation the evolution of needs of a market segment)
6. Adaptive positioning (the brand is repositioned periodically to be in trend with the market evolution and the needs of the watched segment)
7. Defensive positioning (introducing additional brand in the same position for the same segment to defend itself against competitors) (Boyd, Walker, & Larroche, 1998)

Michael Treace and Fred Wiersema (1993) conducted an empirical research through which they have identified market segments and that in any sector there are three branches, which they called value disciplines.
The three value disciplines are: operational excellence, product leadership and strong relationship between the consumer and the company.

• operational excellence - consumers seeking for outstanding performance of the product purchased and not necessarily seeking new or innovative products, just very good performance and with an easy and convenient delivery.
• product leadership - consumers in this product category seeking to be the most advanced in terms of technology and innovation
• strong relationship between consumer and enterprise - consumers in this category are largely interested about the relationship with the supplier of the product, its flexibility and availability in delivery and after-sales services (Treacy & Wiersema, 1993).

Bowman face legatura intre teoria lui Porter si cea a lui Treacy si Wiersema prin faptul că "excelenta operationala" se aseamănă foarte tare cu strategia de cost redus a ui Porter. Acesta de asemenea mentioneaza ca Treacy și Wiersema sunt mai țintiți asupra unui tip de segment prin a deveni "lider de produs", proces lrealizat prin inovare și "relația strânsă cu clientul" prin differentierea fata de concurență cu servicii impecabile.

Bowman associates Porter's and Treacy and Wiersema's theories through the fact that "operational excellence" strategy resembles greatly Porter's low cost strategy. He also mentions that Treacy and Wiersema target the "leading product" as a process of innovation and the "close relationship with the client" by differentiating from competition with impeccable service.

Bowman creates a positioning strategy of his own called the "Bowman's strategy clock" based on the principle of achieving competitive advantage by providing customers with what they want, or need, better or more effectively than competitors.
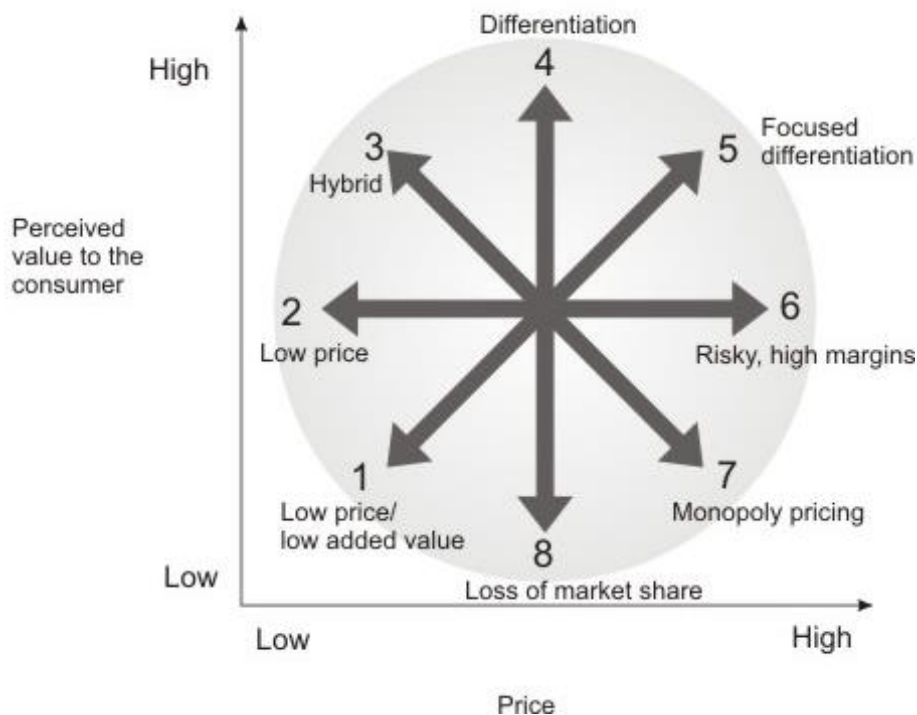
Figure 5: Bowman's strategy clock
Source: (Bowman & Faulkner, 1997)

Positions on the "strategy clock" represent different positions in the market where customers have different requirements in terms of (perceived) value and (monetary) cost considerations. Competitive advantage is achieved through the following positions:

- Positioning 1: Low price, low value added. It is a category in which companies prefer not to position themselves, dominated mainly by products that differ very little one from another. Also here the price is low and the only method by which efficiency can be achieved is by increasing the volumes and the number of new customers. In this category differentiation cannot be achieved, the goal is to reach the customer by any other method than the product features or price (eg.: higher numbers can be reached by a bigger distribution and a strong sales team)
- Positioning 2: Low price. It is a category in which the company relies on the fact that the price sensitivity of the consumer is the most important. This positioning is a difficult for the company because it consists in small margins, high risks of not recovering the costs and unloyal consumers. Also here profits can be achieved only with large volumes and scale economies.
- Positioning 3: Hybrid. Moderately price, high added value. Companies in this category provide high perceived value at a low price compared to the competition. An example of such positioning can be observed when at the discount-type stores, where the products are of medium and high quality, but at lower prices. The relationship between the perceived value and price is seen by the consumer as being correct. In this type of positioning many loyal customers are gained.
- Positioning 4. Differentiation. This positioning provides high quality products and differentiated in a way that the consumer perceives a high added value of the product. In terms of price policy, it can be of two types. In the first situation is a high price is practiced, and customers will consider the price as being in accordance with the offered quality. The second situation is where an average normal price is practiced. In this case the company benefits from the increased market share.
- Positioning 5. Focused differentiation. It offers a very high perceived value for a distinct segment. Of course, meanwhile high prices are practiced, with high margins. Usually this practice is used in the case of ultra-premium products. Some examples of brands using this positioning are: Rolex, Armani, Rolls Royce.
- Positioning 6. High price/ standard added value. This positioning can be practiced by companies only when competition does not take measures in the short term and if it is accepted by the competitors. It is a very profitable category for companies but it is also risky and can lead to loss of a large market share. Usually the adoption of this strategy lasts on a relatively short time, on a normal and competitive market, no to lose the consumers of the product.
- Positioning 7: High price/ low added value. This strategy only works in the case of monopoly. It is impossible to adopt this strategy in a free and competitive market.
- Positioning 8: low value/ standard price. This strategy leads directly to the loss of market share. Products with low perceived added value, and without being differentiated, cannot compete at the market only by the price. If neither the price is right the consumer will not buy the proposed product.

Positionings 6, 7 and 8 are not valid options on competitive markets. The consumer will never choose a product on a free market that gives added value below the paid price.

Blankson and Kalafatis (2001) conducted the first empirical research on the types of positioning based on the typology of consumer or client. They propose eight types of generic factors and strategies to be adopted regarding positioning:

1. Top of the range: upper class, top of the range, prestigious, posh
2. Service: impressive service, personal attention, considers important, friendly people
3. Value for money: reasonable price, value for money, accessibility
4. Reliability: durability, warranty, safety, reliability
5. Attractiveness : aesthetics, attractiveness , elegance
6. Country of origin: patriotism , country of origin
7. Trademark Name: offer name, market leaders, extra features, options, wide range
8. Selectivity: discriminatory, unselective, high principles (Blankson & Kalafatis, 2001)

In business to business marketing, Blankson and Kalafatis have also identified that strategic positioning is much more influenced by other factors than the ones above. They have proposed that competitive position can be achieved with the help of operational (geographical coverage) and experimental (product use) factors to the detriment of the promotion activities. (Blankson & Kalafatis, 2001)

Ries and Trout, the founders of the positioning theory have identified as positioning strategies based on the company's stand in the market in comparison with its competitors. The positions identified are:
1) Market leader
2) Follower
3) Reposition the competition
4) Use the name
5) Line extension (Ries & Trout, 1976)
At the same time Ries and Trout have identified where companies fail to correctly present their advantages due to three main mistakes in their product positioning strategy:
"**1** *Confused positioning*, where buyers are unsure of what the organization stands for (refer to the comments below about Gap's misjudgement of the market in 2001)
2 *Over-positioning*, where consumers perceive the organization's products as being expensive and fail to recognize the full breadth and value of the range
3 *Under-positioning*, where the message is simply too vague and consumers have little real idea of what the organization stands for or how it differs from the competition." (Wilson & Gilligan, 2005, p. 356)

4.Conclusions

The market environment has changed a lot since 1980, when Porter has introduced his generic strategies, international brands becoming stronger and competition becoming much more fierce. Development of communication and globalization have liberalized many new markets and have made it easier for companies to enter the industry. Another factor brought by development of communication is the length of strategies. These have become feasible for a shorter period due to the rapid advancements in competition.
To improve this approach new theories of positioning strategies have emerged to better adapt to consumer needs.
On one hand Kotler, Michael Treace and Fred Wiersema, Bowman have adopted product oriented positioning strategies. Kotler followed a product and atributes strategy orientation. Michael Treace and Fred Wiersema (1993) proposed the three value disciplines and Bowman suggested the value strategy clock. On the other hand Boyd, Blankson and Kalafatis, Ries and Trout adopted a market segmentation strategy, based on the products positioning compared to the competition.

The future of positioning strategies will remain based on the above presented theories, but will be more and more based on the consumer segments and will have a shorter time effectiveness. With the development of globalization and communication positioning strategy will have as a decisive factor the adaptability.

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IDENTIFYING PRODUCT AND PRICE STRATEGIES FOR DESIGNING TRANSACTIONAL BANKING PACKAGES ADDRESSED TO SMES (CONSIDERATIONS)

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Abstract: *The current paper has the aim to provide guidelines for designing efficient product and price strategies, through proposed business cases which could be used especially for banking products addressed to SMEs. While identifying the optimal product and price strategy and designing the product catalogue structure, the marketing specialist should definitely consider existing portfolio behaviour and estimate the growing potential (if possible, overall portfolio, with focus on accurately defining the additional impact of the newly proposed product/ products). A business case contains estimations for results to be generated by products to be launched or optimized. This paper presents complex schemes for business case scenarios for migration of existing portfolio to the new products, but also considers new clients acquisition based on important features of the products. The pricing strategy is not a simple task to manage. Especially when speaking about transactional packages (for which the price is lower than separate services included), some segments or clusters may generate loss to the bank if they already used the services at a higher price than the one of the package. Therefore, the decision of setting up specific prices needs to be based on an accurate and complex analysis, as presented in current paper. The assumptions used in a business case need to be relevant for the entire process of designing and launching a product, therefore they can always be adjusted for better calculation of the impact. No matter if the assumptions and prices remain as in the initial proposal or not, the steps to be followed are the same. Segmentation also plays an important role in designing the product strategy, since the target for a product or product catalogue can be represented by a segment, a sub segment or a cluster of many segments. Not always the initial segmentation represents the clustering for the product strategy. Sometimes, behaviour of existing clients represents the starting point for clustering of a market target for products. In case of SMEs acquiring banking products, another relevant aspect to consider is the turnover through the bank, incoming and outgoing. It consists in the business routed to the bank as incoming payments and out the bank, through transactions made. The turnover is directly influenced by the value proposition of the new packages and may radically influence the final net impact of the business case, being a revenue generator, as you may see explained in the following pages.*

Keywords: banking marketing; pricing strategy; product strategy; SME.

JEL classification: M31; G21; D24.

1. Introduction

The financial service can be defined as an unit which unites many concepts: starting with value proposition, through generating return in the future, continuing with tangible elements (for example cards), additional banking or non-banking benefits (for example with partners) and finally, potential future features (Ennew and Waite, 2013: 250).

The package concept is related to a set of products which separately would be more expensive to be bought than together (at package price).

While some packages can be designed with fixed components, some others may be personalized at a certain level (of course, some components still remain basically as a standard part of the product).

In case of banking system, the packages are often used as products addressed to retail customers (individuals) or to small and medium sized companies with not very complex needs. This is also why segmentation plays an important role for further target defining.

As a prerequisite for working on product and price strategies and on business case, a market watch analysis is mandatory. Currently, in Romania, the major banks targeting SMEs have specific and different product strategies regarding transactional packages addressed to this segment. Some of them have packages containing current accounts, a limited number of transactions, internet banking and maybe debit or credit cards, while others have included in their packages an unlimited number of transactions. In some cases, additional non-banking benefits were added as a value proposition to the customer, sometimes used as a hook for buying the package itself.

Current paper reveals some important aspects in launching new transactional banking packages for SMEs, targeting different segments, creating different clusters and deciding to keep or to adjust the pricing based on specific assumptions and scenarios.

Final scope of the product launching is, of course, to increase the profitability of the overall SME portfolio of the bank, while increase also the Customer Satisfaction level through the clients.

2. Prerequisites and aspects to consider while designing a new banking product for SMEs

The strategies for developing, designing and implementing a new generation of innovative banking products for SMEs have the final objective of generating a significant impact in revenue increase and customer satisfaction. Identifying the optimal strategy starts with a detailed market watch analysis, consisting in defining direct competitors with similar products, but also, best practice products of other competitors. It is essential for the future success of the product/s to include a high level of innovation in each step of the designing process (Nagdeman, 2009: 247). On the other hand, the strategy must be obviously correlated with the overall business plan and objectives of the bank (Ehrich and Fanelli, 2012: 50).

The most difficult part of designing a new product/ product catalogue seems to be creating the concept itself, the innovative part of the entire process. It is to be decided what banking services to be included in the package (and therefore in the analysis), how many transactions, whether to include also paper based transactions or to include exclusively electronic banking transactions. Another idea is to include non-banking benefits, for example discounts or special offers for the bank's strategic partners.

While the concept is focusing on value proposition for the client, the business case has to combine the value proposition with the marketing objectives and with the sales objectives, all in order to make sure that the pricing strategy will be in accordance with overall scope of the project. It is essential for the success of the launching that the sales force is very well understanding and applying the marketing principles and strategies of the marketing/ product development department (Ehrich and Fanelli, 2012: 160).

2.1. Steps in designing a new banking product

Any product has to have its own detailed description called *product card*, which must contain all the characteristics (including technical) of the product; the product card is the base for the product catalogue (a set of product cards addressed to a certain segment), to be used not only by marketing specialist, but also by sales force.
The research step may contain (not to be neglected) work-shops and brainstorming organized by marketing specialists with the sales force. It is important to receive the feed-backs of the experienced sales people, but also to receive feed-back from junior ones as well (is the product well structured? the value proposition clear enough and strong? are the characteristics of the product easy to be understood?). If necessary, training to the entire sales force should be provided by the product manager.
While designing the product/s, negotiations with other departments are essential, since the product itself may involve the synergy between the departments, or even important tasks to be done (set ups etc.) by others.
While involved departments are depending on the type of the product, the characteristics proposed, the targeted segment etc., some departments are by default involved in each project/ process of the bank: eg legal, customer satisfaction. It is important to know legal aspects on each characteristics, or risks that may occur during launching, communication and so on.
While legal issues may change the entire product or pricing strategy, the customer satisfaction is a concept to be considered from the beginning, while defining the value proposition.
SWOT (strengths, weaknesses, opportunities and threats) analysis of the new product should be constantly done before deciding the final structure of the product.
While defining the target, some sub-segments should be defined, categorized and prioritized. If some of them are inappropriate for the objective, not in line with the profitability target, they should be excluded if possible, or another solution to be provided. This is how a product launching becomes a product catalogue launching, containing more products, each one suitable for one category of clients. Market and segment potential are to be considered in this rule defining for the catalogue.

2.2. Establishing the initial product strategy together with the pricing

Current paper provides proposals for business cases related to banking transactional packages addressed to SMEs. While a business case referres to an estimation of the impact in profitability (a before and after comparison, considering the moment of launching a new product), it is mandatory to be preceded by a description of the product strategy. Figure 1 represents a possible version of a product strategy. It describes the package product catalogue proposed, per each segment/ sub-segment. A package represents a set of services, which bought together (the price of the package) cost less than by buying them separately. Ussualy, a transactional package in banking reffers to current accounts (different currencies) maintenance, transactions (paper based or electronic through

internet banking, mobile banking etc.), transactions through ATMs, through POS with cards and so on. A product catalogue of packages it is recommended to include many packages, but not to many (considering the complexity of the segment, we can add the concept of standardization vs. personalization; ussualy, while speaking of SMEs transactional needs, the balance is more on standardization then for personalization).

While it is obvious that the price increases while migrating from a package to another (considering Package 4 the most complex and complete, and Package 1 the basic one), the strategy considering segmentation needs a special attention. Depending on segmentation criteria, a product strategy based on segmentation can or cannot be easily explained to a customer (if segmentation criteria are internal, for example: revenue generation to the bank, it cannot be communicated ad literam to the customer). Therefore, for some segments, banks may address with a multitude of packages, giving the client the possibility to choose according to the company needs. On the other hand, the bank can introduce some restrictions in providing a certain package to a certain segment/ category of clients (if it is not in its interest or in the clients interest; for example, if it is related to a decrease in profitability). In Figure 1, Package 1 (basic and the cheapest) is addressed only to Segment 1, while Package 2 is addressed to Segments 2 (but with the possibility to be acquired also by the lower Segment 1); Packages 3 and 4 (more complex) are adressed especially to Segment 3 (bigger companies with higher, complex needs), but it can be offered also to lower Segments if case. On the other hand, there are also restrictions: Segment 3 cannot buy Package 1 and 2 (they are not suitable for the company needs, may involve additional costs or the profitability for the bank decreases).
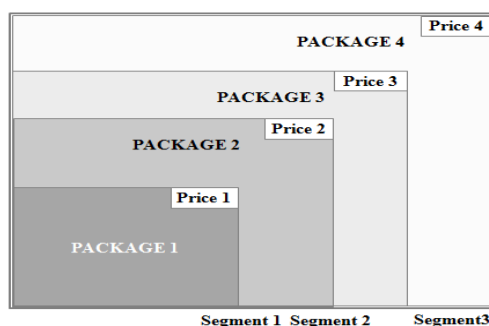
Figure 1: Proposed strategy for a new product catalogue, considering segmentation
Source: Personal contribution of the author

The differentiation concept is to be considered when deciding the prices of the packages, since if the services included in the packages are different (in a positive way) from the one held by the competion (Ellis, 2011: 160), then the bank is able to set up a higher price for its innovative and original products.

3. Analyzing the existing SME portfolio data in order to create a strong business case

Starting from the defined products and prices initially defined, the marketing specialist/ product manager in the bank needs to analyze the profitability of the proposed structure. In this respect, he analyzes the existing clients' portfolio results (clusters per segments and revenues). Figure no 2 below may represent a snapshot of a business case of transactional packages (product catalogue from previous Figure).
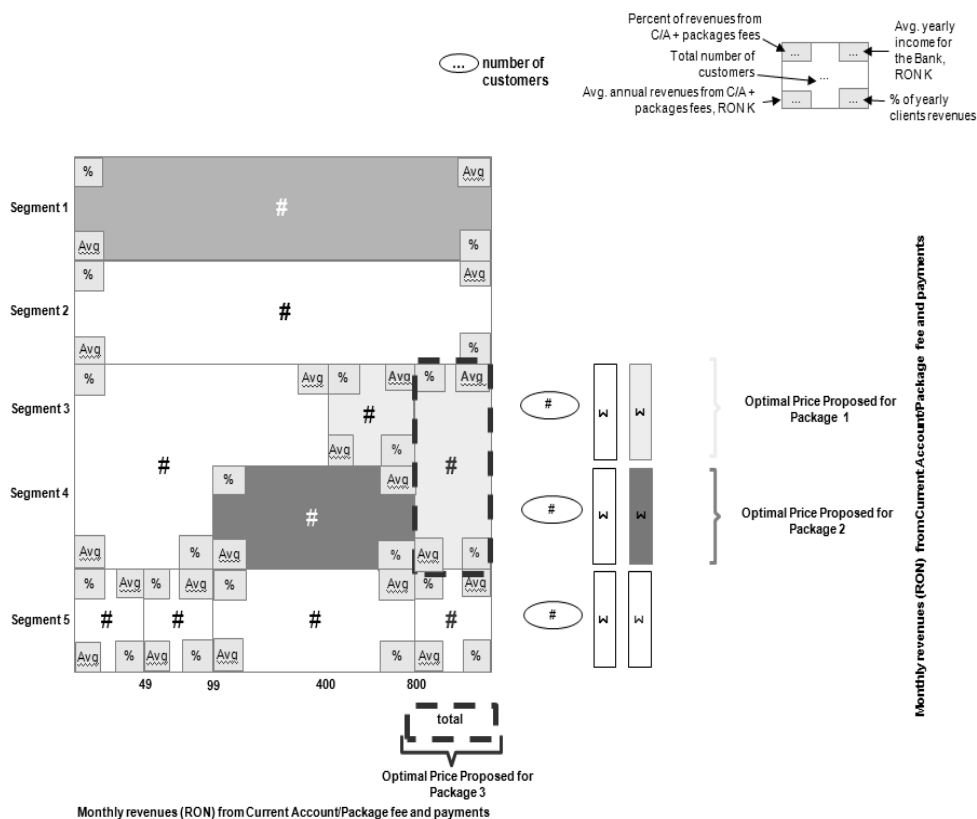
Figure 2: Business Case analysis for current portfolio of clients, per segments and revenue clusters
Source: Personal contribution of the author

Data considered in Figure 2 is referring to two concepts: Transactional Revenue and Total Revenue. Transactional Revenue is the revenue generated by the client to the bank, through: current account utilization, transactions, existing transactional packages fees and other banking services – meaning any other service not related to loan or deposit products. The considered period may be one year, for relevance. Total Revenue is the revenue generated by the client to the bank in a certain period (may consider one year), including also revenue from loans and deposits.

As a formula, it may be defined as follows:

$TR = TrR + RL + RD$, where:
- TR = Total Revenue
- TrR = Transactional Revenue (also called Banking Services Revenue)
- RL = Revenue from Loan products
- RD = Revenue from Deposit (Liabilities) products.

After defining the relevant data, the next step in designing the business case represents the clustering, meaning applying different thresholds on defined criteria (in our case the criterion is the price, while the thresholds are represented by the prices of the packages, the same as Figure 1). Basically, the logic is to compare current amount paid by the client for transactions (meaning more or less the transactional revenue generated to the bank,

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in some cases adjusted with small amounts of costs for the bank) with the proposed package price.

Based on this data definition, existing clients' portfolio can be analyzed (also per sub segments, for becoming more relevant in accordance with the strategy). Personal opinion is that four relevant indicators should be calculated while creating a business case for transactional packages; these are:
- The percentage of transactional revenues from total revenues
- Average for total revenues per client (for each cluster)
- Average for transactional revenues per client (for each cluster)
- The percentage of total revenues per cluster in total revenues of entire SME portfolio.

3.1. Creating a Business Case in order to validate the product and pricing strategy proposed

While in Figure 2 we analyzed the clusters, for designing the business case, the next step is starting to estimate the results, in order to validate the strategy on products and pricing. It is how results in Figure 3 will look like, that will become most important in deciding whether continuing to use the same assumptions and strategies before or to adjust the business case with new prices and new product strategies (even if deciding to start over, the steps are the same).

As you may see in Figure 3, the idea is to estimate an impact per each segment (impact in revenue increase or decrease), while applying different scenarios.

Scenarios may differ considering the strategy, in our example the assumptions being the following:
- Impact on revenue will come from both existing and newly acquired clients
- For existing clients, the impact will be calculated by applying 3 different scenarios (best case, worst case, and the realistic one in the middle
- Clients acquiring the new packages will increase their turnover through the bank, as the value proposition was defined to increase their loyalty.
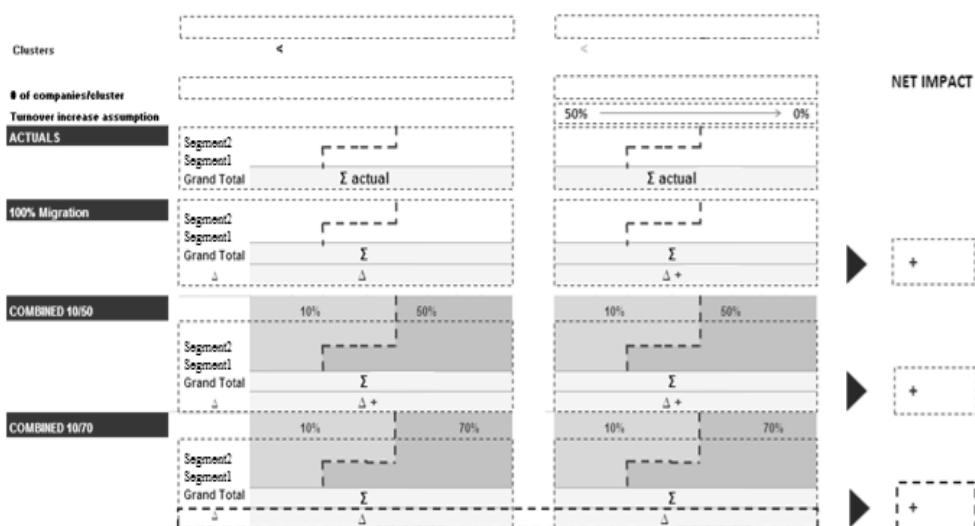
Figure 3: Business case scenarios for portfolio migration to the new products
Source: Personal contribution of the author

The scenarios in the figure are referring to the number (in percent) of the clients per each cluster that will migrate to the newly designed products from the old ones. Best case scenario is represented by 100% Migration to the new packages, meaning that all current transactional revenue to the bank will be overcome by the price of the packages applied to the existing customers (of course, different packages per different segments). Worst case scenario is represented by a combined 10/70 migration assumption, meaning that 10% of the existing clients with lower transactional revenue (compared to the price of the package) will migrate to a new package, while 70% of the existing clients with higher transactional revenue (compared to the price of the package) will migrate to the new assigned package. That is why, depending on price strategy, in some cases worst case result is a negative impact in revenues; the realistic scenario is a combination between best and worst cases, in our example being a combined 10/50 migration assumption (as explained above, instead of 70% being 50%); if for the realistic scenario the final impact in revenue is negative, then the pricing and product strategy must be optimized (either pricing or product strategy, or both). An essential adjustment to be made is while analyzing the packages generating negative impact, therefore a higher price for these packages is needed.

3.2. Complex scenarios and calculation steps for the Business Case validation

Figure 4 represents a more complex version of Figure 3, since it contains a higher number of scenarios and more clusters considering the turnover increase assumption. In this case, the turnover assumption differs from cluster to cluster, considering that a client currently generating a small amount in transactional revenue has more potential to increase its turnover through the bank than a client generating already a high amount in transactional revenue (meaning that he is already working constantly with the bank).

Clusters	<price1	price1-price2	price2-price3	price3-price4	price4-price5	price5-price6	price6-price7	>price7			
# of companies/cluster	100	80	100	50	30	20	20	30			
Assumption for turnover income increase per migrated client	70%	60%	50%	30%	20%	15%	10%	0%			
ACTUALS											
segment2											
segment1											
Grand Total	1	2	3	4	5	6	7	8	Σ actual 36		
									Assumption for turnover Income increase (sight deposit)		NET IMPACT
100% Migration											
segment2											
segment1											
Grand Total	6	4	4	4	5	6	7	6	Σ 42		
Δ	5	2	1	0	0	0	0	-2	Δ +6	+2	+8
40% Migration											
segment2											
segment1											
Grand Total									Σ		
Δ									+		
10% Migration											
segment2											
segment1											
Grand Total									Σ		
Δ									+	+	+
COMBINED 10/50	10%				50%						
segment2											
segment1											
Grand Total									Σ		
Δ									+	+	+
COMBINED 20/70	20%				70%						
segment2											
segment1											
Grand Total									Σ		
Δ									+	+	+
COMBINED 0/100	0%				100%						
segment2											
segment1											
Grand Total									Σ		
Δ									+	+	+

Figure 4: Business case complex scenarios for portfolio migration to the new products, considering turnover assumption
Source: Personal contribution of the author

In order to better understand the complexity of our example, you may find below detailed description of the elements showed in the picture.

Clusters (<Price 1, Price 1-Price 2, ..., > Price 7) refer to clients that currently generate transactional revenue to the bank in the range lower, between or above the newly proposed prices for the packages and for the scenarios of prices if the final ones are not decided.

Number of companies per cluster show an example in order to understand that this number is important while calculation of the impact per each cluster, since there are more companies generating lower transactional revenue and migrating to a basic package than the ones generating higher transactional revenue and migrating to a more expensive and complex package.

"Actuals" row is referring to the transactional revenue generated to the bank in a certain period (usually 12 months; the important thing is that the estimations to be done considering the same period in order for the results to be relevant; so, even in the price of the package is on a monthly basis, the impact will be price per 1 month * 12 months of the analyzed/ estimated period).

100%, 40% and 10% Migration scenarios refer to an homogenous assumption that 100%, respectively 40% and 10% of all the clients will buy the newly designed packages.

Combined Migration scenarios contain, in addition to the homogenous scenarios, also the threshold of comparison between the actual transactional revenue and the price of the package (as described at the previous figure details).

Grand Total for Actuals represents the total revenue generated by the clients in the clusters before buying the new packages.

Grand Total for Scenarios represents the total revenue generated by the clients in the clusters after buying the new packages.

Delta (Δ) represents the difference between the total revenue generated by the clients in the clusters after vs. before buying the package. This is actually the impact per cluster from transactional revenue.

Columns from the right (after the clusters) represent: the total amounts overall portfolio, the turnover assumption impact overall scenario and, finally, the estimated Net impact per each scenario.

4. Estimating revenue impact from new to be acquired clients

Besides the impact on existing portfolio, is important to estimate also the impact coming from newly acquired customers.

Even if in some cases transactional marketing is focused on customer acquisition, while relationship marketing on retention & cross sell (Ellis, 2011: 73), in this case both merge with the same force and objective. Therefore, relationship marketing is essential for both new and existing clients, while transactional products as the ones in our example are sold for both categories. Moreover, relationship marketing interferes with transactional one, since the relationship manager is the one presenting the value proposition and benefits to the new (prospect) customer.

Since there is no actual revenue to be considered or other costs for the bank, the impact for prospect client is simply estimated and calculated as the price of the package * the number of new clients estimated to acquire each type of package. It is recommended to estimate the Total Revenue for a newly acquired customer, since its acquisition itself is supposed to be generated by the selling of the new package. Therefore, in order to estimate a Total Revenue for a newly acquired client, besides transactional revenue decided to be price of the package, we need to estimate the revenue from loans, respectively from deposits. This is a simple task since we already have clustered and segmented the existing data base and we can consider a new client similar to an existing one by clusterizing it. Considering that a new client from one cluster will have the same behaviour as an existing client from the cluster, since common patterns and characteristics may be identified (Nagdeman, 2009: 158), we can consider the average loan revenue, respectively the average deposit revenue per cluster, as estimation for the newly acquired client.

Concluding Discussion

Considering the analysis, methods and strategies presented in the current paper, one can identify the correlation and impact between portfolio analysis, market watch, best and worst practice identifying, gathering feed-back and an efficient business case for launching new transactional banking packages for SMEs. In this respect, the prerequisites, pre-analysis, product and price strategy designing are followed by defining the assumptions, estimating the impact on existing portfolio and on new to be acquired portfolio. If willing to validate the decided product catalogue and product strategy will be efficient or not, business case scenarios are designed and the impact is calculated.

One can conclude that business case methods and product and price strategies presented in the current paper could be applicable to any commercial bank willing to launch new transactional packages, while addressing to SME segments.

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POST-LAUNCHING MONITORING ACTIVITIES FOR NEW TRANSACTIONAL BANKING PRODUCTS ADDRESSED TO SMES (CONSIDERATIONS)

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Abstract: *The current paper has the aim to provide guidelines for post-launching monitoring activities and steps related to new transactional banking products addressed to SMEs. While the pre-launching activities have the purpose of accurately defining the objectives, assumptions and estimations, the purpose of the post-launching plan is to identify: if the final objectives of a product launching have been met, on one hand, to analyze results in the sense of identifying an efficient action plan in order to overcome the lack of results (if case), but most important, to identify opportunities for optimizing the products and for communicating properly the value proposition. This paper also presents schemes for monitoring the results from a business case and for motivating the sales force, as an essential step in increasing the sales. Therefore, alternatives of incentive campaigns are presented, as sustainable campaigns with to purpose to achieve an expected success rate. As an additional support guideline for the sales force, some scenarios and post-sales actions are presented, together with an example of portfolio analysis considering potential per client. Considering the methods and details presented in the current paper, one can identify the importance and find out how to monitor the results after launching a new transactional product addressed to SMEs, can understand and design an incentive scheme and also define actions to be taken in order to increase revenues from a newly launched transactional product.*

Keywords: banking marketing; pricing strategy; product strategy; SME.

JEL classification: M31; G21; D24.

1. Introduction

As Ennew and Waite agree (in Routledge, 2013: 266), 'the key to successful product management is the development and maintenance of an appropriate product range. This requires that a financial service is developed with a set of features which correspond to consumer requirements and that this range is constantly monitored so that existing services can be modified and new services can be developed".
Decisions to be taken/ important questions to be answered before the product catalogue launching:

- Is there a specific target for each product, with limitations for others; is there any impact in profitability if other product is offered to a segment not from the target?

- Is there a limited list with clients to be considered for selling a specific package? and so on.
- Organizing a brainstorming session for product names, in order for each package to receive a relevant name for its value proposition to the customer.

In order to identify product optimization opportunities (in case of newly launched products, or even if only for fine-tunings), the continuous tracking and monitoring of the campaigns execution and of the results are essential; a constant check of adherence to the marketing strategy and guidelines is needed.

Weekly (or even daily) analysis of the overall results achieved on the campaign, through developing specific reports and presentations is useful for the management on one hand, but also for the sales force, on the other hand.

While monitoring campaigns results and presenting intermediate results to the management, besides the sales evolution, an efficient presentation contains also a SWOT analysis, based on identifying, analyzing and comparing the best practices and the worst practices.

2. Measuring the results of a newly launched transactional product

Measuring the results is, in Ehrlich and Fanelli opinion (Bloomberg, 2012:164), 'no different than evaluating a portfolio strategy. If your plan didn't help you reach your goals, change it'.

Ellis (in Oxford, 2011: 159) states that a 'formal planning process is the best way to reach strategic decisions. This approach puts forward a series of logical steps through which organizations may be able to arrive at their optimum strategies. A structured planning framework include as a last step the Control, as a way to measure, evaluate and gain feedback, which evaluate the degree of accomplishing the objectives (Ellis, 2011: 159).

After: analyzing the existing relevant data for current portfolio, comparing existing products on the market with the newly proposed ones and after designing different scenarios in order to calculate revenue impact of the launching, the most realistic scenario has to be chosen (as presented in a previous paper). The work on the business case continues by accurately calculating the estimated impact, by considering all the elements that may affect (positively or negatively) the profitability of the new products. This is why, in Figure 1, the author proposal is to calculate total estimated impact, while emphasizing the impact from new clients acquisition separately than the impact coming from the migration of existing clients to the new products (assumptions on new clients acquisition vs. assumptions on actual portfolio migration scenario – most realistic one). For each type (prospect/ clients), number of companies acquiring each type of package is highlighted, in order for further analysis and monitoring to be more easily done.

The revenue net impact is calculated as a difference between the categories of revenues (as a sum) and the costs. Categories of revenues are, in current example:
- Package fee and additional transactions
- Net interest – from sight deposits
- Costs – if banking benefits or non-banking benefits included in the package involve some costs.

Figure 1: Business case for launching a new product catalogue of 3 packages
Source: Personal contribution of the autho

2.1. Calculating the deviation from initial objectives

After approximately one month from launching the new products, it is important to start monitoring the results. Figure 3 is an example of monthly monitoring the results for the new product catalogue of packages. Main idea is to compare the results with the initially estimated business case, in order to identify areas where it should be improved, or where assumptions are not met, and also to adjust the numbers (a new forecast).

Figure 2: First months results compared to initial estimations
Source: Personal contribution of the author

3. Motivating the sales force through an incentive campaign

If the Service Model is clearly defined, then the roles, flows and targets for the sub segments are accordingly to the customers' needs and characteristics and in line with market potential. This is the ideal situation while launching a product/ creating an incentive scheme for the sales force.

Sometimes a more detailed analysis is needed; therefore a qualitative/ quantitative research is welcomed. Depending on the previously identified issues, the scope of the market research is to identify the reasons for buying/ rejecting the new product. Therefore, the target for the research should consist in SMEs receiving at least one offer on the new product.

As the new products were designed to be very profitable, number of products sold becomes an important target for the entire segment. Therefore, the sales need to be supported through an Incentive Scheme for the sales force, a powerful internal campaign, but a powerful external campaign also. The commercial campaign is to be focused on value proposition for the client, in our case cost optimization. The internal campaign is to be focused on the bonus offered to efficient sales people. Both campaigns need to have support materials, as guidelines for the sales team and as marketing materials for the clients.

Internal campaign, if monitored weekly, could reveal some best practices if analyzing the sales persons with constant good results. Direct feed-back is also efficient. On the other hand, providing strategic directions and support to the less competitive sales persons could also lead to results increase.

The Incentive Scheme is designed as a commercial campaign in order to boost the sales of the new packages launched. There are two main options: to have a limited number of bonuses, granted for Top performers, or to grant bonuses to all performers achieving their targets. Both are efficient in different cases, while the second one is more motivating for a higher number of sales people, being more suitable while the purpose is selling a high number of products.

Figure 3 illustrates an example of incentive scheme, with minimum achievement limit at 80% and revealing the bonus thresholds (meaning that in between the bonus is remaining constant).
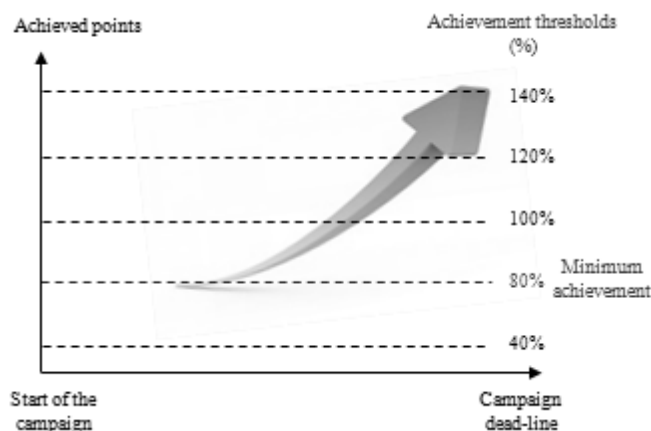
Figure 3: Incentive scheme for selling the new 3 products
Source: Personal contribution of the author

4. Post-launching optimizations to be made

Bad scenarios to be considered with priority include, as Nagdeman states (in Wiley, 2009: 58): 'a sudden shift in market conditions changes user sentiment, (...). A marketer must first understand why the product is not selling and then apply creative thinking to determine the best way to reposition the offering', 'a product or service is not addressing customer needs' (this is why the segmentation and clustering process is so important in defining the target market), 'a product simply outlives its usefulness' (for example, paper based payment orders compared to electronic ones through internet or mobile banking).

Separately from the scenarios, it is important to understand also the potential of increase, in order to take the right decisions and actions. In Figure 4, an example is illustrated, considering that most of the clients currently generate low revenues to the bank and have a high potential, while the ones generating high revenues have the lowest potential of increase.
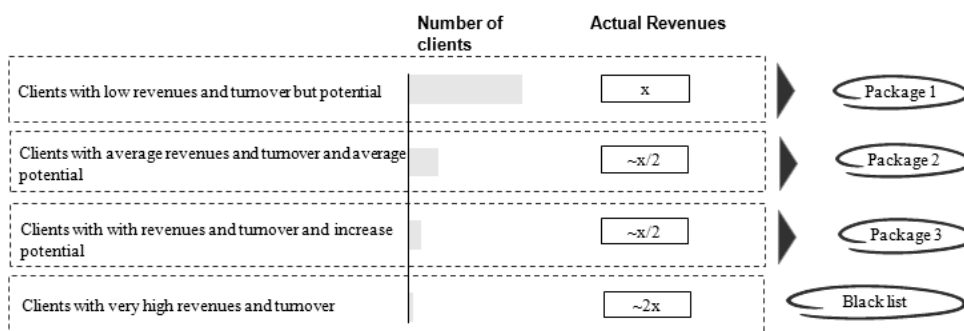
Figure 4: Strategy defining considering the client behaviour and correlation with potential
Source: Personal contribution of the author

Depending on results, best and worst practices, scenarios occurring, clients potential and constant feedback from sales persons and clients, some fine-tunings or even product optimization may be required. These fine-tunings or optimizations could be on: product characteristics or features, technical set ups, pricing, flow adjustment, sales process (including target), campaign related (incentive scheme or external campaign) clarifications or modifications.

Other processes to be considered as adding value to the product after selling are:
■   On boarding process (for newly acquired clients)
■   Migration process (for existing clients acquiring the new product)
■   Resegmentation process while acquiring a superior product (from a superior segment's product catalogue)
■   Dormant clients reactivation through special offers on the new product.

Concluding Discussion

By reading the current paper, one can conclude that, in order for a campaign to become successful, it needs to be efficiently communicated to the sales force, first of all. The concept and value proposition needs to be very well understood by the sales people, while the product details need to be all known, both having a strategic importance in achieving the commercial target.

The main reasons sustaining the importance of motivating the sales force:

- The main purpose of the products are gaining new, respectively making clients become more loyal
- Selling the products has a significant impact in revenue increase, especially through turnover increase
- Clients with low turnover but high potential are encouraged to increase the turnover through the bank.
- The campaign being on going, it is very useful for the product manager/ marketing specialist to receive constant feed-back from the sales force, containing direct feedbacks from the clients.

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ANALYSIS OF THE SIGNALING HYPOTHESIS IN HIGHER EDUCATION MARKETING VIA CLASSROOM EXPERIMENT

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Abstract: *In the international literature of information asymmetry research on the field of marketing has been published since the 1970s. Several authors revealed the signal function of the quantity and specificity of the information in the marketing communication activities mainly in case of experience goods, i.e. sellers of better quality products and services communicate a higher quantity of and more specific pieces of information voluntarily because this causes less risk for them than for their weaker competitors. If this practice is well-known by the customers and for this reason they trust in the products and services about which they possess more and/or more accurate pieces of information, then this business behaviour pays off for the firm with higher quality products in the higher prices and repurchases and becomes permanent. On the other hand, for the firms with lower quality products the behaviour of publishing no, less or less specific pieces of information becomes the norm. This paper examines this phenomenon in the market of higher education institutions. Our research questions therefore are the following: How does the quantity and quality of the information published by the higher education institutions affect customers' evaluation on them? Is there any difference in this effect according to how much the published information is connected to the usual educational quality measures? To answer these questions we used quantitative classroom experiment method with 101 higher education students. The results of this experiment confirmed our hypotheses that the better universities and colleges gain competitive advantage by publishing more and highly specific information about themselves. Especially the information that is related strongly to the academic quality measures is important. In contrast, more informative behaviour contributes to the competitive disadvantage for the lower quality institutions. Our findings aim to contribute to the better understanding of the informational behaviour of higher education institutions. These results can also be useful for those responsible for the marketing communication of such organisations and for those who base their decisions on this communication.*

1. Introduction
The current study examines the role of signaling in the field of higher education marketing. Actuality of this topic stems from the sharpening global competition among the higher education institutions for students that increases the importance of advertisements, public relations (PR) and other marketing communications tools. Literature of the information asymmetry has revealed the relationship between the quality of products and services and the marketing communication strategies already in the 1970s.
Our research intends to verify the validity of these general theories specifically for the higher education services via experimental method. Due to the limits of this paper we

focus only on a narrow area of this broad topic: the effect of the information published in higher education advertisements on the presumed quality by the customers. With its findings, this paper aims to contribute to the better understanding of the informational behaviour of higher education institutions. These results can also be useful for those responsible for the marketing communication of such organisations and for those who base their decisions on this communication, such as prospective students.

Our research questions were the following:

Q1. *What is the effect of the specificity of the information published by the higher education institutions on their evaluation by the customers (current and prospective students)?*

Q2. *Is there a difference in this effect according to how strongly the information is connected to the measures of academic quality?*

Our hypotheses, based on these research questions, were the following:

H1: *Publishing more specific information about themselves provides a competitive advantage for those higher education institutions that are characterised by higher academic quality.*

H2: *For the lower quality higher education institutions, however, publishing more specific information about themselves leads to a competitive disadvantage*.

H3: *The importance of the published information for the customers also matters: if the information is more important to them, it strengthens the previous effects for both the higher and the lower quality institutions (i.e. the customers are able to judge the institutions more precisely), and if it is less important, it weakens those effects.*

After reviewing the relevant literature in the next chapter of this paper, chapter 3 describes the collected data and the methodology of the empirics. In chapter 4 we present our findings and answer the research questions. In the last chapter we summarise the results with its limits and some future research directions.

2. Literature Review

The relationship between information asymmetry and marketing are took a significant part in the economics discussion from the mid-1970s. In his publication that is sometimes referred to as the first one in this field Nelson (1974) established a theoretical model to analyse the informational role of advertisements in the case of both search goods, where information on product quality is free or cheap for the prospective buyer before purchase, and experience goods, where pre-purchase quality information is unavailable or costly. For experience goods advertising is not able to provide specific and reliable information, or if it is, only with serious constraints. However it can communicate the quality of the brand. Those brands that turns out to be good during consumption will then be repurchased even if advertising costs are increasing the price of the product. For worse brands the first purchase is not followed by a repurchase. Consequently, sellers of better brands can, whilst sellers of worse brands cannot afford the advertisement costs. Advertisement under these circumstances serves as a signal (Spence, 1973).

Based on Nelson's model the signaling function of advertising costs was also analysed by Milgrom and Roberts (1986). They put their focus of inspection on the dissipative advertising that not urges directly on buying. They found that if goods are purchased repetitively, even high introductory price and strictly monotonously increasing dissipative marketing expenditures can act as signals. Later Hertzendorf (1993) refined the previous results. He found that advertising bore informational role only when prices and quality were not correlated. Hertzendorf and Overgaard (2001) also examined the role of the signaling hypothesis behind the dissipative advertising but this time for oligopolies. They found support for the hypothesis and in addition they drew the conclusion that quantity of advertisement was depending not only on brand quality but also on the quality difference

compared to the competitors.

In public relations, a sub-area of marketing, Teoh and Hwang (1991) introduced the signaling hypothesis as a reason behind firms' information disclosure or information nondisclosure behaviour. They concluded that stronger companies sometimes implemented signaling strategy via adverse disclosure (releasing bad news and withholding good news). This strategy is harmful for the company on the short run, thus weaker companies cannot follow it, because they would not survive the negative consequences on the short run, thus the stronger ones can signal their strength through they can cope with the same negative effects easier. The weakest companies will deliver no information at all to the market. They will communicate neither the bad news because of the market sanctions, nor the good ones because of the costs that will not be paid back hence their products will not be repurchased. Or simply they do have no good news.

In the market of IT products Afzal, Roland and Al-Squri (2008) conducted an experimental research to examine the effect of information asymmetry on the product evaluation in case of laptop computers (that are somewhere between search and experimental goods for those customers who are not IT experts). They found that the availability of information impacted the product judgements as it has probably reduced the uncertainty and may have provided more relevant cues to subjects.

Higher education provides experience goods (see among others Melton and Trevino, 2001, Dill and Soo, 2004, Hodge, 2006). Brand is the name of the university or college and the products are their programmes. Based on the literature review we drew the conclusion that higher education institutions with high academic quality will be significantly more transparent, while lower quality ones will provide much less or no information about themselves.

3. Data and Methodology

The classroom experiment were conducted between 7th and 10th April, 2014 at Faculty of Economics and Business Administration, University of Debrecen (UD FEBA), Hungary. Our sample consisted of students from three educational levels (higher vocational education, bachelor, and master) and 5 majors (Business Administration and Management at ISCED level 5 (BAM), International Business at ISCED level 5 (IB), BA in Business Administration and Management (BA in BAM), BA in International Economy and Business (BA in IEB), and MSc in Management and Leadership (MSc in ML) totalling 101 observation units (students) distributed as indicated in Table 1.

Table 1: Sample distribution

Educational level	Major	Sex female	male	Total
Higher vocational education	BAM	5	1	6
	IB	1	3	4
	Total	6	4	10
Bachelor	BA in BAM	19	12	31
	BA in IEB	27	14	41
	Total	46	26	72
Master	MSc in ML	12	7	19
Total		64	37	101

In the experiment students were asked to review 12 fake advertisements of U.S. higher education institutions and categorise them as top or average quality institutions and rank them in order of academic quality as well. The fake advertisements were composed by

the authors but contained only real data available on a free access online ranking site (http://colleges.findthebest.com) totalling 1,028 U.S. located universities and university colleges (all of them provided master programmes). 6 of the 12 institutions are on the top of the above mentioned U.S. ranking (Harvard University #1, Yale University #2, Princeton University #3, Massachusetts Institute of Technology #4, Columbia University in the City of New York #5, Stanford University #6). The remaining 6 institutions are significantly lower ranked, however, not at the bottom of the ranking as the institutions at the end of the ranking do provide no or not all of the information the experiment needed (the lack of information at the bottom of the ranking list reflects the message of the signaling literature, see for example Teoh and Hwang, 1991). Therefore, we used the lowest ranked institutions with all the required information (Ramapo College of New Jersey #731, Coppin State University #733, Chicago State University #736, Western Oregon University #737, Portland State University #738, Mount Mary College #774). All students in the experiment worked with the same 12 institutions but to eliminate the influence of image, name, and order, we renamed the institutions as 'A institution', 'B institution' etc. and created 24 different permutations.

Each of the advertisements included 15 pieces of information (items). 8 of them – referred to as important ones – are strongly connected to academic quality (institution type – university or college; acceptance rate; average Scholastic Aptitude Test score; out-of-state tuition; full-time drop-out rate; faculty-student ratio; 4-year graduation rate; number of prominent graduates such as U.S. presidents, vice-presidents, Nobel and Pulitzer prize winners and justices). 7 of them – named as unimportant ones – are no or loosely connected to academic quality (year of foundation, size of settlement, expenses on campus room and board, expenses on books and supplies, financial aid percent, total enrolled students, women to men ratio).

In the experiment the 12 higher education advertisements were provided to the students in a form of 2 different booklets ('X' and 'Y' type booklets). Booklet X was used in the first phase of the experiment while booklet Y in the second phase. For both the top 6 and average 6 institutions booklet X contained 2 advertisements with all the 15 pieces of information being specific; 2 with no specific information at all; 1 with 8 specific important and 7 non-specific unimportant information; 1 with 8 specific unimportant and 7 non-specific important information. In booklet Y every item for every institution was specific. In case of numerical advertisement items we used accurate data in the specific and much less accurate data in the non-specific cases. In case of the single item of institution type we used the term university or college in the specific and higher education institution in the non-specific version.

In the first phase (consisting of 2 turns) of the experiment students were provided booklet X and first were asked to classify the 12 institutions as top or average ones. After this turn answers were collected and in the second turn (in the same phase) participants were asked to rank the same institutions according to a descending order of putative quality. At the end of this phase both the student rankings and the booklets X were collected. In the second phase students were given booklet Y and they had to classify and then also to rank the institutions again (coded names and the sequence of the institutions in the two booklets were independent from each other).

To ensure the interest of the participating students in the experiment they were offered some extra points to their semester grade: every student got 2 percentage points for the participation, the student with the best overall result (most realistic classifications and rankings) got 10 percentage points, while the second and third one got 5-5 percentage points.

4. Results

After reviewing the literature we can conclude that the top higher education institutions should publish a greater quantity of more specific information than their average counterparts. The reason behind this is the impact of the information on the competitive advantage. The transparency serves as a signal itself: customers know that more transparent institutions tend to be better in academic terms.

To examine our hypotheses, paired sample *t*-tests were used. First we compared the students' evaluation of the institutions (classifying them as top or average quality institution and ranking them in descending quality order) in the first (based on the less specific booklet X) vs. in the second phase (based on the fully specific booklet Y). We found that the students classified the institutions more precisely (top as top, average as average), and gave them lower (better) ranks for the top and higher (worse) ranks for the average institutions more likely in the second phase (when they knew all of the information). The above mentioned results are all significant and confirm H1 and H2 hypotheses: publishing more specific information about themselves provides higher quality institutions a competitive advantage as they are judged better when more specific information is present than when only less specific information is available, while the same situation provides a disadvantage for the average quality institutions as they are judged worse when more specific information is known than when only less specific information is available.

Since the directions of the informational impact on top and average institutions are different, there is no significant effect on the total sample of institutions in case of classification. Statistical data are shown in Table 2. Difference in ranking of all of the institutions is trivially impossible, thus it was not analysed.

Table 2: Comparing the results of both classification and order ranking assignments by the true quality of the institutions and the booklet type (*N* = 101)

Test variable	Booklet	Mean	Std. dev.	*t*
Number of top institutions classified correctly	X	5.3762	1.1212	-4.4955[***]
	Y	5.7822	0.7824	
Number of average institutions classified correctly	X	0.8416	1.1201	5.4365[***]
	Y	0.2673	0.8111	
Number of all the institutions classified correctly	X	6.2178	1.2133	1.5306
	Y	6.0495	0.7399	
Average ranking of top institutions	X	3.7277	0.5481	3.7034[***]
	Y	3.5066	0.2272	
Average ranking of average institutions	X	9.2723	0.5481	-3.6143[***]
	Y	9.4785	0.1694	

Note: Std. dev. = standard deviation, *t* = value of the Student *t* statistic;
[***] = significant at level 0.01.

If the advertisement of a top institution was totally specific, then the students have classified it as a top one significantly more likely than if it was not specific at all. An average institution tended to be (incorrectly) classified as a better one more likely if its

advertisement was not specific at all. In case of the top institutions the advertisements including only specific information got significantly lower (better) ranks on average than those with no specific information. Table 3 presents the statistical data.

Table 3: Comparing the results of both classification and order ranking assignments by the true quality of the institutions in cases when all the items are specific and when no item is specific ($N = 101$)

Test variable	Specific items	Mean	Std. dev.	t
Likelihood of classifying top institutions as top	All	0.9455	0.1988	3.0693***
	No	0.8465	0.3220	
Likelihood of classifying average institutions as top	All	0.0891	0.2490	-2.5991**
	No	0.1931	0.3238	
Likelihood of classifying all institutions as top	All	0.5173	0.1381	-0.0890
	No	0.5198	0.2227	
Average ranking of top institutions	All	2.8762	1.3104	-3.7905***
	No	3.8614	1.6899	
Average ranking of average institutions	All	9.5594	1.5170	1.2461
	No	9.2178	1.5547	

Note: Std. dev. = standard deviation, t = value of the Student t statistic;
*** = significant at level 0.01; ** = significant at level 0.05.

The same analysis (Table 3) also showed that in case of the average quality institutions the mean of the rankings of the non-specific advertisements was somewhat better but the difference is not significant. These results confirm both hypotheses 1 and 2.
Involving the not totally specific nor totally unspecific advertisements, too, we found if at least the important information was specific, then the top institutions were classified as top ones more likely than if only unimportant or no information was specific. In case of the average quality institutions the effect is the opposite. In the ranking assignment specificity of information improved the accuracy of the decisions only for the top institutions significantly, though the direction of the effect is the same as expected in case of the average quality institutions as well (more specified advertisement causes worse ranks). These results confirm hypothesis 3. Table 4 contains the statistics.

Table 4: Comparing the results of both classification and order ranking assignments by the true quality of the institutions in cases when at least the important items are specific and when no or only the unimportant items are specific ($N = 101$)

Test variable	Specific items	Mean	Std. dev.	t
Likelihood of classifying top institutions as top	Important or all	0.9356	0.1900	2.6906***
	Unimportant or no	0.8614	0.2678	
Likelihood of classifying average institutions as top	Important or all	0.0809	0.1909	-2.6007**
	Unimportant or no	0.1683	0.3005	
Likelihood of classifying all institutions as top	Important or all	0.5083	0.1090	-0.2816
	Unimportant or no	0.5149	0.1887	
Average ranking of top institutions	Important or all	3.2508	1.2879	-3.1784***
	Unimportant or no	4.0957	1.6134	
Average ranking of average institutions	Important or all	9.5429	1.3668	1.5477
	Unimportant or no	9.1452	1.4693	

Note: Std. dev. = standard deviation, t = value of the Student t statistic;
*** = significant at level 0.01; ** = significant at level 0.05.

Another paired t-test revealed if the unimportant information items were the only specific ones, the ranks of top institutions worsened significantly compared to the case if no items of information were specific (thus increasing the accuracy of unimportant items only had an adverse effect). This was the only significant effect comparing the cases where no vs. only the unimportant items were specific. These findings support the second part of H3. Table 5 presents the related data.

In the following analysis we found if the unimportant pieces of information were the only specific ones, average quality institutions were evaluated as top ones significantly more frequently than when only important information was specific. In case of top institutions there was no such significant effect. In case of top institutions average rankings tended to be more correct if the important information items were the only specific ones than if the unimportant items were the only specific ones. Average quality institutions did not differ in rankings in this comparison. As specificity of important information enhances, while specificity of unimportant items worsen the decision making process, these results support our third hypothesis (H3). Table 6 shows the statistical data.

Table 5: Comparing the results of both classification and order ranking assignments by the true quality of the institutions in cases when only the unimportant items are specific and when no item is specific ($N = 101$)

Test variable	Specific items	Mean	Std. dev.	t
Likelihood of classifying top institutions as top	Unimportant only	0.8911	0.3131	1.2164
	No	0.8465	0.3220	
Likelihood of classifying average institutions as top	Unimportant only	0.2178	0.4148	0.6850
	No	0.1931	0.3238	
Likelihood of classifying all institutions as top	Unimportant only	0.5545	0.2335	1.3279
	No	0.5198	0.2227	
Average ranking of top institutions	Unimportant only	4.5644	2.2866	3.2602[***]
	No	3.8614	1.6899	
Average ranking of average institutions	Unimportant only	9.0000	2.5807	-0.7979
	No	9.2178	1.5547	

Note: Std. dev. = standard deviation, t = value of the Student t statistic;
[***] = significant at level 0.01

Table 6: Comparing the results of both classification and order ranking assignments by the true quality of the institutions in cases when only the unimportant items are specific and when only the important items are specific ($N = 101$)

Test variable	Specific items	Mean	Std. dev.	t
Likelihood of classifying top institutions as top	Unimportant	0.8911	0.3131	-0.8308
	Important	0.9208	0.2714	
Likelihood of classifying average institutions as top	Unimportant	0.2178	0.4148	3.1103[***]
	Important	0.0792	0.2714	
Likelihood of classifying all institutions as top	Unimportant	0.5545	0.2335	1.8826[*]
	Important	0.5000	0.1581	
Average ranking of top institutions	Unimportant	4.5644	2.2866	2.2973[**]
	Important	3.7723	1.9436	
Average ranking of average institutions	Unimportant	9.0000	2.5807	-1.1602
	Important	9.4059	2.1456	

Note: Std. dev. = standard deviation, t = value of the Student t statistic;
[***] = significant at level 0.01; [**] = significant at level 0.05; [*] = significant at level 0.10

5. Conclusions

This paper aimed to reveal the relationship between the quality of information published by the higher education institutions and their customers' evaluation on them. Our findings confirm our 3 hypotheses: Top institutions were classified as top ones more likely and were ranked lower (better) on average if more specific information were available than if less specific information was provided that means that more specific information gives them a competitive advantage (H1). In case of average quality institutions, however, less specific wordings lead more likely to being classified as top ones and lower (better) ranks on average that shows that more specific information means a competitive disadvantage for these types of institutions (H2). Given more important information being specific our results show that the students evaluate the institutions more precisely in case of both the top and the average quality institutions while their evaluation is less accurate if unimportant information is specific (H3).

These results, however, may be influenced by some cultural traits, thus research may be expanded to students from other countries in the future. Another direction of the improvement of our research is to examine these effects in case of higher education institutions outside the U.S. Moreover, we can investigate whether the information providing behaviour of higher education institutions corresponds to our findings (i.e. top universities publish more specific while average or low-ranked universities publish no or non-specific information) by scanning the homepages of those institutions.

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AN EMPIRICAL RESEARCH ON THE EVOLUTION OF BUSINESSES OF THE MAIN RETAIL COMPANIES IN ROMANIA

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Abstract: *Global retail chains expanded rapidly in Romania since 2000 (Javorcik et al., 2013), their presence bringing significant changes in the landscape of the developing national economy. In this study we used data on six major retail companies in Romania, statistical data from Eurostat, and I proposed two models to highlight a link between the variables. The aim of this paper is to identify the relationship between the turnover and the number of employees of the main retail companies in Romania, in the first model using linear regression. In the second model we used multiple regression analysis to identify the relationship between the dependent variable (turnover) and independent variables (Internet users, Individuals having ordered / bought online). The result of the study paper is to evidence the fact that the increase in the number of employees in the retail sector will lead to the increase of their turnover.*

Keywords: Internet users, regression models, retail, turnover.

JEL classification: C26, L81

1. Introduction

Global retail chains expanded rapidly in Romania since 2000 (Javorcik et al., 2013), their presence bringing significant changes in the landscape of the developing national economy.

The Romanian retail market in the years 2007 2008 has seen a significant increase according to Buzila (2009), especially the significantly increased number of hyper / supermarkets. Besides extending and increasing the number of stores, retail companies became interested in making their product / service more efficient. Retail companies have turned to different marketing strategies, including online sales channel expansion, which began to develop (slower than in other EU countries) and have success in our country.

Electronic commerce in Romania is still in infancy (Vlad et al., 2012), most Romanians showing lack of confidence when it comes to this topic. The Romanians are skeptical because they are exposed to fraud (stolen credit cards, personal data's privacy, lack of compliance of the bought product with its presented description etc.). Although there are not many companies that have adopted this form of commerce, is a certainty the fact that their number and that of the online customers is increasing. Slowly the world will recognize and use the possibilities and advantages offered by the Internet.

Data from Eurostat website show an increasing trend in the number of Internet users and the number of people using the Internet to order / buy products or services. In these conditions, retail companies are forced to use the online environment to communicate more easily with potential customers and to keep them up to date with the novelty offered. In this paper from the European retail companies present in Romania we have chosen six of them to be studied (Auchan, Carrefour, Cora and Kaufland hypermarkets, as well as Metro and Selgros cash and carry).

The exploratory research presented in this paper aims to determine the relationship between turnover , the number of employees of the main retail companies in Romania and the number of Internet users and the number of people who use the Internet to order

/ buy online , contributing to broaden the perspective regarding ways of increasing the competitiveness of companies.

2. Data and methodology

In this paper, statistical data used are taken from the websites of Eurostat and www.listafirme.ro for the period 2006-2012. To process the data we used Excel that provides a set of tools for data analysis. The indicators used are the average turnover of the main retail companies in Romania for the period 2006-2012 expressed in billions of lei, average number of employees of these retail companies expressed in thousands of people, the number of Internet users expressed in millions of people, individuals having ordered / bought online expressed in hundreds of thousands of people. Table 1 contains data which will be considered below.

Table 1: Average turnover of the main retail companies in Romania and its influence factors

Year	Average turnover – billions of lei –	Average number of employees	Internet users –mil people-	Individuals having ordered/ bought online - hundreds of thousands people-
2006	1913.45	3350	5.52	6.08
2007	2523.92	4602	6.55	20.96
2008	3056.16	5501	7.42	49.03
2009	3255.56	5423	7.76	43.5
2010	3326.88	5648	8.72	54.1
2011	3490.83	5775	9.29	133.8
2012	3517.68	6246	10.45	267.07

Source: Own processing from http://www.listafirme.ro/ and Eurostat

In Table 1 we can notice a significant increase in average turnover until 2008 after which the growth slows down. The average number of employees of large retails almost doubled during the period. The number of people who use the Internet for different things is growing; the Internet offers its users a wealth of information and services such as e-mail, www, FTP, web hosting and so on. Together with the increase of Internet users, the number of people using the Internet to order / buy goods and services for private use grow, the most significant increase occurring in 2012.

Further on we calculated the Average Turnover Index, Average number of employees Index, Internet users Index, Individuals having ordered / bought online Index to highlight the increase / decrease of the indicator against the previous year.

Table 2: The dynamics of the average turnover of the main retail companies in Romania and its influence factors (previous year=100)

Year	Average Turnover Index	Average number of employees Index	Internet users Index	Individuals having ordered/bought online Index
2006	100	100	100	100
2007	131.9	137.38	118.52	344.75
2008	121.09	119.55	113.41	233.91

2009	106.52	98.57	104.56	88.72
2010	102.19	104.15	112.35	124.39
2011	104.93	102.25	106.47	247.29
2012	100.77	108.16	112.47	199.6

Source: according to data from table 1

The most spectacular growth can be noticed to all indicators studied in 2007 against the previous year. A slight rebound can be noticed in 2009 both at the average number of employees and the Individuals having ordered / bought online. These indicators are increasing since 2006, perhaps because these retails companies have not ceased to expand and prosper in Romania.

Using the Internet has become an essential part of our lives, something comfortable, because we can obtain information on a regular basis and we also provide information about almost "anything". The Internet provides access to a global market for many companies that without its contribution would have never had the opportunity to appeal to customers worldwide. Thus the Internet has become an important business environment. Starting from this fact we tried further on to establish the connection between the average turnover, number of employees and average Internet users, Individuals having ordered / bought online.

For this purpose we created two models to study the influence of the three indicators on average turnover of the main retail companies in Romania. For the first model that expresses the interdependence of the average turnover (AT) and average number of employees (ANE) we have applied linear regression analysis method which has the following equation:

$$AT = \beta_0 + \beta_1 \cdot ANE + \varepsilon_{it} \qquad (1)$$

The second model reflects the interaction between average turnover (AT) and average number of employees (ANE) and Internet users (IU) and individuals having ordered/bought online (IOBO), and it uses the following multiple regression equation:

$$AT = \beta_0 + \beta_1 \cdot ANE + \beta_2 \cdot IU + \beta_3 \cdot IOBO + \varepsilon_{it} \qquad (2)$$

Where β_0 – intercept, express influence of factors not included in model

$\beta_1, \beta_2, \beta_3$ – regression coefficients that indicate independent variables' effect on the dependent variable

i – retail companies

t - years

As it can be noticed in both models the average turnover (AT) is the dependent variable, the other variables representing independent variables.

3. Main findings

The predictions for the first model and the results of the linear regression analysis are presented in Table 3.

Table 3: ANOVA

					Alpha 0.05
Model 1	**df**	**Sum of Squares**	**Mean Square**	**F**	**Significance F**
Regression	1	2009132.52	2009132.52	123.543038	0.000102757
Residual	5	81313.06105	16262.61221		

Total	6	2090445.581			

From Table 3 we can conclude that Model 1 is statistically significant because *Significance F (P value) < 0.05.*

The predictions for the second model and the results of the multiple regression analysis are presented in Table 4.

Table 4: ANOVA

Model 2	df	Sum of Squares	Mean Square	F	Significance F
Regression	3	2055489.499	685163.2	58.802057	0.003652447
Residual	3	34956.08161	11652.03		
Total	6	2090445.581			

From Table 4 we can conclude that Model 2 is significant statistically, because *Significance F (P value) < 0.05.*

Table 5: Regression Statistics

Model	Explanatory variables	Regression Coefficient	t Statistic
1 R Square 0.961 Adjusted R^2 0.953	Intercept	-131.09	-0.457
	Average number of employees	0.602	11.115
2 R Square 0.983 Adjusted R^2 0.966	Intercept	-667.35	-1.77
	Average number of employees	0.396	2.86
	Internet users	226.46	1.90
	Individuals having ordered/bought online	-2.347	-1.916

Dependent variable : average turnover

In the first model Multiple R is 0.98, which shows a very strong link between the average turnover of the main retail companies and the average number of employees.
R Square (the coefficient of determination) is 0.961, meaning that 96.1% from the variation of the average turnover of the main retail companies can be explained by its linear relationship with the average number of employees. Adjusted R Square provides a better estimation of R^2.
The equation of the linear regression has the following form:

$$AT = -131.09 + 0.602 \cdot ANE + \varepsilon_{it} \tag{3}$$

The increase of the average number of employees by one value unit leads to an increase of average turnover with 602.000 lei.

Figure 1 for model (1) shows a linear dependence trend (straight shape) between the two variables which justify the choice.
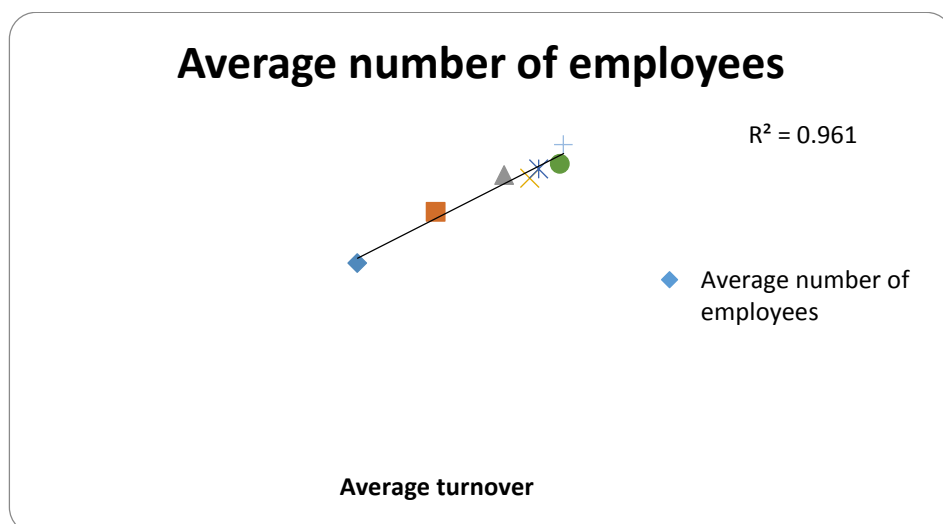
Figure 1: The relationship between the average turnover and the average number of employees
Source: made by the author

However, it is important to keep in mind that the linear relationship that has emerged is not perfect, because all points on the scatter diagram belong to the line that we scattered, resulting the need to introduce an error ε_{it}.
In model 2 we used the average turnover for the dependent variable and the remaining variables we considered them independent, as can be noticed in Table 5. The equation of the multiple linear regression has the following form:

$$AT = -667.35 + 0.396 \cdot ANE + 226.46 \cdot IU - 2.347 \cdot IOBO + \varepsilon_{it} \qquad (4)$$

This model shows that at an increase of one unit of the average number of employees, the turnover increases on average with 396.000 lei. As well as at an increase of one unit in the number of people using the Internet, turnover increases on average with 226.46 million lei.
The two models offer almost a perfect fit for the data (95.3% Adjusted R Square respectively 96.6% Adjusted R Square).

4. Conclusions
This study uses data at company level in Romania and data taken from the Eurostat website to examine the connection between the main performance indicators and Internet usage indicators.
In this paper we used regression analysis for the first linear model because our goal was to describe the relationship between two variables based on observed data and to predict the value of the dependent variable based on the value of the independent variable. For model 2 we used multiple linear regression which uses more than one independent variable.
The results lead us to conclude that the expansion of retail chains lead to an increase in average turnover and an increase in average number of employees, the more pronounced

increase is noticeable in 2007. Retail companies, taking into account the development of the IT sector, may stimulate faster the economic growth.

The analysis performed using the two linear regression models show the existence of a strong relationship between the number of employees and turnover of the main retail companies.

The result of the study paper is to evidence the fact that the increase in the number of employees in the retail sector will lead to the increase of their turnover.

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THE EFFECT OF ORGANIZATIONAL CULTURE ON IT EMPLOYEES TURNOVER INTENTION IN ISRAEL

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Abstract: *Employee voluntary turnover is very expensive from the point of view of the organization, has significant negative effects on the organization and hence remains a critical issue for organizations.Most of the causes discussed in the literature are classic causes coming from conservative theories such as psychological and sociological organizational behavior etc. Field literature review shows that these general causes affecting voluntary turnover intention could be grouped in the following broad categories: 1) organizational causes, related to: Human Resource Management (HRM), organizational culture, job structure and content, leadership style and internal marketing strategies, policies and practices; 2) extra organizational causes, related to: individual characteristics and labor market aspects. One of the classical causes of voluntary turnover that has been researched but still needing attention is organizational culture. The purpose of this paper is to present a new explanation of the phenomenon of voluntary turnover of IT employees in the IT sector in Israel, i.e. from the corporate culture perspective. It focuses on the correlations between organizational culture and voluntary turnover intention among IT employees in Hi-Tech companies in Israel. This correlation was researched in an extensive empirical study among two population groups: IT employees and IT managers and by means of mixed methods research (combination of quantitative and qualitative research).The findings show that only one type of organizational culture influences voluntary turnover intention:Type C Marketing culture, which focuses on results and objectives. It is also shown that this type of organizational culture has a positive effect on voluntary turnover intention among IT employees in Hi-Tech companies in Israel. This finding has to be adopted by IT organizations and management who have to develop a way to prevent voluntary turnover among IT employees and have to develop an organizational culture or policy to retain this expensive IT human resource in Hi-Tech companies.*

Introduction

Employee voluntary turnover remains a critical issue for management because of its negative implications for organizations. Yet little research has been carried out regarding the reasons for employees' voluntarily leaving the IT sector. Thus, researchers' ability to explain and predict employees' voluntary turnover remains limited. In light of this, the questions that arises is why employees voluntarily leave their jobs in the IT **s**ector?

In a previous study (Kessler-Ladelsky and Catana, 2013) the following organizational causes of turnover intention were found: Human Resource Management related, organizational culture, job related, leadership and internal marketing related. This article will focus on one of the organizational causes of voluntary turnover, i.e. the effect of

organizational culture on voluntary turnover intention among IT employees in in Hi-Tech companies in Israel.

Literature Review and Hypothesis

Organizational culture is posed in the literature as a many-sided abstraction with several dimensions which have varying degrees and direction of impact on employees' behavior (e.g., Sheridan, 1992; Song, Tsui et al, 2009). Kym and Park (1992) proposed that turnover can be explained as a misfit between the corporate culture and that of IT department (Ibid).

Researches about organizational culture perceptions and voluntary labor turnover are uncommon. Positive perceptions of organizational culture correlate to longer length of employment, (Madaus et al., 2008).Organizational culture was found to have an affect on organizational behavior and may be proposed as a potential moderator of voluntary turnover. Tziner et al., 2012, in their study hypothesized the moderating effects of the dimensions of organizational culture on the relationship between Organizational Citizenship Behavior (OCB) and turnover intentions. In another study organizational culture dimensions only partially met the initial requirement for a variable to be defined as moderator, where the variable was linearly uncorrelated to the predictor variable and was also uncorrelated to the criterion variable (Ibid and in Zedeck, 1971; Keppel and Zedeck, 1989). In addition results from a sample of 102 employees showed solid support for the interactive effects of the dimensions of organizational culture and OCB in relation to turnovr intentions (Cohen and Zaidi, 2002; Tang and Wang, 2005). In addition, there is evidence that perceptions of organizational politics, which can be highly salient aspects of organizational culture, were positively related to turnover intentions (Chang et al.,2009). In earlier studies researchers concluded that organizational culture affected organizational behavior and was partly responsible for turnover intentions (Carmeli, 2005). Based upon the above literature findings, the following hypothesis is formulated:

H1: It will be found that organizational culture has different effects on employees' voluntary turnover intentions. (This is beyond the variables of gender, age, origin, marital status, education, wage).

Components of organizational culture are not uniform. Therefore, the relationship of each of them with the variable voluntary turnover intention was examined, as follows**:**

H1.1 Organizational culture from Type A - Clan Culture will reduce voluntary turnover intention.

H1.2 Organizatio nal culture from Type B – Adhocracy will raise voluntary turnover intention.

H1.3 Organizational culture from Type C – Marketing will raise voluntary turnover intention.

H1.4 Organizational culture from Type D – Hierarchy will reduce voluntary turnover intention.

Methodology

The article is a part of the author's doctoral work in progress which examines the causes *and conditions of voluntary turnover among IT employees in the IT sector in Israel.* The research was mix method research and carried out among IT employees and IT managers. *This article will refer to the IT employees quantitatve resraech only.*

Research Population

IT employees in Hi-Tech companies in Israel, who have worked in this sector for at least three years prior to the study (programmers, developers, computer engineers, information systems engineers, software engineers, mobile and telecom developers, R&D developers, electronics and hardware engineers, software testers, and IT practical engineers/technicians and so forth).

The population of interest belongs to 500 Hi-Tech companies in Israel with more than 50 employees (no startup companies) and some global companies (like Microsoft).

Research Procedure

A pilot questionnaires was developed for the employees' population. An employee questionnaire (completing time 25-45 minutes) was administered to 30 randomly selected IT employees. The distribution of the population (including Skewness and Kurtosis indices) and reliability indices showed that the sample of IT employees had a normal distribution and supported parameters tests.

Data Collection

IT employees: 350 questionnaires were submitted, as follows:

- 50 to employees working in IT companies (access to them was by mail, at the company's address). The response rate was 90%.
- 100 to IT employees known through personal connections and networking. The response rate (via mail) was 25%
- 200 questionnaires delivered to students in computer science, business administration with specialization in computers, software engineering, and computer engineering / science in the second or third year of undergraduate studies and postgraduate levels, already working as IT employees in development roles in Hi-Tech companies (delivered in the classes and by email). 50% of the questionnaires were completed and returned.

It has to be mentioned that it was decided to use students in the sample due to the difficulty and delay in obtaining approval to deliver questionnaires from Israeli IT companies (domestic and international). Using part of the working day to fill in the questionnaire involved high transaction costs (high hourly salary of this type of worker) at the employer's expenses.

170 completed questionnaires were returned in two stages: November 2012 to December 2013 and February 2013 to July 2013.

Data Analysis

Hypotheses testing for fitting to normal distribution were done with the Kolmogorov - Smirnov test. Skewness and Kurtosis indices were found to be smaller than +3 /- 3. Hence it was concluded that the dependent variable was normally and symmetrically distributed and therefore parametric tests were conducted (GLM Univariate linear regressions). In comparison to the workers' sample results, in the managers' sample it was found that almost all the answers were not normally distributed and thus non-parametric statistics was carried out in order to test the hypotheses (Mann Whitney test that compares the distributions and results between groups). The empirical data was processed for both samples with SPSS 21 and for the IT employees only in AMOS 21 (structural equations models, SEM) as well.

With regard to the structural equations (SEM) the research model was partially supported by regression and correlation tests which were done by SPSS on the IT employee sample. The validation of the theoretical model and the relationship between all the variables were tested by structural equations - SEM and by AMOS 21 on the IT employee sample, only.

Thus, from all hypotheses reinforced in SPSS, the SEM model was built, with the variables normally distributed.

Measures
The Dependent Variable
Voluntary turnover intention Questionnaire (Based on Price, 2001)
Three items of four (Q11.1-Q11.4) in the voluntary turnover intention questionnaire (Q11.4 was dropped after pilot) were used for measuring voluntary turnover intention (from Price, 2001). An example is, "I would like to quit my job at [Company]". The scale moved from 1 - "strongly disagree" to 5 – "strongly agree".
The internal consistency for this scale (after pilot) in Timmerman et al.'s study (2003) was 0.85. The internal consistency in the current study of the 3 item scale was 0.8.
Two additional items were added to the above mentioned ones to measure the employee intention to voluntarily leave the organization: Q27 "I intend to remain in my profession but leave the organization at or before the end of this year" (Alfa Cronbach coefficient for inter item reliability was 0.93) (Nunnally, 1978) and Q26 "What are the chances that you will remain in the profession but leave the organization at or before the end of the year?" (5-point scale: 1=no chances; 5 =100% chance; Alfa Cronbach coefficient for inter item reliability was 0.83 (Nunnally, 1978).
Item Q26 was deleted after the reliability test. Without the deleted item the scale showed the same reliability. Namely if one of the items was deleted, the Alfa Cronbach coefficient would rise from 0.1 to 0.6. This points to the fact that these two items have the same meaning. That is why one of them was deleted. Between the remaining items, reliability testing was carried out and the internal consistency value was 0.9. The mean of the items was calculated and the new variable was called *Voluntary Turnover*.

The Independent Variable
Organizational Culture – was measured by questions adopted from:
Organizational Culture Questionnaire (Based on Cameron and Quinn 1999). They developed an organizational culture frame that was based on a theoretical model which was labeled the "Competing Values Framework." This framework relates to the question whether a company has a dominant internal or external focus and whether it aspires for suppleness and individuality or stability and control. The frame is also based on six organizational culture dimensions and four dominant culture sorts (i.e., clan, adhocracy, market, and hierarchy). Additionally the frame authors created an "Organizational Culture Assessment Instrument (OCAI)" which is used to recognize the organizational culture profile based on the core values, postulations, interpretations, and approaches that characterize companies (Cameron and Quinn, 1999).
Thus, the quantitative survey instrument used in the study was the Organizational Culture Assessment Instrument (OCAI) and specifically "assesses six key dimensions of organizational culture: dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and the organization's criteria of success" (Cameron and Quinn, 1999:19). Cameron and Quinn (1999) state: "The instrument is in the form of a questionnaire that requires individuals to respond to six items. Although there are a variety of ways to assess organizational culture, this instrument has been found to be both useful and accurate in diagnosing important aspects of an organization's underlying culture. It has been used in more than a thousand organizations and it has been found to predict organizational performance. Its intent is to help identify the organization's current culture (Cameron and Quinn, 1999:19, 23)." The same instrument helps identify the culture organization members think should be developed to match the future demands of the environment and the challenges to be faced by the company (Ibid: 18).The OCAI has six categories in which each respondent

has to divide 100 points between four sub-items/styles for each that represent the four competing values cultures, as followes:
- Type A style indicates a Clan culture
- Type B style indicates an Adhocracy culture
- Type C style indicates a Market culture
- Type D style indicates a Hierarchy culture

Table 1- Category and Style: Cameron and Quinn (1999)

	Category	Style
1.	Dominant organizational characteristics	A: Personal, like a family B: Entrepreneurial, risk taking C: Competitive, achievement oriented D: Controlled and structured
2.	Leadership style	A: Mentoring, facilitating, nurturing B: Entrepreneurial, innovative, risk taking C: No-nonsense, aggressive, results oriented D: Coordinating, organizing, efficiency oriented
3.	Management of employees	A: Teamwork, consensus, and participation B: Individual risk taking, innovation, freedom and uniqueness C: Competitiveness and achievement D: Security, conformity, predictability
4.	Organizational glue	A: Loyalty and mutual trust B: Commitment to innovation, development C: Emphasis on achievement and goal accomplishment d: Formal rules and policies
5.	Strategic emphasis	A: Human development, high trust, openness B: Acquisition of resources, creating new challenges C: Competitive actions and winning D: Permanence and stability
6.	Criteria for success	A: Development of human resources, teamwork, concern for people B: Unique and new products and services C: Winning in the marketplace, outpacing the competition D: Dependable, efficient, low cost

Source: Cameron and Quinn, 1999

OCAI - Reliability
The Comparison Reliability Coefficients according to the culture type are presented in the table below:

Table 2: Comparison Reliability Coefficients (Cameron & Quinn, 1999)

	The culture Type according to Camron and Quinn (1999)	Reliability Comparison Coefficients*
1.	Clan	.82
2.	Adhocracy	.83
3.	Market	.67
4.	Hierarchy	.78

Source: Cameron and Quinn, 1999

Lawrence and Quinn (2003) showed that in the later research of Cameron & Quinn the distribution of the reliability coefficients vary. However the average of the coefficients it is always above 0.7 (Ibid).

In this research each of the IT employee respondents completed the OCAI once. The OCAI was scored as the respondents currently perceive the culture of the organization. This was because this research examined the organizational culture as it was at that point in time and how the respondents would like to see the organization's culture five years into the future was not relevant. For this reason, the second OCAI was not required to be completed and scored. The questionnaire was perceived a little complicated to fill. In light of this it seemed that if only one questionnaire was relevant to the research and if it was possible to split the questionnaires and deliver only one questionnaire then this would facilitate the completion of the questionnaires by the respondents.

In this research the reliability of the instrument was tested. To assess the reliability of the scales used in the questionnaire, a coefficient of internal consistency was calculated for current situations using Cronbach's Alpha methodology (Santos, 1999). The reliability of the scale (after pilot) in this research was: For Type A- clan culture type: (α = .8); For Type B – adhocracy culture (α = 0.7); For Type C- market culture (α = .8); For Type D – hierarchy culture (α = .0.7). This was similar to the research carried out by Camron & Quinn, 1999, 2000. In order to compute the mean of all the index reliability tests were done on every index. The Alpha Cronbach that was received was 0.8. The accepted reliability testing is about a group of items and not for all the culture indices. Accordingly the mean of the sub groups were done as follows: Clan culture mean was done while after it Type A culture was called TypeA_clan_cul. Type B which is Adhocracy culture was called after doing mean TypeB_adhoc_cul. Type C which is Market culture was called after doing mean TypeC_Market_cul and TypeD which is Hierarchy culture was called after doing mean Type_D_Hiera_Cul.

Findings and Discussion

The proposed hypothesis of this study was:

It would be found that organizational culture effects an employee's voluntary turnover intentions differently . (That is beyond the variables of gender, age, origin, marital status, education, wage).

Components of organizational culture are not uniform. Therefore the relationship of each of them with the variable voluntary turnover intention was examined.

SPSS Findings

For the hypothesis examination Univariate Glm regression was done. That is because there was an independent categorical variable. In the first stage the regression was run with the organizational culture variable but without the demographic intervention variables. This variable was built from four sub variables (which are culture types) that are Type A - ClanType B-Adhoc ,Type-C Market ,Type D- Hiera .It was found that there was

no relation between them, therefore they were initially entered into the model simultaneously as independent variables. without the demographic controlled variables. Before entering the demographic controlled variables, only the sub culture variable Type-C Market was found significant (B=0.019, P=0.020). This points to a stable model. In the second stage after the intervention variables were entered into the regression and were controlled the correlation of Type-C Market strengthened (B=0.02, P=0.018).However in Bootsrap that was done the signicance that was found was P=0.05 in comparison to what it had been (P=0.02). Namely, the interventionvariables slightly moderated the relationship between organizational culture Type-C Market and voluntary turnover but still the variable organizational culture Type_C Market had a significant effect on decreasing of turnover intention. This was not found in other types of organizational culture. The hypothesis was partially confirmed among IT employees in the Hi-Tech sector in Israel in practice

SEM Findings and Comparison Of SEM findings to the SPSS Findings
In hypothesis testing with SEM (Structural Equation Model) by Amos on the IT employees it was also found (as in Spss) that the variable organizational culture from Type-C Market increased voluntary turnover intention (B=-0.24, P<0.001).That is through the latent variable internal causes of voluntary turnover that was found to decrease voluntary turnover intention (B=-0.90, p<0.001). This is similar to the findings in the hypothesis testing undertaken in SPSS with regard to the IT employees.

In addition it was found in the SEM model that the variable having the most significant effect on voluntary turnover intention was organizational focus on values (B=0.51, P<0.001), while the second was IM (internal marketing) (B=0.41, P<0.001).The third variable with the mostt significant effect on voluntary turnover intention was organizational culture – Type-C Market (B=-0.24, P<0.001). The fourth variable having the most significant effect on voluntary turnover intention and explaining of it was need fulfillment (B=0.15, P<0.001)

*Namely, The hypothesis was partially supported among the IT employees also in SEM analysis.*However this finding was supported both in the SPSS and in SEM (by Amos).

The Correlation to the Literature
The employees sample findings supported the literature according to which
organizational culture is viewed as a multifaceted abstraction with several dimensions which have varying degrees and directions of impact on employees' behavior (e.g., Sheridan, 1992; Song et al., 2009). Kym and Park (1992) proposed that turnover can be explained as a misfit between the corporate culture and that of the IT department (Ibid). In addition, there is evidence that perceptions of organizational politics, which can be highly salient aspects of organizational culture, are positively related to turnover intentions (Chang et al., 2009). Additionally in earlier studies researchers concluded that organizational culture affects organizational behavior and is partly responsible for turnover intentions (Carmeli, 2005).

The research result supported the literature. In the research it was found that only one type of organizational culture effects voluntary turnover intention and that is organizational culture Type-C Market. It was found that this type of culture which focuses on results and objectives positively affects voluntary turnover intention namely increased IT employees' voluntary turnover intention.

Conclusion

The research findings offer specific answers to the hypothesis presented above:

The findings lead to the conclusion that the reason for IT voluntary turnover intention is mainly at the organizational level.

The results support partially the literature in which, as was mentioned, researchers concluded that organizational culture is partly responsible for turnover intentions (for e.g. Carmeli, 2005). Partially in the sense that not all organizational culture types were found to affect voluntary turnover. In this research, it was found that organizational culture Type-C Market correlated significantly relate with the hypothesis and its effect on turnover intention.

The findings that organizational culture Type-C Market increase voluntary turnover is innovative and does not appear in the literature so far. This means that setting goals as a means through which employees are encouraged to achieve corporate objectives does not assist in preventing the voluntary turnover of development employees (IT employees) and of the best IT employees in development but increases their turnover intentions.

Turnover can be explained as a misfit between corporate culture and that of its IT department (Kym and Park, 1992). The research shows that culture which is result focused and usually accompanied by measurement of goal achievement does not fit with IT employees in Hi-Tech companies and leads to voluntary turnover among them.

Hence, if Hi-Tech Companies want an organizational culture that focuses on results it has to develop simultaneously another policy that will retain its IT employees.

One of the main results which emerged from the extensive PHD research indicated that internal marketing (IM) reduced voluntary turnover intention [Coefficient by Spss among IT employees (B=-0.258, P=0.0001/P<0.001) and among managers (Mean=5.18, P=0.000). Coefficient By SEM (B=0.41, P<0.001) that is through the latent variable internal causes to voluntary turnover that decrease voluntary turnover intention (B=-0.90, P<0.001)]. Thus, it may be that the assimilation or integration of a policy of internal marketing parallel to the assimilation of Type_C Marketing Culture or management by objective style will prevent the development of voluntary turnover intentions among IT human capital and assist in the retention of these employees. This study recommends the continuation of this topic for future research.

This research limitation is that it was carried out with a sample of 170 IT employees only and this may create problems with external validation. The reasons for such a limited sample is the lengthy approval processes required in Hi-Tech companies for distribution and completion of questionnaires because of the cost to the company. As the wage costs of IT employees are high this can be expensive for the company. To overcome this limitation, the hypotheses and model were tested on 140 IT managers in IT companies (and in this case, too, it took time to get permission to administer questionnaires and was only achieved with the assistance of the Israeli Research Unit of the Ministry of Economy).

Beyond this limitation, the findings offer new theoretical and practical insights into the causes of IT voluntary turnover intention and IT human capital retention for researchers, Human Resources and organizational development managers and consultants. They light that fact that from one hand organizations achieve by Type_C Marketing employees' meetingin objective but on the other hand further inspection leads to voluntary turnover and as a result, to many negative consequences, particularly economic, for the organization. For this reason, it is recommended to implement, in parallel, a policy in the organization to deal with and prevent voluntary turnover intention, which might be internal marketing.

Future study, In light of the results that are described above, it is important to conduct future research that examines whether organizational culture is a moderator variable of voluntary turnover. Namely if internal marketing decreases voluntary turnover intention and if the organization or the IT department adopt an internal marketing policy in

comparison to the fact that he is not. That is also within the larger IT population in Israel as well as overseas Hi-Tech companies. This would make it possible to compare results and generalize the findings internationally so that prevention policy mechanisms may be developed.

Finally, it is believed that organizational problems are internal, not external and therefore, implementation of Type_C_Culture (focus on results culture) must be accompanied by mechanisms or policies that create the opportunity to harness employees' commitment, and increase staff retention.

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THE EFFECT OF JOB SATISFACTION ON IT EMPLOYEES TURNOVER INTENTION IN ISRAEL

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Abstract: Employee voluntary turnover is very costly for companies, particularly for the Hi-Tech sector, where the costs of their IT labor force is expensive. Employees' voluntary turnover has substantial negative impacts on the companies especially costs, potential loss of valuable knowledge, skills and organizational knowledge.That is why it becomes a critical issue to take address. Studies have been carried out *on the reasons which lead to this tendency, however* the ability to explain and predict it remains restricted.The objective of this paper is to present *the reasons for* voluntary turnover of employees in the IT sector in Israel *from the IT employees` perspective*. A broad analysis of the field literature led to the following groups of causes affecting voluntary turnover: organizational causes: Human Resource Management (HRM) related, organizational culture, job related, leadership and internal marketing related; extra organizational causes: individual and, respectively, labor market related causes. This could be approached as n light of this review this article will focus on one of the extra organizational causes of voluntary turnover, i.e. the effect of job satisfaction on voluntary turnover intention among IT employees in Hi-Tech companies in Israel. This correlation was researched in an extensive empirical study among two population groups: IT employees and IT managers and by using mixed method research (combination of quantitative and qualitative research).The findings that supported the literature show *job satisfaction* has a negative effect on voluntary turnover intention among IT employees in Hi-Tech companies in Israel. Additionally, it was found that job satisfaction indirectly affects voluntary turnover intentions and that emotional variables such as commitment, motivation and loyalty mediate voluntary turnover intention.This finding is supported partially in the literature which only pointed out commitment as a mediating factor in the relationship between job satisfaction and voluntary turnover intention. The finding in this research should be *adopt*ed by IT organizations and managements who should develop a way *to prevent voluntary turnover among IT employees and develop a route to increase their employees' job satisfaction and from that point to reduce voluntary turnover intention and retain this expensive IT human resource in Hi-Tech companies.*

Key Words: Voluntary turnover intentions; commitment; IT sector employees in Israel; Job satisfaction; internal marketing (IM); loyalty (NPS)
JEL Classification System: J2 , M13, M14 M31, M15, O14

Introduction
Employee voluntary turnover remains a critical issue for managements because of its negative implications for organizations. Yet fewer studies have been done about the reasons for employees voluntarily leaving the IT sector. Thus, researchers` ability to explain and predict employee`s voluntary turnover remains limited. In light of this the question that arises is why employees voluntarily leave their jobs in IT sector in Israel?
After a widespread analysis of the field in the literature, we arrived at the following clusters of causes affecting voluntary turnover intention: 1) *organizational causes*: Human Resource Management (HRM) related, organizational culture, job related, leadership and

internal marketing related; 2) *extra organizational causes*: individual and, respectively, labor market related causes (Kessler-Ladelsky and Catana, 2013).

This article will focus on one of the extra organizational causes of voluntary turnover, i.e. the effect of job satisfaction on voluntary turnover intention among IT employees in in Hi-Tech companies in Israel.

Literature Review and Hypotheses

Judge and Hullin (1993), organizational behavior researchers, argued that employees' job satisfaction is linked to eight rudiments. Among them absenteeism and turnover rate (Judge & Hullin, 1993). Researchers agree that the lack of employee job satisfaction in an organization leads to problems of absenteeism, lack of commitment and an increase in turnover rate. Employee job satisfaction was found to be a good predictor of retention of a highly skilled and experienced labor force in an organization (Alexander, Litchtenstein, & Hellman, 1998; Hellman, 1997). A certain study revealed that the job satisfaction variable is negatively related to voluntary turnover intentions (Carmeli, 1991; O'Reilly et al., 2005). Moreover, it was found that it is one of the variables determining voluntary turnover (Borda & Norman, 1997). Turnover models suggested a multifaceted process, indicating that job satisfaction is related first and foremost to turnover intentions. In other words, if job satisfaction is sufficiently low, the employee will develop an intention behavior of job withdrawal (Yeith Chen et al., 2004; Appelbaum et al., 2003; Freund, 2005). The intention may lead to a search for alternatives (Mano-Negrin & Tzafrir, 2004), which may result in actual turnover, if yielding the desired outcomes (Spector, 1977). Based upon the above literature findings, the following hypothesis was formulated:

Hypothesis 1: It will be found that employee job satisfaction is associated negatively with voluntary turnover intentions.

Most researchers are concerned with voluntary turnover intentions (VTI) in organizations and it is commonly held that VTI is dysfunctional, negatively influencing organizational effectiveness [i.e. the degree to which organizations achieve their objectives] (Hom and Griffeth, 1995). VTI is "a conscious and deliberate willfulness to leave the organization" (Tett and Meyer 1993, p. 262). It is thinking about voluntarily leaving one's current job and it is the best and most immediate predictor of turnover. However, intention to leave the workplace was found to be fully mediated by affective commitment (Hall and Moss, 1998; Hsu, *et al.*, 2000; Steel, et al., 2002).

From the literature described above , the following hypothesis was formulated:

Hypothesis 2: It will be found that job satisfaction effects indirectly on voluntary turnover intentions.

The review of literature for the research topic has revealed that certain factors have led to employee turnover in the information technology workplace. It showed that those factors are emotional intelligence (EI) or emotional quotient factors and in general belong to the emotional content world. For example, Kreisman (2002) found that the following drivers have contributed to employees voluntarily departing from Hi-Tech companies: Lack of respect for communication with management, an agglomeration of indignation based on one or more triggering events, and some ongoing interaction with a manager that has pushed the employee over the edge. Burnes (2006) also identified inadequate management communication as a motivator for voluntary employee turnover among Generation X information technology professionals. Departing IT employees have also cited lack of faith and lack of belief in the company (Burnes, 2006). It seems that leaders of the organizations have failed to promote the "trust, group identity and group efficacy" identified by Cherniss and Goleman (2001, p. 133) as components of Emotional Intelligence or the emotional world of content needed to enhance cooperation, collaboration, and partnership in the company and among IT employees. To be

successful, as Yukl (2006) mentioned, leaders in technical environments need to have EI or emotional skills in addition to theoretical and technical knowledge. Based on a study conducted by Stephens (2007), lack of EI among leaders (and among other populations) appeared to be a factor in IT employee turnover (Stephens, 2007). Leaders have viewed employee turnover as a negative except for the involuntary turnover of low performing employees, leading to the belief that if organizational leaders select the correct frontline leader, they might reduce employee turnover (Stephens, 2007).

From the literature review it appears that emotional components effect voluntary turnover of IT employees. *Thus it can be assumed* that the emotional variables might be an intervention variable between voluntary turnover and other variables as follows: *job satisfaction reduces voluntary turnover intentions while neutralizing the intervening variable (that was called the emotional variable and includes three variables, loyalty to workplace, motivation to work and commitment to work).*

This three indices might oppose one another. Therefore each of them will be examined as an intervention variable in the relationship between job satisfaction and voluntary turnover intentions as follows:

Hypothesis 2.1:   *Job satisfaction reduces voluntary turnover intentions while neutralizing the loyalty variable.*

Hypothesis 2.2:   *Job satisfaction reduces voluntary turnover intentions while neutralizing the motivation to contribute variable*

Hypothesis 2.3:   *Job satisfaction reduces voluntary turnover intentions while neutralizing the commitment variable. As follows:*

Hypothesis 2.3.1:   *Job satisfaction reduces voluntary turnover intentions while neutralizing the affective commitment.*

Hypothesis 2.3.2:   *Job satisfaction reduces voluntary turnover intentions while neutralizing the normative commitment.*

Hypothesis 2.3.3:   *Job satisfaction reduces voluntary turnover intentions while neutralizing the continuance commitment.*

Methodology

The article is a part of the author's doctoral work in progress which examines the *causes and conditions of voluntary turnover among IT employees in the IT sector in Israel.* The research was mixed method research and carried out among IT employees and IT managers. *This article will refer to the IT employees quantitatve research only.*

Research Population

IT employees in Hi-Tech companies in Israel, working in this sector for at least three years prior to the study (programmers, developers, computer engineers, information systems engineers, software engineers, mobile and telecom developers, R&D developers, electronics and hardware engineers, software testers, and IT practical engineers/technicians and so forth).

The population of interest consists of employees of 500 Hi-Tech companies in Israel with more than 50 employees (no startup companies) and some global companies (like Microsoft).

Research Procedure

A pilot questionnaire was developed for the employees population. An employee questionnaire (completing time 25-45 minutes) was administered to 30 randomly selected IT employees. The distribution of the the population (including Skewness and Kurtosis

indices) and reliability indices showed that the sample of IT employees had normal distribution and supported parameter tests.

Data Collection

IT employees: 350 questionnaires were submitted, as follows:
- 50 to IT employees working in IT companies (access to them was by mail, at the company's address). The response rate was 90%.
- 100 to IT employees known through personal connections and networking. The response rate (via mail) was 25%
- 200 questionnaires delivered to students in computer science, business administration with specialization in computers, software engineering, and computer engineering / science in the second or third year of undergraduate studies and postgraduate levels, already working as IT employees in development roles in Hi-Tech companies (delivered in the classes and by email). 50% of the questionnaires were completed and returned.

It has to be mentioned that it was decided to use students in the sample due to the difficulty and delay in obtaining approval to deliver questionnaires from Israeli IT companies (domestic and international). Using part of the working day to fill in the questionnaire involved high transaction costs (high hourly salary of this type of worker) at the employer's expenses.

170 completed questionnaires were returned in two stages: November 2012 to December 2013 and February 2013 to July 2013.

Data Analysis

Hypotheses testing for fitting to normal distribution were done with Kolmogorov - Smirnov test. Skewness and Kurtosis indices were found to be smaller than +3 /- 3. Hence it was concluded that the dependent variable was normally and symmetrically distributed and therefore parametric tests were conducted (GLM Univariate linear regressions). In comparison to the employees' sample results, in the managers' sample it was found that almost all the answers were not normally distributed and thus non-parametric statistics was carried out in order to test the hypotheses (Mann Whitney test that compares the distributions and results between groups). The empirical data was processed for both samples with SPSS 21 and for the IT employees only also in AMOS 21 (structural equations models, SEM).

With regard to the structural equations (SEM) the research model was partially supported by regression and correlation tests which were done by SPSS on the IT employee sample. The validation of the theoretical model and the relationship between all the variables were tested by structural equations - SEM and by AMOS 21 on the IT employee sample only. Thus, from all hypotheses reinforced in SPSS, the SEM model was built, with the variables normally distributed.

Measures
The Dependent Variable
Voluntary turnover intention Questionnaire (Based on Price, 2001)

Three items of four (Q11.1-Q11.4) in the voluntary turnover intention questionnaire (Q11.4 was dropped after pilot) were used for measuring the voluntary turnover intention (from Price, 2001). An example is, "I would like to quit my job at [Company]". The scale moved from 1 - "strongly disagree" to 5 – "strongly agree".

The internal consistency for this scale (after pilot) in Timmerman et al.'s study (2003) was 0.85. The internal consistency in the current study of the 3 item scale was 0.8.

Two additional items were added to the above mentioned ones to measure the employee intention to voluntarily leave the organization: Q27 "I intend to remain in my profession

but leave the organization at or before the end of this year" (Alfa Cronbach coefficient for inter item reliability was 0.93) (Nunnally, 1978) and Q26 "What are the chances that you will remain in the profession but leave the organization at or before the end of the year?" (5-point scale: 1=no chances; 5 =100% chance; Alfa Cronbach coefficient for inter item reliability was 0.83 (Nunnally, 1978).

Item Q26 was deleted after the reliability test. Without the deleted item the scale showed the same reliability. Namely if one of the items was deleted the Alfa Cronbach coefficient would rise from 0.1 to 0.6. This pointed to the fact that these two items have the same meaning. That is why one of them was deleted. Between the remaining items, reliability testing was carried out and the internal consistency value was 0.9. The mean of the items was calculated and the new variable was called *Voluntary Turnover_Co*.

Independent Variable

Job satisfaction – was measured by questions adopted from *Job Satisfaction Questionnaire* (Based on Price, 2001)

Six items were used to measure job satisfaction from Price's (2001) 6-item job satisfaction scale (JbSS). Examples of items include, Q12.1 "I am fairly well satisfied with my job" and Q12.4 "I am often bored with my job" (reverse scored). Timmerman et al. (2003) reported an internal consistency for the JbSS of 0.83. In the current study the internal consistency of the 4-item scale (after pilot) was 0.8. After reliability testing was done a mean was calculated and the new variable called Job_Satis was determined.

Findings and Discussion

The proposed hypotheses were:

   Hypothesis 1: It will be found that employee job satisfaction is associated negatively with voluntary turnover intention.

 SPSS Findings

To test hypothesis 1 reversal was done for the scale values of questions 12.3-12.5 which are part of the index of the *employee job satisfaction at work*. These were found to be in a negative direction so that they would be in the direction of the other scale questions/items in this index (insofar as *job satisfaction at work* was higher, then the value of voluntary turnover intention would be more positive).Then the influence of *job satisfaction at work* on intentions for voluntary turnover was tested. At the first stage this influence was tested without the controlled intervening variables and a significant negative correlation was found (B=-0.344, P=0.00007/P<0.001). In other words as *job satisfaction at work* increased then voluntary turnover intentions decreased. Thus Hypothesis 1 was confirmed.

Hypothesis 2: It will be found that job satisfaction effects indirectly on voluntary turnover intentions.

This hypothesis was examined in two stages. the first stage was conducted to test hypothesis 1 a where a significant negative correlation was found (B=-0.344, P=0.00007/P<0.001). following the findings related to of hypothesis 1, was conducted the second stage. In order to test whether there was an indirect connection between *job satisfaction at work* and intentions for voluntary turnover, correlations were first examined between the variables "loyalty", "motivation", "commitment", intentions for voluntary turnover and *job satisfaction at work.* Analysis of the findings indicated that there are no very strong correlations and all the correlations are small. Nevertheless since there is a strong correlation between independent variables such as "normative commitment" and "motivation" (r=0.458) and between *job satisfaction at work* and "motivation" (r=0.432) and also between *job satisfaction at work* and "normative commitment" (r=0.343) and between "affective commitment" and "loyalty (r=0.295) entering the variables into one model can

create a problem of multicollinearity and so theoretically the model should be analysed with regard to each variable separately. Thus it was assumed that:

Job satisfaction reduces voluntary turnover intentions while *neutralizing* the intervention variable that was called the emotional variable (which includes: loyalty to work, motivation to work and commitment to work) while three sub hypotheses refer to this as follows:

<u>Sub-Hypothesis</u> 2.1 posited that: Job satisfaction reduces voluntary turnover intentions while neutralizing the loyalty variable.

<u>Sub-Hypothesis</u> 2.2: posited that: Job satisfaction reduces voluntary turnover intentions while neutralizing the motivation to contribute variable.

<u>Sub-Hypothesis </u>2.3: posited that: Job satisfaction reduces voluntary turnover intentions while neutralizing the commitment variable.

Table 1 presents the correlations between the dependent variable and the independent variables in the regression equation.

Table 1: correlations between the dependent variable and the independent variables *in the regression equation*

	Voluntary turnover	*Loyalty*	*Motivation*	*Affective commitment*	*Normative commiment*	*Continuance Commitment*
Loyalty	-0.26*	-----	0.144	0.295**	0.295	0.083
Motivation	-0.317**	0.144	-----	0.458	0.458**	0.070
Commitment						
Affective commitment	-0.19**	0.295**	0.458	-----	0.293***	0.002
Normative commitment	0.495**	0.295	0.458**	0.293***	-----	0.090
Continuance commitment	0.109	0.083	0.070	0.002	0.090	-------
Job satisfaction	-0.345**	0.142	0.432	0.233**	0.343*	0.030

Source: computed by author
*p≤0.05   **P≤0.01 p≤0.001***

Continuance to the multicollinearity problem that was described above (and can be also seen in Table 1 above) actually the difficulty in including these variables (commitment, loyalty and motivation) within the equation exists if it involves independent variables and does not exist when the inclusion of these variables into the model is as part of the intervening variables. Therefore it is possible to include them in the model under this definition (as intervention variables) despite the fact that there is multicollinearity (between them if they were considered as independent variables. Namely, all the above variables enter the regression GLM model as a single unit and this is together with the controlled variables.

Thus initially the independent variable *job satisfaction at work* was included and the variable "intentions for voluntary turnover" without the controlled variable and the result was found to be significantly negative (B=-0.344, p=0.00007). With the inclusion of the intervening variables (types of organization commitment, loyalty and motivation) a significant negative correlation was found (B=-0.438; p=0.000000/p<0.001) between *job satisfaction at work* and voluntary turnover intentions and the strength of the correlation also increased. It also emerged from the data that since these variables are mediators

because they increase the strength of the correlation they decrease even more the voluntary turnover in comparison with other models. In general it was found that the variable "commitment" further enlarged turnover in comparison with the two other intervening variables and in both cases the result was a significant reduction in voluntary turnover. Thus hypothesis 2 with its three sub-hypotheses was confirmed.

SEM Findings - special findings
In SEM analysis a significant effect of job satisfaction on voluntary turnover intention was not found however in terms of the explained variance of the variables turnover intentions among IT employees it was found that the latent variable which was called the IT employees` emotional dimension (and included the variables commitment, loyalty and motivation) explained 25% of the explained variance of the variables turnover intentions. That is because they effect indirectly on the variable turnover intentions. That is to say, the loyalty and commitment to the work place explained most of the voluntary turnover intention variance among IT employees in Israeli Hi-Tech companies. It also emerged that voluntary turnover intention and development of voluntary turnover intention relate mainly to the latent emotional factor/variable. Namely, voluntary turnover of IT employees was affected by the emotion factor. The variables that were found in SEM analysis to affect the emotional variable/dimension were found to relate to job satisfaction with a covariance of 0.25 and continuance commitment with a covariance of 0.22.

To summarize, it was found that the emotional dimension variable may be explained by all these factors (job satisfaction, organizational culture, economic reliance etc.) connected to in accounting for voluntary turnover intentions.

Results of all hypotheses tests are shown in Table 2 as follows:

Table 2: Summary of the impact coefficients of the IT employees in Hi-Tech companies regarding voluntary turnover intention prediction and summary of the hypotheses which confirmed or rejected:

	Dependent Variable	*Voluntary Turnover intention (VTI) IT Employees (Test and results)*				*Summery of the hypotheses*
The hypothesis	*Independent variables*	*SPSS- GLM Univariate linear regressions - second stage*		*SEM by AMOS*		*Hypothesis Accepted/ rejected*
		B standar-dize	*P*	*B Standar-dize*	*P*	
H1	*job satisfaction*	-0.344	P=0.00007/P<0.001[***]	-0.34	1.000[1]	Accepted in SPSS

H2 Job satisfaction reduces VTI while *neutralizing* emotional variable. H2 *consists of sub hypotheses (H2.1, h2.2, H2.3)*	*job satisfaction*	-0.438	P=0.00007/P<0.001			Accepted in SPSS
R^2 of VTI by emotional variable (commit-ment, loyalty and motivation)				25%		
N		170	170	170	170	170

Source: computed by author $p \leq 0.05^*$ $P \leq 0.01^{**}$ $p \leq 0.001^{***}$ [1] In Amos significant has to be P <0.05

The Correlation to the Literature

The employees sample findings with reference to *Hypothesis 1* support the literature according to which job satisfaction was found to be linked to absenteeism and turnover rate (Judge & Hullin, 1993) and that the lack of employee job satisfaction in an organization leads to problems of absenteeism, lack of commitment and an increase in turnover rate. A certain study revealed that the job satisfaction variable is negatively related to voluntary turnover intentions (Carmeli, 1991; O'Reilly et al., 2005). Moreover, it was found that it is one of the variables determining voluntary turnover (Borda & Norman, 1997). Turnover models suggested a multifaceted process, indicating that job satisfaction is related first and foremost to turnover intentions. In other words, if job satisfaction is sufficiently low, the employee will develop an intention/behavior of job withdrawal (Yeith Chen et al., 2004; Appelbaum et al., 2003; Freund, 2005).

The employees sample findings with reference to *Hypothesis* 2 support the literature. According to it, voluntary turnover intetnion (VTI) is the best and most immediate predictor of turnover and job satisfaction effects indirectly on voluntary turnover Intention. However they only partially supported the liteature on the point that Intentions to leave workplace were found to be fully mediated by affective commitment (Hall and Moss, 1998; Hsu, et al., 2000; Steel, et al., 2002). This intervention variable belongs to emotional intelligence (EI) / Emotional quotient (EQ) variables that in general belong to the emotional content world [for e.g. Kreisman, 2002; Stephens, 2007]. However in the results, it was shown that voluntary turnover intemtion (VTI) is mediated by commitment and it was found, as the variable was

extended voluntary turnover intention was also influenced by other emotional variables such as loyalty and motivation.

Conclusion

The research findings offer specific answers to the hypothesis presented above:

The findings lead to the conclusion that the reason for IT voluntary turnover intention is mainly at the extra organizational cluster of reasons and hence exists at the extra organizational level.

The results support the literature in which it was noted that job satisfaction related negatively to turnover intentions. The results also pointed out the fact that job satisfaction affected indirectly on voluntary turnover intetnion (VTI), but only partially supported the literature according to which VTI is medaited by the commitment variable only. The fact is that it was found that VTI is mediated by variables belonging to emotional intelligence (EI) / Emotional quotient (EQ) variables that in general belong to the emotional content world included loyalty and motivation. That lead to the conclusion that was found in SEM analysis on the employees sample that the emotional dimension (variables) related to job satisfaction and explained 25% of the VTI variance. The SPSS findings also indicated the fact that there is a clear negative effect of job satisfaction on VTI. This lead to the conclusion according to which, if an organization wants to prevent IT employees voluntary turnover or retain IT human resource in the Hi-Tech sector, it has to invest efforts in making the employee more loyal, commited and motivated and more satisied with their work, anamely to harness IT employees from the emotional aspect. This would be through leadership development of mangers in every position or by creating policies which would draw the IT employee to the organization and create a dual relationship of supplier and customer. Such policies might be internal marketing policies or service marketing policies.

This research limitation is that it was carried out with a sample of 170 IT employees only and this may create problems with external validation. The reasons for such a limited sample was the lengthy approval processes required in Hi-Tech companies for distribution of the questionnaire and completion by IT employees because of the cost to the company. As the wage costs of IT employees are high this can be expensive for the company. To overcome this limitation, the hypotheses and model were akso tested on 140 IT managers in IT companies (and in this case, too, it took time to get permission to administer questionnaires and was achieved only with the assistance of the Israeli Research Unit of the Ministry of Economy).

Beyond the limitation, the findings offer new theoretical and practical insights into the causes of IT voluntary turnover intention and IT human capital retention for researchers, Human Resources and organizational development managers and consultants. They illuminate the fact that voluntary turnover intentions are influenced by and dependent upon emotional components and that if companies want to harness their IT employees and prevent voluntary turnover intentions and actual turnover it has to make the employee more committed, loyal and raise their motivation and this can be achieved, for instance, by implementing internal marketing policies.

Future study, In light of the results described above it is important to conduct future research that examines if internal marketing is a moderating variable of voluntary turnover and of the relationship between job satisfaction and voluntary turnover. Namely does job satisfation decrease voluntary turnover intention if an organization or its IT department adopts an internal marketing policy in comparison to those that do not. This should be researched within the larger IT population in Israel as well as overseas Hi-Tech companies.

That is in order to compare results and generalize the findings to other countries that might have to deal with IT employees` voluntary turnover in their organizations and hence enable the development of prevention policy mechanisms.

Finally, it is believed that organizational problems are internal, not external and therefore, if organizations want to raise employees` job satisfaction in order to decrease voluntary turnover they must do so through the strengthing of the emotional component (commitment, loyalty, motivation) and this must be accompanied by mechanisms or policies that create the opportunity to harness employees' commitment, and increases staff retention.The policy suggested but requires further research is internal marketing.

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DECISION IN ACCOUNTING USING TOOLS IT&C

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Abstract: *Taking a management decision is usually a complex endeavour with many stages. Gathering and assimilating information supposes perception processes based on attitudes which are determined by the values and fundamental beliefs of the individual. These values and beliefs are in a large degree tributary to the national culture to which we belong. The role of cultural particularities in forming perceptions becomes a priority of the economic agents, the manager being the catalyst of information, involved in the integration, administering and updating pertinent information, from the thousands of data available by using IT&C. The quality of the decision depends on the qualities, knowledge and aptitudes of the manager, and this is why it is a good idea to attract a greater number of specialists in the decisional process.*

Keywords: *management decision, knowledge, cultural particularities, decisional process*

JEL classification: M15

Introduction

The structure of the decisional process – that is the number, content and the links between the activities (the stages) of the process – didn't find yet a unanimous model, accepted by specialists. One can raise the question: what is the impact of cultural characteristics in taking decisions?

The cultural identity can be defined in five universal dimensions: distance from the power, individualism or collectivism, pre-eminence of masculine versus feminine values, avoiding incertitude and orientation towards long term or short term decisions.

The management of decisional processes supposes applying knowledge, abilities, instruments, techniques and systems for defining, visualising, measuring, controlling, reporting and improving processes, with the aim of satisfying the requirements of clients in a profitable way (Thom W. 2009).

The process is defined as having inputs, outputs and energy required for transforming inputs into outputs. A process needs time in which the action associated to it is performed. A process also requires space for inputs/outputs and for converting inputs into outputs (Dawis, E. P. et al. 2001).

The *set of decisional possibilities* can be a finite or infinite set, depending on the accounting documents on which decisions are taken. In general a series of criteria can be used such as: profit, degree of use of the production capability, price, quality, term for recuperating the investment, the length of the production cycle. The external conditions can be generated by changes in legislation, in the relations between the company and the environment etc.

The *set of consequences* represents the set of potential results that can be obtained according to each decisional criterion and each state of the objective conditions

by applying different decisions. Establishing the consequences constitutes a prediction activity, which cannot always be accomplished with great accuracy because the causes that could lead to their occurrence are not known with certitude.

Decisional objectives represent the level of criteria proposed by managers that can be reached in case of applying the chosen decision case.

Decision is taken according to the profit that was made. The great role of the decision can be understood as the capacity of reaching the objectives that were set, and which depend on the available accounting data.

Planning is a process where the manager analyses the environment, his own possibilities, choses a strategy for establishing the objectives that should be met and the distribution of the financial, human and material means necessary for reaching them. It highlights the will of the manager to act on the future. It is accomplished over several years and is materialized in a set of plans that become essential instruments in the activity of the managers.

By *plan* we understand the document that is written based on some well established procedures.

The formal planning supposes the existence of specialized departments, using some working procedures and elaborating written documents in the form of aggregated plans or on activity domains, for reaching the desired profit.

The informal planning is not based on the existence of specialised planning departments it doesn't use well established methods and procedures and, often, has a discontinuity character. Depending on time, the planning can be:

• Long term or perspective planning has a time horizon of 3-5 years, and contains global statements established based on estimating the commercial policies or the sales predictions that could bring the necessary profit.

• Medium term planning, with a lifespan or 1-3 years, being met in the case of organizations that make products with a long production cycle.

• Planning on short or very short term, known also as current planning, has a time horizon or 1 year or 3 months, one month or even one week.

Literature review

Depending on the relation with the degree of importance of the established indices and the time horizon to which they refer, there exist a strategic planning, a tactical and an operational one.

Strategic planning applies the objectives of the long term strategy adopted by the top management of the organization. The tactical planning refers to the set of operative actions and activities that have to be done at shorter intervals.

Often time's organizations are in such a hurry to get a project started, that conducting risk assessment is viewed as a waste of time, overlooked, or ignored altogether. Ignoring project risks can cause major problems during your project, which is discovered after the damage occurs (Weber P. 2012)

Taking into account that the greatest number of decisions have in mind actions that apply to the future of realising profits, the risk of making the desired profit is very high, but there is also a certain risk that the management has to assume in case it is not achieved.

Methodology

Organization, as a management function, deals with the work as well as with the production and determines exercising the other functions, by ensuring the needed clarifications, in the following issues.

- Who should do what?
- Who and why is responsible?
- What are the communication channels?
- Which is the concrete way of grouping the homogeneous and the specialized activities

Organization is the process by which the action area is established, the resources are being allocated, the manager's responsibilities are delimited and the authority is being delegated, in order to reach the planned objectives under the best possible conditions.

The organizational structure is a system or a network if tasks, reporting and communication relations that ensure:

- the coherence of the activities performed by the members of the organization, individually and in group;
- dividing and coordinating work;
- Achieving planned objectives.

The accomplishment of the organization function is conditioned by the *establishing the organizational structure,* an attribute of the top management, by:

- Defining structural components (departments, directions, sections, service workshops, departments etc.);
- -establishing the type of structure;
- -elaborating documents for presenting these structures.

Establishing and organizing the main departments or the organization is an attribute of the medium management team

The workplace of the manager should have a certain surface and should be fit for performing his current activities and for organizing meetings with lower level managers, organized on ergonomic principles that have to fulfil a series of requirements such as

- commodity;
- comfort;
- an adequate disposition and combination of furniture from a functional and aesthetic point of view;
- the furniture has to be simple, to ensure the correct position of the body parts during the execution of all operations and to correspond to ergonomic and aesthetic requirements;
- normal conditions from the environment point of view;
- An adequate technical endowment with office equipment (computer, printer, internet, phone, interphone, fax, Xerox copier etc.).

The organization of the manager's work takes into account the factors of physical and nervous stress of the environment, that have a direct impact on the quality of work and on the productivity, and also factors of microclimate and nervous stress (temperature, humidity, air circulation, radiations) illumination and noise, colour and light etc.

Optimizing the relations with the subordinates is a way of amplifying the manager's work efficiency by involving them directly for:

- establishing and promoting specific rules in the manager – subordinate relations;
- fluidizing the communication between managers on vertical and horizontal managerial hierarchies;
- the maximum motivation of the subordinates;
- The improvement of the efficiency of the control over the subordinates.

Maximizing the motivation is achieved by: the transparency of the motivational elements, the rotation, the enlargement and the increase in the performance elements of the jobs

Fluidizing the communication is conditioned on the insurance of conditions that guarantee:

- motivation, in the sense of a clear concise approach;
- improving the capacity of expressing themselves and listening by training the managers;
- promoting, with a priority, of the participative management style;
- perfecting the organizational structure;
- rationalising the informational system;
- information of the management.

The *management function* is the function by which the manager interacts with his subordinates, which achieving objectives planned at individual, group or organizational level – and at the level of performance indices. In the *management process*, the influence over the subordinate behaviour can be oriented on tasks and employees.

Management can be defined as a process as well as a feature. As a process, management represents using non-cohercitive influence over the behaviour of one or more subordinates – in order to materialize the activities performed for creating products, performing services and executing work according to the objectives of the organization. By the management process, the manager tries to influence the behaviour of the employees.

Communication is a process of transmission of information between two or more persons in order to establish and respect certain standards, performance indices, to correct deviations from standards and norms etc.

Power represents the quality an individual has to make another individual to achieve what he would not have not from his own initiative.

The *rationality requirements of a management decision* are:
- To be sound from a scientific point of view, that is to be taken according to the accounting data;
- To be authorized, that is to be adopted by the manager who was assigned this task;
- To be appropriate, that is to fit the data provided by accounting;
- To be clear, concise and not contradictory, to not be susceptible to interpretations;
- To be efficient, in order to get the desired result with a minimum effort; thus the decision should be judged according to the effects of their implementation;
- To be complex, that is to comprise all the necessary elements for a correct understanding and, more importantly, for a correct implementation;

There exist more types of decisions, depending on different criteria.

Depending on the *time* horizon for which decisions are taken and their implications on the management objects, there exist:
- strategic decisions, that aim at reaching a certain profit;
- tactical decisions that is adopted for a shorter period of time (around a year) and refer to the important problems (domains) of the company, influencing making the prospected profit;
- current decisions, which is accounting are taken depending on the data from the accounting documents.

Depending on the *number of people* who underlie a decision there exist:
- *Impersonal decisions* that are elaborated and underlined by a single person. Usually such decisions refer to the everyday problems of the company. The more complex the company becomes, the more the number of these decisions decreases.
- *Group decisions*, for which more people are required (group decision makers), or decisions taken collectively.

Depending on the *periodicity* of taking the decisions:
- unique decisions, that are taken only once in a company or are taken at large time intervals, once in a couple of years;

-        repetitive decisions, that are taken repeatedly in a company;
-        periodic decisions, that are taken at regular time internals;
-        random decisions that are repeated regularly.

Depending on the *number of decision* criteria are multilateral decisions, based on two or more accounting acts.

Depending on the *degree of substantiation*, there exist:

• logic decisions, that are taken on a reasoning basis;
• intuitive decisions, taken according to instinct or a presentiment.

The strategic planning, an important stage in the planning of the organization, calls for *prospecting and forecasting*.

• *Prospecting* starts from the assumption that the future doesn't represent just a simple extension of the past, but there doesn't is a predetermined future but a series of possible variants of the future depending on the voluntary actions of the organization.

• Unlike prospecting, forecasting starts from the past and not from the present, in its exploration of the future. There are a couple of forecasting methods that are frequently used: *scenarios method, the multi-criteria qualitative analysis method, the Delphi method, the creative methods by free expression and associations of ideas* etc. After the strategic directions and objectives have been formulated, the next stage is starting the *planning process.*

Results

In the colloquial language, the word "**communication**" has the meaning of "to inform" or "to let someone know". Communication is a process that, from the perspective of the science of communication, has 4 fundamental components: emitter, channel, information and receptor.

This model can be enhanced with three more fundamental elements: coding, decoding, and "background noise". This last communication model allows taking into consideration the communication's success.

By communication we understand the exchange of messages between two or more persons, from inside an organization, in order to meet its objectives as well as the processes of setting the objectives, of achieving the concordance with the organizational structure, or harmonizing the actions with the initial objectives and to eliminate defects, to train the personnel, which are based on:

-        receiving and transmitting messages;
-        establishing and maintaining relationships between employees;
-        using the feedback for improving the individual and general performances of the organization;
-        correctly identifying, knowing and using different categories of needs and stimulants for the orientation of the employee behaviour towards performance and satisfactions;
-        Creating correct and efficient relationships, of reciprocal understanding and acceptance between managers and executants, colleagues, persons from the interior and exterior of the organization.

From the perspective of the management function, communication is a process of converting information, under the form of symbolic messages, between two or more persons, some with a transmitter status and others with a receiver status, by means of specific channels.

Human communication, as cultural phenomenon, mediated by IT&C means, has allowed the introduction of the computer, of the database, which at its turn has extended the action field of the social receiver from the local level to planetary level, thus allowing becoming a *citizen of the world*.

The emitter, being it a manager or an executant, is the person that initiates communication. He formulates the message, choses the language, the receiver and the communication means.

The receiver is an executant or a manager that receives the informational message.

The message is the symbol or the set of symbols transmitter by the emitter to the receiver.

The *communication channels* are trajectories on which messages circulate. Depending on their degree of formality they can be formal or informal.

The *formal communication* channels are superposed on organizational relationships, are projected and function in the framework of the structure so that they transmit information between jobs, departments and different hierarchical levels.

The *informal communication channels* constitute additional paths that permit messages to penetrate official channels.

The *communication success* depends on the degree of adequacy of the form the message is expressed to the perception and understanding capacity of the receiver.

Context and environment is the adjacent component which influences a lot the communication quality.

Communication means, constitute the technical support of the communication process (the discussion from person to person, the meetings and oral presentation, letters, phone, fax, audio-video devices for teleconferences, internet, computer networks, closed channel TV, notice boards, magazines, works, diagrams etc.)

Language in the communication process is the written and spoken language (maternal or foreign), digits and visual images of any kind (diagrams, drawings etc.)

The internal mechanisms of the communication process have in mind the coding of the meaning, the transmission of the message, decoding, interpretation, filtering and feedback.

Coding the meaning consists in selecting certain symbols, capable of expressing the significance of a message (words, images, facial language, body language, gests).

Conveying the message consists in transporting the codified message from the emitter to the receiver.

Decoding and **interpretation** refers to decoding the transmitted symbols and explaining their sense which together ensure the receiving of the message.

Filtering consists in deforming the sense of a message due to intended or unintended limits of interpretation. In general they have a physiological and psychological component.

Feed-back helps the emitter to verify in what degree his message was understood correctly or has suffered as a result of filtering.

The *bilateral communication* process takes place in two senses, between emitter and receiver, having the following characteristics:

• it goes out of the exclusive control of the emitter;

• the receiver has the possibility to intervene through questions, suggestions, commentaries. It is performed over longer periods of time, so that the reception and the transmission have the possibility of transforming themselves in a discussion;

• the significance of the message can be verified, clarified, redefined.

Intellectual skills are important such as precision and speed in computing, logic, synthesis etc.

In order to make a *job description*, the manager has to:

• remember the problems that need to be addresses, while observing a job and the questions that he can ask the person occupying the job, so that the answers are clear and concise;

- to order the obtained results in order to have a precise representation of the job, the work place and the profession;
- to contribute to the increase of information volume necessary for knowing the profile of the candidate for occupying a job.

In the process of strategic planning, the management fulfils tasks such as establishing roles and responsibilities, coordinating the process of redefining and SWOT analyses.

Conclusions

Communication clearly to other organizations (partners or customers) about the values, the mission, the role and the goals of the organization and to build strategies to accomplish the mission is an absolutely necessary stage of organization strategy.

Redefining values is an absolutely necessary stage after the mission of the organization has been created and approved by the highest decision factors.

The channels by which decisions are transmitted from the place where they are taken to the place where they are implemented, as well as the information transmitted from the place where it is collected to the decision factors depend on using IT&C.

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BENCHMARKING FOR THE ROMANIAN HEAVY COMMERCIAL VEHICLES MARKET

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Abstract: The globalization has led to a better integration of international markets of goods, services and capital markets, fact which leads to a significant increase of investments in those regions with low labor cost and with access to commercial routes. The development of international trade has imposed a continuous growth of the volumes of transported goods and the development of a transport system, able to stand against the new pressure exercised by cost, time and space. The solution to efficient transport is the intermodal transportation relying on state-of-the-art technological platforms, which integrates the advantages specific to each means of transportation: flexibility for road transportation, high capacity for railway, low costs for sea, and speed for air transportation. Romania's integration in the pan-European transport system alongside with the EU's enlargement towards the east will change Romania's positioning into a central one. The integrated governmental program of improving the intermodal infrastructure will ensure fast railway, road and air connections. For the Danube harbors and for the sea ports, EU grants and allowances will be used thus increasing Romania's importance in its capacity as one of Europe's logistical hubs. The present paper intends to use benchmarking, the management and strategic marketing tool, in order to realize an evaluation of the Romanian heavy commercial vehicles market, within European context. Benchmarking encourages change in a complex and dynamic context where a permanent solution cannot be found. The different results stimulate the use of benchmarking as a solution to reduce gaps. MAN's case study shows the dynamics of the players on the Romanian market for heavy commercial vehicles, when considering the strong growth of Romanian exported goods but with a modest internal demand, a limited but developing road infrastructure, and an unfavorable international economical context together with medium and long term growth perspectives. Important efforts are being made in Romania in order to align the national transportation system, weather railway, sea, road, air or pipelines to the European network, by supporting big modernization projects, the development and integration of national transportation infrastructure into the European network.

Keywords: benchmarking; transport; globalization; heavy commercial vehicles;

JEL classification: M30; M31; M39 .

1. Bechmarking – a tool used by performance management

Globalization led to competitive pressure and forces the companies to look constantly for new methods and techniques in order to improve their performance and to gain a competitive advantage. As stated by Jack Grayson, founder and executive chairman for the American Productivity & Quality Center "Productivity and quality improvement is a race without a finish line. Your organization's future will be determined by how well and how quickly you learn, adapt and improve" (www.apqc.org). The rate of changes nowadays, requires that we don't reinvent the wheel in the process of improving our company's results, but to act after reflecting upon our processes and our results compared to others' results.

Benchmarking is a systematic process whereby a comparison of work processes and performance indicators is accomplished, in order to identify and apply best practices from the same industry or from different industries. Basically, benchmarking is a learning process which needs to be ongoing in our company's live. *Benchmarking is the practice of being humble enough to admit that someone else is better at something, and being wise enough to learn how to match them and even surpass them at it* (APQC, 1993).

Benchmarking is a management and strategic marketing tool which enables you to shape the future in terms of organizing an activity, action or process. It encourages change in a complex and dynamic context where a permanent solution is not possible. The different results stimulate the use of benchmarking as a solution meant to reduce the gaps. A simple copying of best practices from your competition or other companies does not guarantee the achievement of best results. A more flexible approach of the job market, of products, services and capital markets would help increase productivity in Europe, which continues to have a slower growth rhythm when compared to the US or Asia. Among the causes of mediocre productivity one can find pecuniary motivation, the lack of a clear direction towards productivity, the lack of competitive organizational culture meant to stimulate employees or the lack of an efficiency driven education.

> Benchmarking was most probably used for the first time by Japanese companies during World War II by analyzing American companies in order to improve products and processes. As a management tools, references to benchmarking appear for the first time in 1979 when Xerox notices that the Japanese competition has prices beneath their own production costs. The analysis begun at the Fuji-Xerox subsidiary in Japan has proven that the differences were due to Canon's more efficient organization of the production site and the product development processes.

In the long term there are certain factors which can influence productivity: investments, new technologies but also the innovative effort, a better labor division, an increase of educational quality. All of them are the base of increased competencies or a larger involvement and motivation of the workers in the production process of goods and services.

The evaluation of the competitive position of a company is related to a system of key success factors which are significant as factors that differentiate the efficient companies from the others. In order to identify the key success factors in economical literature (Niculescu, 1995), the following 5 criteria are recommended:

- market positioning, expressed by absolute or relative market share and threw its dynamics;
- position of the company regarding costs (supply, storage, sales);

- image of the company and commercial strength;
- technological and technical competencies;
- cost-efficiency and financial power.

Following the steps in the benchmarking process helps companies improve their performance in critical areas that affect competitiveness as it is presented in figure no. 1. Today we talk about different types of benchmarking according to what and by whom the analysis is realized (Andersen, B., 1995): competitive benchmarking, functional benchmarking, business process benchmarking, etc.

Planning Phase
1. Identify what is to be benchmarked
2. Identify the best performers for comparasion
3. Determine data collection method and collect data

↓

Analysis Phase
4. Determine current performance gap
5. Project future performance levels

↓

Integration Phase
6. Communicate findings and gain acceptance
7. Establish functional goals

↓

Action Phase
8. Develop action plans
9. Implement actions & monitor progress
10. Recalibrate benchmarks

↓

Maturity Phase
Practices fully integrated into processes?
Ledership position attained?

Figure no. 1 Steps of benchmarking
Sursa: Sik Wah Fong, Eddie W.L. Cheng, Danny C.K. Ho, Benchmarking: a general reading for management practitioners, 1998

A special experience related to a primitive type of benchmarking belongs to the countries from the former communist block where in their competition to the west, they have considered as normal to obtain and transfer "data about secret scientific inventions from capitalist countries and their accomplishments" (Banu, F., www.cnsas.ro). The purpose was to use these data without acknowledgement of intellectual property rights. Romania is nowadays in the situation where companies are developed according to competition principles, but with one of the lowest innovation rates in Europe.

As any other strategic management instrument benchmarking is support to and is limited and has to be correlated to other existing information. According to (Kotler & all, 1998) the limits of benchmarking are as follows:

- the creativity of the company which apples exclusive benchmarking is limited;
- the attempt to imitate the performance of other companies lasts for a while and can allow equaling these performance while the market is continuously changing its work methods;
- the emphasis is put on the competition and it loses sight the clients' changing needs;
- concentrating on benchmarking can distract attention from the improvement of basic competencies of the company;
- success depends on the subjective choices of the one realizing the benchmarking analysis.

2. Benchmarking in the transport system

An efficient global economy relies fundamentally on transportation. The quality and the cost of transportation services influence competition among companies, countries and regions. The heavy commercial vehicle fleet has been significantly restructured nowadays, so that many older and smaller vehicles have been replaced with newer and bigger vehicles thus influencing in a major way statistical numbers. By the term of heavy commercial vehicles, one understands a mean of transportation with its total mass above 7,5t with the purpose of transporting general goods.

There are substantial differences in structure, organization, and integration of transportation within the EU and on global level. For example, the transportation sector in the European Union has more than 10 Million employees representing thus 4,6% of the GDP and influences by 10-15% the cost of the final product, according to the European Commission's website. Also, the producing industry of means of transportation adds 1,7% to the GDP and totals 1,5% of the European labor market.

Benchmarking in transportation needs to take into consideration public policies but also the market's request in terms of demand and offer. The truck sales have always been an indicator for the state of the economy. Regardless of the type and purpose of the trucks they transport goods that are produced or consumed by the people of the respective country. This is why when a country is affected by an economic crisis, sales in commercial vehicles go drastically down and when a country experiences economic growth, sales in commercial vehicles go up. The direct relation between the state of the economy and the truck sales can be followed in several areas: state investments in infrastructure (relevant for trucks used in constructions), state investments related to safety (special utility firefighter trucks, military vehicles), investments of local authorities in sanitizing and waste collection (garbage trucks), civil and public constructions (construction trucks), transport of general goods (distribution trucks), fuel consumption (fuel trucks).

Another relevant aspect for the influence of the economy in the sales of heavy vehicles is the financing. General lack of safety and the impossibility to realize a business-plan for medium and long term, lead financial institutions and non-banking financial institutions to a financing policy characterized by precaution. Here we need to mention the huge losses registered by leasing companies through the reposition process of vehicles of any kind during the transition from economic boom to crisis.

The financial crisis which began in 2007-2008 has affected also in a major way the truck sales on the European and US markets. The interest for deposits and credits have raised significantly, the money being considered the most valuable commodity, thus many potential truck clients have preferred not to take any risks upon them and they either settled with generous interest rates from their bank deposits or they invested into "safe goods" like gold, art, jewelry in limited editions. On the other hand large interest rates for

credits have reduced considerably the potential future profit of transportation companies thus discouraging those eager for potential investments.

3. Heavy Commercial Vehicle's Market

The world distribution of power poles in the truck market has changed starting with 2006. Thus, the Asian producers have ensured themselves a stronger position on the downside of the countries belonging to the Triad (North America – without Mexico, the European Union, Japan and countries from the Far East). As a consequence the big producers of commercial vehicles from the developed countries have used different means to consolidate a global position through mergers or share takeover. Thus the Swedish producer Volvo has merged with the French producer Renault and the German group VAG known especially for the car industry has taken over the producers MAN, Scania and Volkswagen Latin America.

The truck producers worldwide need to be aware of the growing tendency of emerging markets and the continuous cyclicity of mature markets. Emerging markets are also predisposed to cycles but opposed to the Triad area the general tendency they experience is of a positive growth.

The producers of heavy commercial vehicles have to develop new models and regionally adapted brand strategies in order to satisfy the peculiarities of the market and the customers' preferences. Adapting of engines to the environmental requirements attracts with is higher costs related to research and technologies which the beneficiaries aren't always willing to pay. The time slots to introduce pollution restrictions in the emergent market are diminishing constantly although there are still gaps towards the developed markets.

For the long term, the Full-Line producers which means those who produce and sell heavy commercial vehicles as well as light vehicles will have better chances in the competition at global level. The most important Full-Line producer is Daimler AG, present in almost all markets around the world and which sells commercial vehicles under different brands: Mercedes Benz in Europe, Russia, North and South America, Fuso in Asia or Bharat Benz in India. Andreas Renschler, president of Daimler Trucks division within the Daimler AG, considers that the best way to create an opinion about the potential future of a market is to look at the GDP: *A growing economy always goes hand-in-hand with increasing freight transport volumes – boosting the demand for trucks (KPMG report, 2013).* The same Andreas Renschler notices in mature markets a continuous trend towards a differentiated analysis of the total cost of ownership: *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).*

The trade with commercial vehicles has always been characterized by the importance granted to the total cost of ownership - TCO. If you consider it an investment, the acquisition of a truck and its operational cost have a direct influence on the profit registered by the transport company as shown in figure 2 Structure of Ownership Costs.

The largest part of the TCO which can be influenced by the developed markets like Western Europe is the cost for fuel (approximately 30%). It is hard for the producer to reduce this part of the TCO, because its most influential components are tightly linked to environmental regulations (environmental requirements, taxes and fees, road tax) especially on the developed markets. Most probably the ratio of the external factors will grow, diminishing the producers' ability to influence this cost in favor of their customers.

On the medium and long term it is very probable that on the emerging markets the TCO, the main tool used for calculations and comparison of competiveness on the trucks market, will align to the ones in the developed economies. Total convergence of the emergent and developed markets is expected to happen only in 10-15 years. China and

Russia prove a higher convergence potential, higher than India. In the last period of time, China's and India's internal production exceeds national sales contrasting to Russia which still relies on substantial imports.

The activities in transportation produce effects over the environment, accidents, road blocks and usage of the infrastructure. Contrasting to the benefits, the cost of this effect is not fully taken over by the transport operators. Due to the lack of legislative regulations, these so called external costs are not taken into consideration by the operators when organizing transport. Thus, the beneficiaries of transportation are affected due to false reasons which can produce losses, damages in the community.
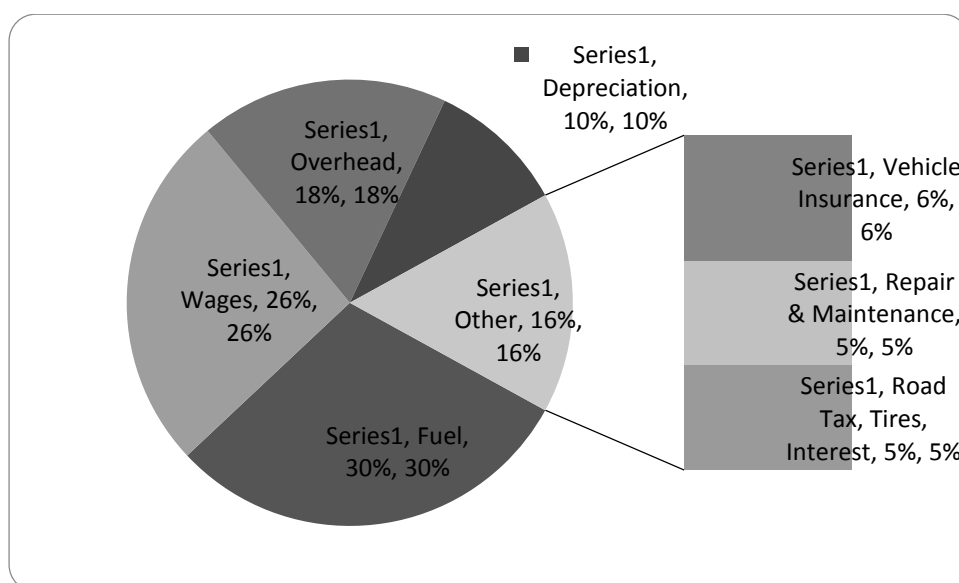
Figure 2. Structure of Total Ownership Costs for heavy commercial vehicles
Source: KPMG Report, 2013

The internalization of these external costs means including these effects in the transporters' decisional process. According to the approach of the wealth theory (Samuelson, Paul, A., 1983), internalizing external costs by using specific instruments of the market can lead to a more efficient use of the infrastructure, can lead to diminishing negative effects of the transport activity and the improvement of fair competiveness among transporters.

During time, at European but also at global level, internalizing external transportation costs has been an important subject for research and specific legislation. Countless research projects some of them even financed by the European Commission have suggested that the implementation of the instruments specific to the market, inspired by the theoretical-economical concept of establishing the marginal social cost, could generate considerable benefits. Setting correct and efficient transportation prices has also been debated in multiple legislative documents generated by the European Commission, one of the notable ones being the White Paper on Transport in 2011.

During the amendments to the Directive1999/63/EC from 2006 regarding the weight of heavy commercial vehicles for the access to different infrastructures, the EU has requested the European Commission to be presented with a general usable and transparent model to evaluate all external costs, including the non-road-associated-costs. This model was supposed to serve as a calculation base for future road taxes.

4. Case study. MAN in Romania

MHS Truck & BUS S.R.L. is the official importer of MAN trucks in Romania. Its activity has begun in 2007 when it took over the heavy commercial vehicle division from another company in the same group, namely Automobile Bavaria S.R.L. shortly MHS Truck & BUS S.R.L. became a leader in sales of new trucks. During 2008-2012 the company ranked first, even if the total figures have fluctuated considerably. A look at the dynamics of Romanian markets during 2008-2013 of these vehicles is presented in the following chart, tabel no. 1. The main competitors on this market, at European Level as well as in Romania, are Mercedes-Benz, Volvo, Scania, DAF, Iveco and Renault. The direct competitors are just the brands occupying the first three ranks, because together with MAN, they make up the premium category for heavy commercial vehicles.

Tabel no. 1 Romanian Market during 2008-2013,
Commercial Vehicles above 7,5 t

Brand	2013	2012	2011	2010	2009	2008
MAN	748	713	815	525	477	1825
Mercedes	791	379	569	317	204	1109
DAF	678	448	676	438	313	1236
Renault	220	180	261	210	151	1015
Scania	297	358	306	186	66	392
Volvo	860	475	491	136	183	1378
Iveco	412	253	559	549	390	2274
Others	33	33	50	94	96	296

Source: MHS Truck & BUS SRL, internal documents

The data shown in table no.1 can be shown also in figure no. 3 which illustrates the annual hierarchy of heavy commercial vehicle brands in Romania during 2008-2013.
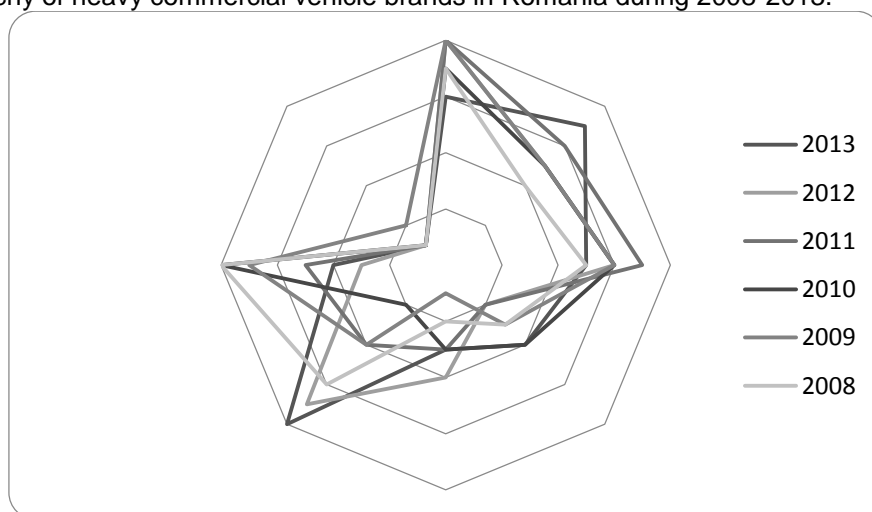
Figure no. 3 Brand positioning according to sales figures 2008-2013

The excellent results of MAN brand are due to the organization of the sales department, the flexibility of its offers from financial point of view, but also associated services and delivery terms.

In average a number of 25 sales agents have promoted the MAN brand in Romania. The staff variations in this period have been minimal which helped forming homogeneous department with experience in the sales of vehicles. The sales network of the main competitors in Romania consists of approximately 15 sales agents.

Increased flexibility due to a client oriented vision (Bruhu, Manfred, 2012), the company's management, but also due to the status of general importer and not as a subsidiary of the producer, a status which the main competitors on the market do not have (Mercedes-Benz, Scania and Volvo are Romanian subsidiaries of the producing company) brings along benefits as well as weak points but in the end it all comes down to the company's management and its ability to speculate these advantages. The above mentioned flexibility has been lived as follows:

- ordering stock vehicles in order to cover the clients' urgent needs; constantly a variety of chassis types have been produced in order to cover a wide range of aplications; using this method an important number of customers have been added from those who were not sure about the brand but also from customers belonging to the competition;
- fast decision time for important issues; this advantage proved to be decisive in several situations, for example in online auctioning or in direct negotiations; thus online auctions have been won, by introducing a lower price than the competitor, only seconds before the deadline; a timely reaction during direct negotiations also proves professionalism, experience and self-confidence;
- constant participation to public auctions for heavy commercial vehicles; due to a major reluctance in behalf of its competitors which is partially unjustified, MHS Truck & Bus S.R.L. has won numerous contracts this way, sometimes being the only supplier; in time, this lack of interest in auction has led to the situation that only few truck vendors in Romania have accumulated the necessary experience in order to participate to important auctions, experience which is actually a pre-requisite as stipulated in the auction books; thus, the figures accomplished through this type of sales to the state authorities have strengthened the leader position of MAN in Romania; as a consequence of the world economic crisis, the sales to private customers have decreased since 2009, which means that the number of vehicles sold via public auctions has raised considerably;
- Freedom to negotiate contractual terms; the main contractual stipulations under negotiation which helped MHS Truck & Bus S.R.L. to consolidate its leader position in Romania's truck market are: price reductions, terms of delivery, down payment for an order or even for a reservation, payment methods, payment deadlines, warranty, price reductions or even service items free of charge, etc.;

When putting down an offer and during the following price negotiations, it was taken into consideration not only the value of the respective transaction but also other important criteria: size of the customer's current fleet, the client's development potential according to signed contracts or the association to a larger group of companies, the impact of the acquisition of MAN trucks in an specific area or the area of activity and last but not least the time frame for the renewal of its truck fleet.

Regarding its payment conditions, MHS Truck & Bus SRL has accepted orders for going into production even for symbolic down payments and in exceptional cases for traditional customers, without down payment. In direct transactions where the customers used own

financial resources, installments have been offered going as far as 6 months after delivery. All outstanding amounts were supported by guaranteed letters of credit.

It must be mentioned that, although all truck producers cover almost the whole range of products, each is best in class in a specific area. MAN's strong point is provided by vehicles dedicated to the construction segment and to the special vehicles for rough terrain.

In 2013, due to the states strong decrease of investments for public constructions or highways, MAN has registered a fall in its sales figures and went down to the third place. Of course to this decrease also other factors had its share, for example the slow absorption of European funds, lack of contracted works and implicitly the slow renewal process for specialized vehicle fleets, changes of the shareholders in MAN Truck & Bus AG, the competitors aggressive marketing policy, etc.

For the year 2014, MHS Truck & Bus SRL intends to regain the first position in the sales chart for heavy commercial vehicles in Romania. Although the forecast isn't very optimistic due to the fact that the state's investments in infrastructure and the absorption of European funds did not increase if compared to last year's figures, the only way it could be possible is by improving the marketing policies.

Thus, the targets established by MAN importer in Romania in order to regain the leader position, are:.

- offering test trucks in order to attract those customers who aren't 100% sure or are skeptical about the quality of MAN vehicles; this method has been successfully tested during the last year, through this method MAN managed succeeded to attract customers from other brands;
- closeness to existing or potential customers by organizing events for example "open doors day" occasioned by the launch of new models; representative customers shall be invited to fairs where the newest models and the most technical advanced vehicles are displayed;
- promoting price reductions by offering service packages (extended warranty, included revisions, coupons for service visits) in order to avoid the depreciation of the image about the quality of products;
- improvement of the image of MAN trucks by publishing in business newspapers or specific magazines of interviews with representative customers, owners satisfied by the products of the German MAN producer; main fleet delivers should also be advertised to the broad audience through specific communication tools;

Identification of new means of a more efficient promotion of used vehicles, especially those which are older than 10 years, directing them towards African and Arabian markets; this type of sale of old and no longer efficient vehicles from the EU where the importance of environmental protection increases, is meant to avoit the company's financial blockade and to increase its capacity to absorb the vehicles resulting from buy-back or trade-in contracts.

5. Conclusions

Europe is far behind the USA and Asia in terms of competiveness. EU institutions make efforts in order to create the infrastructure and to stimulate European companies in order to raise competiveness when facing the ruthless global economy. For the purpose to reduce these competiveness gaps, benchmarking is used as management tool, ever more often. Using benchmarking as a strategic analysis tools for the heavy commercial vehicle market underlines the success factors of the distributors in Romania, as well as the regional and national trends. The abrupt decrease of sales in heavy commercial vehicles in Romania after 2008 has not been recovered by the main players on the market, although promoting means and communications to targeted clients have been diversified,

the financing scheme has become more flexible and the package and associated services has been developed, extended as shown in the case study of MHS, the MAN distributor in Romania.

It is necessary to have a practical implementation of the holistic marketing concept (Kotler et all, 2012), according to which the success of a business depends of the capacity of its initiator to convince all involved stakeholder to have common interests. At the same time it is requested that the marketer to put into practice the principle three specific characteristics requested of him: empathy in thinking and action, rational creativity and partnership spirit (Pop at all, 2012).

Selling trucks requires a high level of knowing your product and is different from car sales. The client who buys a heavy commercial vehicle is driven to an acquisition in order to bring a profit to his business. The key to success in selling trucks is the understanding that a purchase is a process and not a spontaneous decision.

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THE ECONOMICS STUDENT – THE FUTURE BUSINESSMAN. FROM THE AWARENESS OF CONSUMERS' RIGHTS TO THEIR ENFORCEMENT

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Abstract: The student attending *courses related to business field is the one who, as a practitioner, will direct his business towards the customer. Educating such students in a spirit of recognition and respect for the rights of consumers will determine them to apply these universal axioms in their future business approach.The objective of the research is to determine the experience achieved by the business student, as a consumer of various services, expressed through the knowledge, claim and protection of his consumer's rights in case of violation of such rights. In order to achieve this objective, we conducted a survey on a sample of 291 third-year students of the Faculty of Economics and Business Administration, business management specializations (The Economy of Commerce, Services and Tourism, Marketing and Management). The main results of this research show that only 69.9% of the total sample has ever experienced a situation of violation of consumers` rights, 50.5% of cases being recorded in the service-providing field. Contrary to expectations, ECTS students are those who report the lowest number of situations of this kind for the service-providing field (46.75%), the rest being associated with tangible goods. Also, when experiencing a violation of consumer's rights, a person goes through bad moods and emotions, which will remain as a mark in the mind of that person for a longer period of time. If the complaint is resolved in favour of the customer, then such a situation generates positive emotions that tend to be evoked for a longer period of time, as well. Putting face to face the actual reaction versus recommended reaction, and analyzing the emotional implications of a person experiencing such a situation of violation of consumer rights, we consider that our work may be useful because it explains to affected consumers the actions to be taken, and namely because it emphasizes the importance of educating the future business people in the spirit of respect and recognition of consumer right*s.

Keywords: protection of consumers` rights; consumer`s satisfaction.

JEL classification: C01, C12, D18, M30, M31

1. Orientation towards customer - prerequisite for the observance of consumers` rights

In their race to profit, the companies should not forget that they have a first obligation towards the consumers, because nowadays, on the balance of power the consumers hold equal weight due to their skills and sophistication of choice in the process of buying (Petrescu, I, et. al. 2010).

Based on these consumer rights, all the bidders from the market (be they producers or retailers) must assume direct responsibility for the following (Mihuţ, I., Pop, M., 1996):

- supply and marketing of only certified and quality tested services and products, which do not endanger the life, health or safety of consumers;
- sale of products with exceeded, fake or counterfeited expiry date;

- compliance with hygienic-sanitary conditions in production, during transport, handling, storage and sale;
- granting of guarantees, accurate information on prices, compensation for damage, so as to protect the economic interests and information rights of the consumer;
- assuming self-control over the moral behavior in relation to direct subordinates, customers, shareholders, competitors, etc. - every manager elaborating a personal code of ethics.

We live in the age of smart customer (Fisk, P., 2008). Before engaging in a transaction, the customer explores the market, compares the offer, studies more products and prices than the vendor does. Therefore, studying the customer, developing solutions according to his/her needs, establishing appropriate relationship that lead to loyalty and profits for business become strictly necessary. And all these things can be achieved only by developing a responsibility towards the customer.

Organizations are becoming increasingly transparent, develop more sophisticated and personalized marketing techniques. But, in their struggle for the customer they may seem aggressive in promoting brand image, aggressive even through active social involvement. Citizens and authorities require updating of legislation, which is now expanding at an unprecedented rate, in order to determine the companies to become more responsible.

Consumers close ranks in front of an arrogant or obtuse marketing, boycotting it. In her book, Naomi Klein (Klein, N., 2009) demolishes our beautifully packed daily universe, in which public space is confiscated by large corporations that ostentatiously bring branded products manufactured in third world countries. Another writer Amaranta Wright (Wright, A., 2005), who has been hired by Levi's to travel through Latin America to observe the needs of adolescents, shows the arrogance with which Western companies run their business in developing countries and how they try to turn people into consumers.

Basically, it seems that developing countries have more confidence in international brands than in local ones, while in developed countries the consumers` confidence tilts in the balance of local brands.

Peter Fisk (Fisk, P., 2008) mentions six current problems of the modern consumer to be reconsidered by the managers:

- Privacy - we are basically bombarded non-stop by media, phones, mail (increasingly by electronic mail), books, flyers on the street or in the mailbox – therefore, we try to secure the information considered by us really important and, through them, our own existence;
- Indebtedness - we are increasingly encouraged, helped and persuaded to want luxury products, to spend more and more, even beyond our solvency limit, through the so-called loose conditions of payment or immediate personal loans or loans upon request;
- Threat to the natural environment - the packaging products produce enormous amounts of waste; in addition, we buy in excess, thus causing a prodigal consumer behaviour, which overlaps with the general trend of pollution;
- Focus on health - obesity has reached epidemic proportions, being caused by food composition (with a high content of sugar, fats, E-numbers, etc.), but also by changing culinary habits and preferences;
- Children - the explosion of products for children, advertising addressed directly to them, as well as the designation or selection of models for children (not always a happy one) make the great mass of children to become a clear focus that determine a strategic reorientation of the business;
- Integrity - consumers are demanding honesty, morality and respect, they want ethical behaviour and positive models.

Thus, it becomes increasingly necessary to establish a code of ethics within an organization (Dragomir, Anghel, 2011). The best thing is to have a code of practice, which

is closely monitored, so that the ethical responsibilities of the company to be clearly visible both inside (managers, shareholders, employees) and outside the company (various interest groups, among which we mention the consumers)

Usually, the employees adhere to the values and ethics of the company, harmonising their consciousness with the existence of a code of ethics. Thus, they will have the belief that they are working for a fair and honest company (Petrescu et al., 2010).

2. Recent studies on consumer protection

The concern of researchers to study the dynamics of the ethical and moral actions taken towards the consumer by the companies has been intense, adding the consumer behavior issue among the marketing literature (e.g., Khan and Dhar, 2006; Mazar, Amir, & Ariely, 2007).

Petrescu et al. (2010) present the results of a study which shows the importance of studying the management of consumer protection as a subject included in the university curricula, namely the implementation in practice of such course. In fact, there is a close connection between the level of education of a person and the consumption of goods and services (Chebat, et al., 2005). Moreover, the emotions expressed by consumers, feelings of satisfaction or, on the contrary, dissatisfaction, reported to their expectations and combined with awareness of their rights will determine their reactions (Chebat, et al., 2005). Glazer, et al. (2008) develop a mathematical model that places the ethical values of the offerers as basis of the consumers` satisfaction and emotions.

Niţă şi Butnaru (2010) show that academic education and customer experience contribute equally to raising awareness of the rights enjoyed by people as consumers. Higgins et al. (2002) argue that, besides this, the feedback they receive constitutes a decisive element in evaluating the manner in which their rights have been met.

Olaru, et al. (2010) state that in order to achieve business excellence, one has to start from building a responsible business, being mandatory to include among the company`s values the customer value. Such an approach is considered ethical (Dinu, 2008) leading to a positive attitude of the consumers, primarily towards the company`s products, and last but not least towards the business itself (Dinu et al., 2012). Thus, many studies combine the ethical approach with the social responsibility of a company, the final target being respect for the individual, be it employee or customer, stakeholder or not (Brinkmann, et al., 2008; Cornelius, et al., 2008; Argandona, et. al., 2009).

3. Research: Incidence statistics for the situations of violation of consumers' rights among the economics students and their reactions

Research Problem: Is the business student aware of his rights as a consumer? Does he know these rights? To what extent does he consider that he has experienced so far, as a consumer, violation of his rights, especially in the case of the services provided to him? What types of services are considered by the business student as the most deficient in terms of consumers` rights? What actions were taken by him in order to defend his rights, when he considered they were violated, and what does he consider should be done if he were in such a situation?

3.1 Objective

The objective of the research is to determine the experience achieved by the business student, as a consumer of various services, expressed through the knowledge, claim and protection of his consumer's rights in case of violation of such rights.

O1: Determining the experience achieved by the business student, as a consumer of various services, expressed through the knowledge of his consumer's rights in case of violation of such rights.

O2: Determining the experience achieved by the business student, as a consumer of various services, expressed through the claim and protection of his consumer's rights in case of violation of such rights.

3.2. Hypotheses

H1. Students attending ECTS courses identify a greater number of cases of breaching the consumers` rights by the service-providing companies, due to the specialization attended. (Niţă, et. al., 2010)

H2. A breach of the rights generates negative emotions to the consumer. (Chebat, et al., 2005; Glazer, et. al., 2008).

H3. The manner in which a situation of breaching the consumers` rights is solved causes either negative emotions (if the claim fails to be solved) or positive emotions (if the claim is solved in favor of the consumer whose right has been infringed). (Higgins, et al., 2002; Chebat, et al., 2005; Glazer, et. al., 2008).

H4. Studying in the universitary curricula a subject like "The Consumer Behavior" determines the students to have knowledge of their consumers` rights to a far greater extent (Petrescu et al., 2010).

3.3. Method: Questionnaire-based survey

Selection of Research Population: Reference Population is represented by students of the Faculty of Economics and Business Administration, University "Alexandru Ioan Cuza" of Iaşi, attending the full-time courses from the specializations ECTS (Economy of Commerce, Tourism and Services) and Management and Marketing. We have included the specializations mentioned above because their graduates fit the profile of those who in the future will more likely become managers of companies.

3.4. Research Sampling

The Planned Target Group totals a number of 310 students, represented by all the students in the third-year, from the specializations mentioned before. We have chosen to include only the third-year students because it is assumed they have already studied so far a large number of disciplines from their academic curricula.

The Final Target Group comprises a total of 286 students, as can be seen in Table no. 1. The difference in number between the Planned Target Group and Final Target Group has three causes:

- absence from school during the period of investigation (January-February 2013) of a number of students (8 students);
- refusal to fill out the questionnaires and non-submission of questionnaires (14 students);
- invalid responding in questionnaire-based research (2 students).

Table no. 1: Planned Target Group/Final Target Group

Specialization	Planned Target Group	Final Target Group
ECTS	114	114
Management	81	62
Marketing	115	110
Total	310	286

The structure of final target group is as follows:

Table no. 2: Final Target Group Structure

Variable	Subgroups	Number of subjects
Sex	M (var.1)	116
	F (var. 2)	170
Living environment	urban (var.1)	256
	rural (var.2)	28
County	Iasi	129
	Neamt	40
	Bacau	19
	Suceava	24
	Botosani	29
	Vaslui	20
	Vrancea	6
	Galati	5
	R.Moldova	9
	Tulcea	2
	Bucuresti, Ilfov	1
	Harghita	1
	Salaj	1
Accommodation in Iasi	Living with parents (var.1)	85
	Private dwelling (var.2)	36
	Student dorm (var.3)	62
	In hosting (var.4)	103
Specialization	ECTS (var. 1)	114
	Management (var. 2)	62
	Marketing (var. 3)	110

Research Tool: the investigation tool is represented by a survey questionnaire with 17 items, out of which: four (4) items to identify the respondent; four (4) open questions; two (2) semi-closed questions with nominal scale, and seven (7) closed questions (out of which: one (1) question uses an interval scale; two (2) questions use a scale of proportions, and four (4) questions use a nominal scale).

4. Results of the study
After applying the filter question, out of the total of 286 respondents, we have the following outcome: a number of 199 students state "*I consider I have been in the situation to have my consumer rights restricted*" (i.e. 69.6%), while 87 students answer "*I have not experienced such a situation*" (i.e. 30.4%).
If we analyze the responses, according to the specialization attended, we can see the following situation (Table no. 3):

Table no. 3: Incidence statistics for the situations of violation of consumers' rights, according to the specialization attended

Specialization	Number of respondents		Incidence	Percent
ECTS	114	No	31	27.2%
		Yes	83	72.8%
Marketing	110	No	37	33.6%
		Yes	73	66.4%
Management	62	No	19	30.6%
		Yes	43	69.4%

The resulting information shows that ECTS specialisation students are those who have identified the highest number of cases of violation of consumers` rights in their experience as a consumer.

After applying the filter, the sample that fits the searched profile has been limited to 199 subjects, namely to those who have encountered a case of violation of their consumers` rights. Analyzing the incidence statistics for the occurrence of such a situation in the last year, we have the following outcome: 121 subjects have faced with a number of 1-2 cases (42.3%); 59 subjects have faced with 3-5 cases (20.6%); 9 subjects have faced with 6-10 cases (3.1%); 8 subjects have faced with more than 10 of such cases (2.8%), and 2 subjects have not faced with any such case in the last year, but previously (0.7%).

We have tried to find out which would be, in general, the share of the cases of violation of the consumers` rights for the service-providing field, and we have noticed that out of the total of 100% cases, the service-providing field holds a share of 50.5%. Analyzing the respondents' answers according to their specialization, for the cases which have occurred in the service-providing field, we have noted as follows: ECTS students assign a percentage of only 46.75%, Marketing students assign a percentage of 53.08%, while Management students assign a percentage of 53.48%. The first hypothesis (H1) is thus ruled out, ECTS students being those who have assigned the lowest percentage for the service-providing companies, even though they are the ones who have identified the highest number of cases of violation of their rights as consumers.

We have also tried to find out, making use of the latest situation of this kind, how would the respondents, in a single word, describe their mood at that moment (noted Time 0), and their mood at the present time (noted Time 1), and we have analysed their words in two distinct circumstances: the said situation has been solved negatively for the respondent (noted Time 1 Negative), and the said situation has been solved positively for the respondent (noted Time 1 Positive).Table no. 4 presents the incidence statistics for all the cases examined:

Table no. 4: Incidence statistics with the words that describe the respondents` mood at the time of the last event of violation of their rights (Time 0), namely their mood at the present time (Time 1)

Crt. No.	Time 0	Incidence	Time 1 Negative	Incidence	Time 1 Positive	Incidence
1	disappointment	27	indifferent	46	indifferent	4
2	nervous	22	disappointment	22	contentment	4
3	frustration	14	disgust	10	tranquility	3
4	anger	12	disdain		happiness	2
5	aggrieved		diconfort	5	proud	2
6	astonished		discontent		OK	2
7	disdain		regret		satisfaction	2
8	discontent		resignation		relief	2
9	indignation		ignored		clearance	1
10	helpless		indignation		detachment	1
11	disgust		nervousness		release	1
12	discomfort		revolt		respected	1
13	discrimination		acceptance		joy	1
14	humiliated		anger		relaxation	1
15	deceived		nausea		calm	1
16	offended		unchanged		safety	1
17	outraged		injustice			
18	abased		anxiety			
19	repulsion		uncertainty			
20	vexation		repulsion			
21	irritation		annoyance			
22	crappy		disagreement			
23	neglected		discrimination			
24	anxious		avoidance			
25	awkward		frustration			
26	rejected		misfortune			
27	attacked		reconciled			
28	defiance		uncertainty			
29	despair		informed			
30	nausea		dissatisfaction			
31	ignored		irony			
32	violated		inattention			
33	invisible		nedumerit			
34	disrespect		unhappy			
35	marginalization		distrust			
36	improperly		unjustly			
37	unimportant					
38	distrust					
39	resignation					
40	stressed					
41	hate					
42	vulnerability					

It should be noted that from the percentage of 100% of the cases, only a percentage of 19.7% has been solved in favour of the customer, which has resulted in the following situation: 17.1% of respondents say that, at present, thinking about what has happened, they feel even worse than at Time 0, while 31.2% of them say they feel as bad as at that time. All those who have come off victoriously have now a better mood than at Time 0, and not only them, but also a percentage of 23.1% of the total sample. The rest of the respondents say they feel nothing but indifference when thinking to the event evoked. Therefore, hypotheses H2, and respectively H3 have been confirmed.

It also matters also how recently the event has taken place. We note that most of these situations happened about three months ago (37.2%), and respectively six months ago (27.1%). But such cases were reported also in the last month (18.1%) or in the last week (5%). It is possible that the time factor to fade the severity of such cases in time – a conclusion that is reasoned based on the cumulative percentage of 23.1% of such cases evoked only in the last month.

We also have tried to find out in which types of services most of these cases have occurred, the situation being presented in the following table (Table 5). Being of multiple-responses type, the question can generate a larger number of responses per person:

Table no. 5: Incidence statistics for the situations of violation of consumers' rights depending on the type of service

Crt. No.	Service	Incidence (no. of cases)	Share of the Total
1	HoReCa (hotels, restaurants, catering)	48	14.00%
2	Commerce	81	19.19%
3	Education	28	7.51%
4	Health and Social Services	35	10.09%
5	Facilities	36	8.04%
6	Communications	74	16.90%
7	Financial Intermediations	21	6.48%
8	Transport Services	61	12.67%
9	Public Services	10	5.12%

Respondents are asked to share-out 100 points to the services listed above, depending on the number of cases of breach of their consumer rights in 2012. It is thus noted that trade-related services have the largest share (19.19%), followed by communication services (16.19%) and HoReCa services (14%), which is not a surprise because the subjects are aged betwee 20 and 23 years old, and at this age, the scope of services accessed by students is directed along these lines. A warning signal would be the percentage of 7.51% of cases registered in the educational services (the subjects being students at this time), however, a smaller percentage than the percentage assigned to social and health services (10.09%). Such values entail great concerns because at their age the subjects are mostly very healthy, therefore the incidence of needing this service is lower. Moreover, even though they rarely need this type of services, their experiences have not been entirely positive.

Trying to find out how reacted the subjects when they were last in the situation described, we recorded the following answers (Table no. 6).

Table no. 6: Reactions following situations of violation of consumers' rights

Crt. No.	Reactions	Incidence
1	I had no reaction, however I wouldn`t solve anything	48
2	I made my discontent known right away to the seller/person involved	110
3	I communicated my dissatisfaction to the company manager	40
4	I noticed the competent bodies entitled to resolve consumers` complaints	20
5	I started a legal action	3
6	I complained to relatives, acquaintances and friends	69
7	I advised my relatives, acquaintances and friends to no longer buy the products/services in question	77
8	I posted on my Facebook page comments regarding my discontent	19
9	I posted on forums comments regarding my discontent	15
10	I posted on the company website comments regarding my discontent	18
11	Other situations	2

It has been interesting to find out to what extent Business students know the competent authorities entitled to protect their consumer interests. Thus, out of the 199 valid respondents, only 4% of them have mentioned correctly and completely the superior authority - NAPC (National Authority for Consumer Protection) and its territory representative and advisory bodies (the Consumer Protection Commissariat of the Counties). 46% of the respondents have nominated CPO (Consumer Protection Office) - representing the old identity of this specialised body of the central public administration, identity under which it has operated between 1992 and 2001, being changed under the current name since 2001. What is worrying is that 50% of the respondents filled out either nothing, or other entities - in both cases being considered that such persons have few or no knowledge on the authorities entitled to protect their rights of consumers. Besides this, not only those 199 respondents, but also the entire sample of 286 respondents have been asked to what extent they believe they are aware of their rights as consumers, the answer being measured by a scale interval of 5 levels (1 - a very lesser extent, 5 - to a very large extent). The average value of the responses is 2.94 - what represents the perception that they are familiar with these rights to a large extent. Analyzing the responses based on the specialization attended by subjects, we note that ECTS students have achieved an average of 3.06, Marketing students have achieved an average of 2.82, and Management students have achieved an average of 3.3 – the highest of all. Therefore, hypothesis H4 according to which: "*Studying in the universitary curricula a subject like The Consumer Behavior determines the students to have knowledge of their consumers` rights to a far greater extent*" is not confirmed, because even though the Marketing students and ECTS students respectively study in their universitary curricula such a subject they are the ones who have achieved the lowest levels of average, while Management students who do not study in their universitary curricula the consumer behavior as a subject, have achieved the highest average. It is true that their response is just a statement and the average value has not been determined through a review of their actual knowledge. Interestingly, 18.2% of the respondents say they know their rights to a small extent, while 16.4% of them think they have some knowledge of their rights, but only a few.

Also, analyzing the students` responses concerning to what extent they know their rights as consumers, we notice that, based on their gender, there is a very balanced situation, the men obtaining an average of 2.95, while the women an average of 2.94. Depending on the type of accommodation in Iaşi, those who live with their parents have achieved an average of 2.98, those who hold a private dwelling have an average of 3.03, the respondents who live in students' dormitory have an average of 2.81, while those who live in hosting have an average of 2.96.

If, however, assuming they had their consumer rights infringed, 286 of the respondents indicated the following actions they would personally recommend to be taken (Table No.7):

Table no.7: Comparison between past reactions and reactions recommended to others

Crt. No.	Recommended Reactions	Past Reaction		Reaction recommended to others	
		Incidence	Share	Incidence	Share
1	There should be no reaction, however it won`t solve anything	48	11.4%	6	0.85%
2	To immediately inform the seller/person involved about the discontent	110	26.12%	139	19.71%
3	To inform the company manager about the dissatisfaction	40	9.5%	145	20.56%
4	To notice the competent authorities entitled to resolve consumers` complaints	20	4.75%	174	24.68%
5	To start a legal action	3	0.71%	40	5.67%
6	To complain to relatives, acquaintances and friends	69	16.38%	16	2.26%
7	To advise your relatives, acquaintances and friends to no longer buy the products/services in question	77	18.28%	56	7.94%
8	To post on your Facebook page comments regarding your discontent	19	4.51%	27	3.82%
9	To post on forums comments regarding the discontent	15	3.56%	32	4.53%
10	To post on the company website comments regarding your discontent	18	4.27%	69	9.78%
11	Other situatons	2	0.47%	1	0.14%

Analyzing the data in the table above, we note that when subjects are faced with a situation like the one described above, they have a different reaction from the one they would recommend.

5. Conclusions

Hypothesis H1 is ruled out, ECTS students being those who have assigned the lowest percentage for the service-providing companies (46.75%), even though they are the ones who have identified the highest number of cases of violation of their rights as consumers (72.8%).

Hypothesis H2 has been confirmed. Out of the total of 100% cases of violation of their consumer rights generate a percentage of 100% negative emotions to the consumer.

Hypothesis H3 has been confirmed. 17.1% of respondents say that, at present, thinking about what has happened, they feel even worse than at Time 0, while 31.2% of them say they feel as bad as at that time. It should be noted that from the percentage of 100% of the cases, only a percentage of 19.7% has been solved in favour of the customer, all the persons affected at that time are experiencing now positive emotions. Only a percentage of 3.4% of the respondents who have failed to come off victoriously are experiencing now positive emotions, the rest of them stating they feel nothing but indifference when thinking to the event evoked. Thus, both cases determine inertia, a long term evocation of the emotions.

Hypothesis H4 according to which: "*Studying in the universitary curricula a subject like The Consumer Behavior determines the students to have knowledge of their consumers` rights to a far greater extent*" is not confirmed, because even though the Marketing students and ECTS students respectively study in their universitary curricula such a subject they are the ones who have achieved the lowest levels of average, while Management students who do not study in their universitary curricula the consumer behavior as a subject, have achieved the highest average.

Other conclusions show that the reactions of the students when experiencing such situations are as follows: making their discontent known right away to the seller/person involved (26.12%), complaining to friends or relatives (18.28%), advising everyone to no longer buy from that company (16.38%). At the same time, 11.4% of them have had no reaction, considering they cannot change anything. Nevertheless, the same students recommend in such a situation as appropriate reaction the following: first of all, filing a complaint to the competent authorities, such as NACP – The National Authority for Consumer Protection (24.68%), informing the manager or superiors (20.56%), and thirdly, making their discontent known right away to the seller/person involved (19.71%). At the same time, only 0.85% of them say that there should be no reaction.

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TESTING BRAND VALUE MEASUREMENT METHODS IN A RANDOM COEFFICIENT MODELING FRAMEWORK

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Abstract: *Our objective is to provide a framework for measuring brand equity, that is, the added value to the product endowed by the brand. Based on a demand and supply model, we propose a structural model that enables testing the structural effect of brand equity (demand side effect) on brand value (supply side effect), using Monte Carlo simulation. Our main research question is which of the three brand value measurement methods (price premium, revenue premium and profit premium) is more suitable from the perspective of the structural link between brand equity and brand value. Our model is based on recent developments in random coefficients model applications.*

1. Introduction

The main objective of our research is which of the three brand value measurement methods, namely price premium, revenue premium or profit premium is more suitable from the perspective of the structural link between brand equity and brand value.

In the literature brand value is conceptualized in different ways, some measures it with price premium ((Randall et al. 1998, Aaker 1991, Sethuraman 2001) or revenue premium (Ailawadi et al. 2003) others use profit premium (Goldfarb et al. 2009). Acknowledging that all tree measures advantages and disadvantages we will analyze what is the most appropriate method of brand value conceptualization.

In order to distinguish between consumer-based brand equity and brand equity expressed in financial terms, the literature uses consumer-based brand equity (Keller 1993) instead of brand equity, the latter appears without a distinctive epithet referring to brand equity expressed in financial terms (Ailawadi et al. 2003) and in other cases is called brand value (Raggio and Leone 2006, Goldfarb et al. 2009).

We will use the following formulations: brand equity refers to the preference of consumers towards the brand; brand value refers to the financial performance of the measured brand, acknowledgeable to the brand equity.

Based on the former formulation we are interested in measuring correlation between brand equity and price, revenue and profit premium. These correlations cannot be computed directly, so we proceed by Monte Carlo simulations.

The greatest number of studies are concerned with brand equity measurement (Kamakura and Russel 1993, Erdem et al. 2006), there are smaller number of studies focusing on brand value estimation (Ailawadi et al. 2003, Simon and Sullivan 1993), and there are a only a few that are estimating both brand equity and brand value (Goldfarb et al. 2009). A great number of studies are based on survey based data (Yoo and Donthu

2000, Netemeyer et al. 2004, Erdem et al. 2006), others are using market level scanner data (Kamakura and Russel 1993, Ailawadi et al. 2003, Goldfarb et al. 2009).
The rest of the paper is organized as follows.

2. Literature review

Brands stand out of the other marketing mix elements owing to the fact that they are capable of incorporating the positive effects of all marketing activities, and by this they become effective signals of quality for the experience and credence attributes (Erdem et al. 2006, Goldfarb et al. 2009).
In the brand equity literature Kamakura and Russel (1993) are the first to address the problem of brand valuation by using a random utility framework. The probability of choice is estimated in a multinomial logit model by using market level scanner data.
Brand value is modeled by the utility component intrinsic to the brand, which reflects consumer's perceptions and needs after controlling for price and advertising expenditure. Kamakura and Russel (1993) calculate brand value as indices; the values of measured brands are scaled to sum up to zero..
Kamakura and Russel (1993) proposed brand intercept as a brand equity measure. Sriram et al (2007) based on recent methodological advances (Berry et al. 1995) tested this measurement method using store level data on toothpaste and dish detergents. They found that the brand intercept effectively captures high equity of measured popular brands. They also validated brand intercept as a brand equity measure by analyzing its correlation with other brand equity measures (price premium, sales premium, revenue premium) finding in every case positive correlations.
Ferjani et al. (2009) built a conjoint based brand-attribute interaction model, and tested its fit while analyzing five other specifications. They found strong evidence for the empirical superiority of the brand-attribute interaction model, and the Kamakura and Russel (1993) model specification performed second best in this comparison.
The Goldfarb et al. (2009) model can be considered one big step forward in brand equity measurement. In contrast to Ailawadi et al. (2003) Goldfarb et al. (2009) calculates the difference between equilibrium profit earned by the brand and the profit equilibrium in a counterfactual situation where the brand enters the estimation without its experiential attributes.
The Goldfarb et al. (2009) model measures brand effect on both demand (brand equity) and supply side (brand value). The positive brand effect on consumers (demand side effect) is defined as brand equity, and the positive effect of brand on the financial performance (supply side effect) is defined as brand value (operationalized as profit premium).

3. Proposed structural model of brand equity

We build a random logit model based on previous empirical findings (Kamakura and Russel 1993, Goldfarb et al. 2009) and methodological advancement (Berry et al. 1995). We propose a model that will account for both demand and supply side effects of brands measured. The estimation will be realized by using the semiparametric maximum likelihood estimator which holds some important advantages over previous estimation methods.
"The productivity of brand assets comes from both the demand and supply sides." Goldfarb et al. (2009).

3.1 Demand side effects - Brand equity

A brand, through indicating quality, decreases the time for consumer decision, particularly when a consumer has no knowledge of the product category (Pashigian and Bowen 1994, Tsao et al. 2006, Ramello 2006). Consumers possess an image of product attributes based on previous experiences or marketing communication activities, and they, when recognizing a certain brand, are able to make a quick decision whether to purchase a particular product or not.

The demand side effect of the brand was operationalized in the economic theory based literature as the brand preference measured with the intercept term in the utility function (Kamakura and Russel 1993). Jedidi et el. (1999) captures the main effects of advertising and promotions on brand intercepts interpreted as brand equity. Brand preference is also extracted from brand intercept in the random utility of the multinomial logit in Chintagunta (1994). In Chintagunta et al. (2005) and Aribarg and Arora (2008) intrinsic brand value is also measured with the intercept term of the utility function. In Goldfarb et al. (2009) brand equity is conceptualized as the unobserved component of utility of products.

Consumer i's direct utility from buying product $j \in \mathcal{G}_f$, where $\mathcal{G}_f$ is the set of products produced by firm f, is:

$$u_{ij} = \beta_f + \beta_i x_j - \alpha_i p_j + y_f \eta_i + \delta_i M_j + \xi_j + \varepsilon_{ij} \tag{1}$$

where β_f is a parameter common to all products of firm f (we assume that all products of firm f have the same brand name), x_j is the $1 \times K$-dimensional row vector of search attributes of product j whose first component is 1 for intercept, p_j is the unit price of product j, y_f and M_j are vectors of experience attributes and marketing activities (advertising expenditure, promotion, innovation, guaranty period), respectively, ξ_j is the brand specific unknown (to the econometrician) product characteristic not expressed by the other attributes (e.g., demand shocks, but also loyalty or support for regional products, etc.), ε_{ij} is an iid type extreme value distributed error term.

In the market consumers can choose from J products and the outside alternative, which represents the option of not purchasing any of the J products, and is assumed to yield utility:

$$u_{i0} = \varepsilon_{i0} \tag{2}$$

Building on empirical research based on Kamakura and Russel (1993), more specifically on Goldfarb et al. (2009) we define brand equity as brand preference accountable for experience attributes. The brand equity of brand f is $be_f = y_f \eta$ (that is we omit the random part).

The aggregate market share of brand j can be obtained by the following equation:

$$s_{ij} = \int \frac{\exp(\lambda_{ij})}{1 + \sum_{j=1}^{J} \exp(\lambda_{ij})} f(v) d(v) \tag{3}$$

where

$$\lambda_{ij} = \beta_f + \beta_i x_j - \alpha_i p_j + y_f \eta_i + \delta_i M_j + \xi_j \tag{4}$$

3.2 Supply side effects – Brand value

A company's protection against competitive attacks increases as the more differentiated brands result in lower price elasticity (Boulding et al. 1994). The company that is more protected against competitive attacks (Srivastava and Shocker 1991) can apply premium

pricing (Farquhar 1998), and can achieve a more successful brand extension (Keller 2003). Simon and Sullivan (1993) confirmed that stock exchange evolution contains information referring to brand equity as well. There is also a positive relationship between new products and stock return, which is a strong relationship only when a company has introduced a great number of newly developed products into the market (Chaney et al. 1991). Companies of high brand equity can expect a significant market share increase if they cut prices, while their share decrease would be insignificant if they increased their prices (Ailawadi et al. 2003).

According to the widely accepted (Keller 1993) definition measurement of brand equity presupposes a comparison between the measured brand and a base brand or a factual and a counterfactual (Goldfarb et al. 2009). Different solutions were offered: private label (Ailawadi et al. 2003), fictive brand (Ferjani 2009), the brand with the smallest market share. Following Goldfarb et al. (2009) we define the counterfactual as a brand shorn of its experience attributes. Goldfarb et al. (2009) presume, that a brand name is valuable only because it can signal products' experience attributes, while search attributes can be always verified by the consumer.

The utility function of the counterfactual is reduced to the following form:

$$u_{ij} = \beta_f + \beta_i x_j - \alpha_i p_j + \delta_i M_j + \xi_j + \varepsilon_{ij} \tag{5}$$

Brand value will be computed through counterfactuals in the following three forms: price premium, revenue premium, profit premium.

I order to estimate price premium we compute equilibrium prices p_j, counterfactual equilibrium prices p_j^c and subtract the average of the latter from the average of the former. For a brand f price premium is equal to:

$$pp_f = \frac{1}{J_f} \sum_{j \in \mathcal{G}_f} (p_j - p_j^c) \tag{6}$$

The price vector $\mathrm{P_f}$ of each firm f are determined as the Nash equilibrium in the pricing game where the profit of firm f is

$$\Pi_f (\mathrm{P_f}, \mathrm{P_{-f}}) = \sum_{j \in \mathcal{G}_f} (p_j - c_j) s_j \tag{7}$$

where c_j is the marginal cost of producing brand j.

To estimate revenue premium we compute equilibrium revenues, counterfactual revenues and subtract the latter from the former. In the case of brand f revenue premium is:

$$rp_f = \sum_{j \in \mathcal{G}_f} (p_j s_j - p_j^c s_j^c) \tag{8}$$

Profit premium for brand f is equal to:

$$pr_f = \sum_{j \in \mathcal{G}_f} ([p_j - c_j] s_j - [p_j^c - c_j^c] s_j^c) \tag{9}$$

4. Analysis

As brand value is defined as the financial performance of the brand attributable to the brand equity (Goldfarb et al. 2009, Sun 2012) we hypothesize that the most suitable brand value measure is that is strongly correlated with brand equity.

We simulate the market nr (=1000) times by drawing the characteristics each time from the specified distributions. We do the computations in each case and obtain nr values for all these quantities for each brand. We compute the correlations by the correlation coefficients over the nr repetitions.

In the following table we present the estimated correlation coefficients between brand equity and the different brand value measures. We simulate three different markets. In the first case there are many small firms on the market with a variable number of products (1), in the second case there are few large firms with a variable number of products (2), and in the last case there is a large number of firms with only one product on the market (3). Every firm is present on the market with one brand and with different product (or subbrands).

Table 4. Correlation between brand equity and brand value measures

		Price premium	Revenue premium	Profit premium
(1) Many small firms	BE	0.568	0.151	0.102
(2) Few large firms	BE	0.492	0.232	0.170
(3) Large number of firms, one product	BE	0.996	-0.231	-0.297

5. Conclusions

From the three brand value measures price premium is more strongly correlated to brand equity than other measures. The relations gets stronger as the firms has a smaller number of products. One explanation could be that brand equity is measured at the level of the firm and its effect is stronger in the presence of only one product, and its effect is diluted in the case of a larger number of products.

I the third case (3) revenue premium and profit premium are negatively correlated. The explanation could be that on a market where every firm compete with only one brand investments in brand equity development will result in reduced revenue and profit. Important to mention that negative correlation signals only reduced revenue or profit premium.

We conclude that from the perspective of the structural link between brand equity and brand value price premium is the most suitable measure of brand value. That is price premium represents better the value added of the brand on the demand side.

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STUDY REGARDING THE USE OF THE TOOLS OFFERED BY MICROSOFT EXCEL SOFTWARE IN THE ACTIVITY OF THE BIHOR COUNTY COMPANIES

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Abstract: *A business activity involves many decision situations. These include organization, aggregation, processing, modelling and analysis of large volumes of information. By using specialized software that provides tools for analysis, aggregation and data modeling, company managers can quickly obtain significant information about company activity. For different reasons some companies are opting for a summary analysis of data, while others for a complex analysis of the data. Many companies use spreadsheet applications for inventory, data processing, modeling and analysis, useful for business activities. Microsoft Excel software is used by many of those who know and use spreadsheet applications for carrying out the work. Using tools to organize, aggregate, modelling and data analysis provided by spreadsheet application, these companies can make complex economic analyses and prognoses that lead to better decisions. For example, the Pivot tables are a simple way to extract relevant information from complex data sets in a quick and simple manner. Solver can be used to solve optimization problems. Correlation is useful in interpreting the relationships between various indicators. Based on these considerations we conducted a study in which we sought to obtain information on how instruments such as Pivot tables, Solver and Correlation are used in the business activities of companies. Companies that attaches high importance of using Pivot tables are medium and large companies. Among the companies using Solver tool, very little use GRG Nonlinear and Evolutionary Algorithms. Therefore, the Solver is used more to resolving optimization problems involving linear modeling. Correlation tool, which could help decision makers to understand more easily why the increasing of one of the factors implies the change of other factors and consequently help them make better decisions, is used far too little. Still too many companies give less importance to data organizing, aggregation, processing, modelling and presentation in a manner suitable for efficient decision making. This is due mainly because of insufficient knowledge of the Microsoft Excel abilities by the employees. Collected and stored data are not used to their full value. In this way, companies do not have information that could provide advantages in a rapidly changing market.*

Keywords: data analysis; spreadsheet software; economic analysis activity

JEL classification: M21; C83

1. Introduction

A business activity involves many decision situations. They may have a lower or higher complexity and involve organization, aggregation, processing, modelling and analysis of large volumes of information. By using specialized software that provides tools for analysis, aggregation and data modelling, company managers can quickly obtain

significant information about the company's activities, can obtain overview, image synthesis of certain aspects of the company's activities.

Specialized tools for analysis, aggregation and data modelling allows capitalization of the information found in databases for effective decision making, both at the strategic and technical levels (Soares, Peng, Meng, Washio and Zhou, 2008). For different reasons some companies are opting for a summary analysis of data, while others for a complex analysis of the data. For this aim traditional analysis software tools or specialized analysis software tools are used.

Many companies use spreadsheet applications for inventory, data processing and analysis. Microsoft Excel software is used by many of those who know and use spreadsheet applications for carrying out the work.

Microsoft Excel 2010 allows you to analyse, manage and share information in more forms than ever before, so that the user can make better decisions. Visualization tools and data analysis enables us to track and highlight important trends in a timely manner (Vătuiu and Guran, 2012).

2. Tools for analysis, aggregation and data modelling offered by Microsoft Excel software

Tools for analysis, aggregation and data modelling offered by Microsoft Excel software are used more or less in different companies.

For example, in small companies, Microsoft Excel software is primarily used for recording data as spreadsheets by using simple formulas, common functions, sorting, filtering. These companies are devoid of information that might help in the development of efficient activities.

For medium and large companies, computing power and data analysis provided by Microsoft Excel is appreciated a lot, but still not enough. Using tools to organize, aggregate, modelling and data analysis provided by spreadsheet application, these companies can make complex economic analyses and forecasts that lead to the best decisions.

Microsoft Excel software provides efficient solutions to many situations for a business activity. Among these are:

- Pivot tables that offer great flexibility in data presentation (Jacobson, R. 1997). Represents a fast and simple way extract relevant information from complex data sets. Allow organizing data stored in multiple spreadsheets, change in the pattern or level of detail displayed.
- Solver, useful in optimization problems. Most common problems are those related to optimization. They consist of an objective function that must reach an optimum (minimum or maximum) and of some restrictions (limitations of the existing natural resources). In order to solve them, Solver Excel provides a strong element analysis using more variables and restrictions in order to find the best solution for solving a problem (Vătuiu and Guran, 2012). Solver can use linear algorithms (Simplex LP) and nonlinear (GRG Nonlinear and Evolutionary) depending on the nature of the optimization problem to be solved. Solver is useful, for example, in determining the optimal mix of products, in determining the optimum distance, efficient organizing of human resources, in solving the problems of transport and distribution, efficient allocation of financial resources, financial planning (Bălan and Dumitru, 2011).
- Correlation tool, useful in interpreting relationships between various indicators. It offers the possibility of getting relevant information regarding the way in which different indicators evolution are correlated. Using this tool could help decision makers to understand more easily why the increasing of one of the factors implies

the change of other factors and consequently to make better decisions (Bălan and Dumitru, 2011).

Microsoft Excel software has the status of a standard in spreadsheet software. It is integrated with Microsoft Office software so that the data and the processing results can be transferred between all components of Microsoft Office software, which is an important advantage.

3. The premises of the research

In the performed research we started from the following hypothesis:

- Tools for analysis, aggregation and data modelling offered by Microsoft Excel software are used in Bihor companies' activity.
- Tools for analysis, aggregation and data modelling offered by Microsoft Excel software are used more in companies with more than 100 employees.
- There is a positive correlation between the size of the company and how much they use the tools for analysis, aggregation and data modelling offered by Microsoft Excel software

4. The research methodology

As a result of a previous study regarding the use of Microsoft Excel in Bihor companies' activity, we achieved a database with 744 companies which use Microsoft Excel software in their activity. A classification of these companies sorted by size is presented in Table 1.

Table 1: Companies using Microsoft Excel software grouped by size

Number of companies/ Company's size	Total number of companies
up to 10 employees	148
between 10 and 50 employees	256
between 50 and 100 employees	226
with more than 100 employees	114

To collect the necessary information we used questionnaires which we sent to all companies in our database. A number of 736 of the total questionnaires were returned and used for analysis, resulting a response rate of 98,92%. Response rate for each category considered is presented in the Table 2.

Table 2: Response rate for each category considered

Response rate / Company's size	
up to 10 employees	97,30 %
between 10 and 50 employees	98,83%
between 50 and 100 employees	99,55 %

with more than 100 employees	99,12%

It is observed that the response rate is very high. The cause could be that the companies used in our research are companies that responded and at other times to other questionnaires sent to us. It seems that these companies are interested in conducting studies of this nature.

The questions were grouped as follows:
- Questions related to the company's size.
  The companies were structured as follows:
    - up to 10 employees
    - between 10 and 50 employees
    - between 50 and 100 employees
    - with more than 100 employees
- Questions related to departments that used Microsoft Excel software.
- Questions related to activities involving the use Microsoft Excel software.
- Questions related to position which the employees (Microsoft Excel software users) hold in the company.
- Questions related to the complexity of the reports needed in activities which they carried
- Questions related to the analysis activity of the economic data.
- Questions related to the graduated domain and software applications known by the employees.
- Questions related to the software applications they currently use in the analysis, aggregation, modelling and data presentation.
- Questions related to how much Microsoft Excel software is used in analysing, aggregating, modelling and data presenting.
- Questions related to the tools which they use for analysing, aggregating, modelling and data presenting offered by Microsoft Excel software and used in company activities.
- Questions related to the importance given by the company manager in improving the employees' knowledge in using Microsoft Excel software.

5. Data analysis and interpretation
Regarding the first two hypotheses, collected data showed that:
- In 76,39% of the companies with less than 10 employees Microsoft Excel software is used mainly in data inventory using spreadsheet forms, due to lack of knowledge in how to use Microsoft Excel software. Only simple formulas are used, sorting and usual functions, filtering and in the best case subtotal function. Using the results, a person can make a decision, usually regarding to what to do in the upcoming month, based on the current data, compared to the data acquired in the previous month. In some companies, by applying simple filtering techniques are quickly found and highlighted information that meet certain criteria. By using the subtotal function, detailed information such as lists of expenses, individual sales records, number of articles in each type of inventory could be used effectively in the decision making process.
- Pivot tables are used to a lesser extent (23,61%) in companies with less than 10 employees. Therefore, we noticed that still too few companies give importance in analysing, aggregating, modelling and data presenting in a manner which allows effective decisions.

- Pivot tables are used more, but still not enough (68,44%) in companies with a number of employees between 50 and 100.
- Companies that attaches the highest importance to use pivot tables are companies with more than 100 employees (73,45%). Pivot tables allow dynamic summaries for efficient data analysis. Allow quickly aggregation of large amounts of data. The way in which data is presented can be changed easily, by changing either the configuration or the level of the details displayed. Stored data can be organized in multiple spreadsheets. All required details can be displayed or hidden.
- In companies with less than 10 employees Solver tool is used in a very small extent (3,47%) and Correlation tool is not used at all. Expected, due to lack of knowledge in how to use Microsoft Excel software.
- Companies that use mostly Solver tool in solving optimization problems are those with more than 100 employees (53,98%).
- Among the companies using Solver tool, very few using GRG Nonlinear and Evolutionary algorithms. Therefore, the Solver tool is used more in solving optimization problems involving linear modelling.
- Even in companies with more than 100 employees, Correlation analysis tool is used in very small extent (13,27%). Using this tool can be identified factors that escape in case of a rapid analysis of data. Using this tool could help decision makers to understand more easily why the increasing of one of the factors implies the change of other factors and consequently to make better decisions
- Too few companies, especially of those who have less than 50 employees, using the tools for analysis, aggregation and data modelling offered by Microsoft Excel software. This is because employees have only basic knowledge in using Microsoft Excel.
- A large number of companies do not give enough importance to analysis, aggregation and data modelling tools offered by Microsoft Excel software, tools that could bring multiple benefits.

Results are synthesized in the Table 3:

Table 3: Usage of tools offered by Microsoft Excel software in the activities, depending on company size

Instruments used/ Company's size	N	PivotTables	Solver - Simplex LP	Solver - GRG Nonlinear and Evolutionary	Correlation
up to 10 employees		34	5	0	0
	%	23,61	3,47	0	0
between 10 and 50 employees		117	36	2	2
	%	46,06	14,17	0,78	0,78
between 50 and 100 employees		154	87	12	28
	%	68,44	38,66	5,33	12,44
with more than 100 employees		83	61	8	15
	%	73,45	53,98	7,08	13,27
Total		388	189	22	45
	%	52,72	25,68	2,99	6,11

For a visual presentation of the data and better understanding of their significance, the data is represented as a chart, in Figure 1:
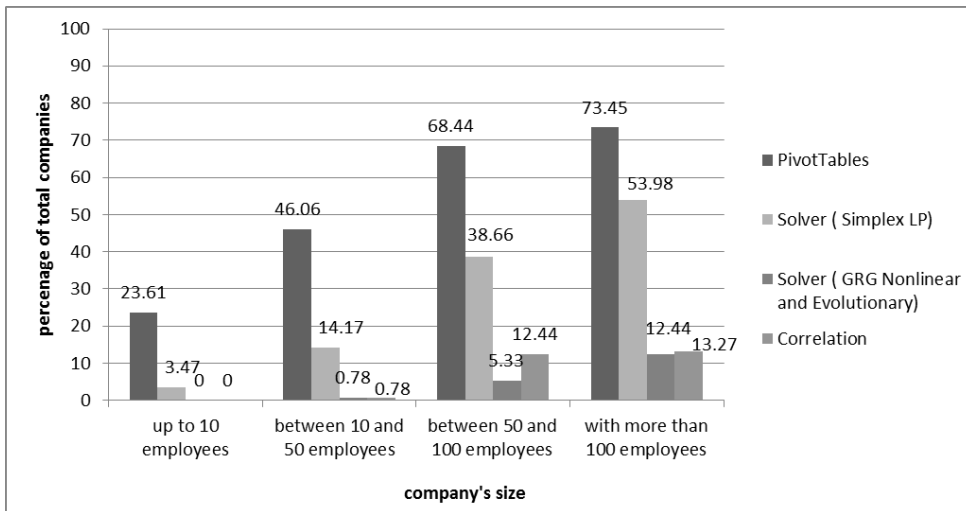
Figure 1: Usage of Microsoft Excel software by companies

Regarding the last hypothesis, collected data showed that:
- In all four cases, the correlation indicator has values close to 1, which means that there is a strong and positive correlation between the size of the company and how much they use the tools for analysis, aggregation and data modelling offered by Microsoft Excel software.

To verify the last hypothesis, we used the Correlation tool that is part of the package of data analysis tools. Results are synthesized in the Table4.

Table 4: Correlation indicator values

	Company's size	Pivot Tables
Company's size	1	0.970557
Pivot Tables	0.97055671	1

	Company's size	Solver Simplex LP
Company's size	1	0.98992481
Solver Simplex LP	0.98992481	1

	Company's size	Solver (GRG Nonlinear and Evolutionary)
Company's size	1	0.946978408
Solver (GRG Nonlinear and Evolutionary)	0.946978408	1

	Company's size	Correlation
Company's size	1	0.92138736
Correlation	0.921387357	1

6. Conclusions

Conducted research shows that Microsoft Excel software is used quite enough in Bihor companies' activity, but tools for analysis, aggregation and data modelling offered by Microsoft Excel software are used too little. Collected and stored data are not used to their

full value. In this way, companies do not have information that could provide advantages in a rapidly changing market.

In most of the companies with less than 10 employees, are used only elementary techniques of Microsoft Excel software, due to lack of knowledge in how to use Microsoft Excel software. Tools for analysis, aggregation and data modelling are known and used to a limited extent. Very few of the respondents use Solver tool in solving optimization problems. Correlation tool is not used at all. Using this tool could help decision makers to identify factors which are omitted in the quick analysis of data, to understand more easily why the increasing of one of the factors implies the change of other factors and consequently to make better decisions.

Regarding the second hypothesis, we found that companies that attaches the highest importance to use pivot tables and Solver tool (Simplex LP) are indeed companies with more than 100 employees. Instead, Solver tool (GRG Nonlinear and Evolutionary) and Correlation tool are used in a very small extent even in these companies.

Companies in Bihor county should give more importance to analysis, aggregation and data modelling tools offered by Microsoft Excel software, tools that could bring multiple benefits. Should give more attention to improving employee knowledge in how to use Microsoft Excel software.

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SUB-SECTIONS: MANAGEMENT I, II

MODERN METHODOLOGIES TOWARDS A SUSTAINABLE FLEXIBLE PRODUCTION

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Abstract: The present paper brings into the light several methodologies used today inside the companies to organize their process in order to respond to continuously evolving and changing customer behavior. It follows the historical timeline from the moment when production was a simple craft to the moment where mass production has been transformed in mass customization.

Keywords: flexibility, agile, scum, jit, kanban, kaizen, lean

Jel Classification: D20 – General

1. Introduction

Growing demands on various customized products are received by companies on a recurrent basis more than before. Specific desires are being formulated by clients, having consequences on the company strategy and father to their production capacity. Several factors have contributed to the actual state in the client behavior. One of them is the globalization, social factor that encouraged the exchange of opinions, ideas and a faster propagation of the information between countries and cultures. Governments and different accredited organizations sustained the spread of the globalization from a regulatory and social perspective. The second factor, a really key pillar, sustained globalization and allowed it to evolve at a higher speed towards new horizons. This second factor is the technology, that brought today human beings under one digital roof, giving new possibilities to generate competitive products and services. Research and development plays an important role bringing to life new generation machines capable to perform complex and flexible tasks that allows companies to use them as resources in order to reach strategic targets. Technology seen from the production corner means powerful computers, long lasting components able to be easily replaced when repaired or upgraded. Many machines have the capacity to easily change between several production processes with little input from the employees. For example computer-aided design and manufacturing machines are using super computers that offer an easy interface to communicate with the human factor. From a service perspective technology refers to the friendly interface tools that do not require advance knowledge from the users. The last 20 years have been characterized by an exponential growth of the social media platforms that encouraged the communication worldwide and sustained the intensification of the globalization. Social media started from simple interactive online spaces between users being adopted in recent years also by companies as a straightforward solution to keep the brand fresh. The fact that around 43% of all online consumers are social media fans or that 85% of internet users have Facebook accounts has to send some signals to those that have not yet been convinced. Globalizations means also being able to access the same information anywhere using the same connection device. Is it mobility that solved the challenge for many tools that now can be accessed via phone, table or laptop. It is estimated that in 2014 four out of five internet users will be a mobile web user.

Having in mind the two mentioned factors, globalization and technology, as contributors to the variety of demands received from the clients, let's go further and see how methodologies and best practices have been built to respond on their turn to the changing environment.

2. Methodologies

Going back in history, years 1950 – 1960 have been characterized by important moments such as placing the production of coal and steel under a common authority, unification performed by Paul Schuman on 18th of April 1951 and several years later in 1957 the creation of the European Economic Community (EEC). Looking now at the company level, efficiency was considered for that period the most important competitive advantage. It was seen a success to produce at large scale keeping under control the costs. Many standard procedures have been created and companies could certify in order to prove their efficiency. The in-depth attention for standardization gave birth to an individualistic thinking and limited interactions at the level of related activities. Coordination and control became two distinct goals that led to complex work organizations but with simple and monotone activities. Passing to years 1970-1980, this are characterized by the launch of Microsoft on 4th of April 1975 and by the first extension wave performed by the European Union. Looking now at the companies, they have realized that standardization was no more enough to generate competitive advantages and started to concentrate on a higher quality. Clients at the same time begun to be more attracted by quality products with a higher fitness for use. After a period of another 20 years, cost and quality were again not enough to sustain further the company future. It is the moment when flexibility appears as a complement to the two initial factors (cost and quality). Flexibility means the possibility to produce various products with little changes brought to the production system itself without having a negative impact on cost or either quality. The picture below describes the relation between clients demands and the competitive advantage.
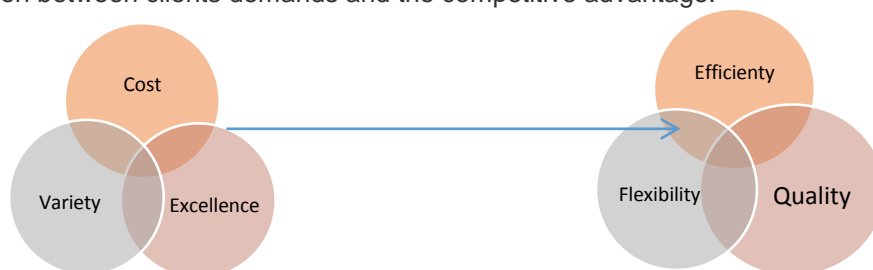
Figure 1 - Clients demands and the competitive advantage

Along the three historical periods described above, scholars and experts have conducted many researches in order to formulate best practices to help companies develop their portfolio of services and products. One of the first philosophies developed by Toyota, back in 1952, was *Just in time* (JIT) that aimed at eliminating waste and continuously improving quality. This was a strategy to reduce the inventory and gain on the return of investment. The JIT methodology was put in place by special cards named, *Kanban* that contained essential information on the product and the remaining stock in the warehouse. The same card was used for future orders to the provider when the stock was finished. Using this process the stock was limited only to the ongoing process eliminating unnecessary materials to be kept in the warehouse with no reason that generated huge costs. To be more clear Kanban is an inventory control system and not a logistical system. Another concept dates back to 1930 from Sakichi Toyoda, founder of Toyota. In 1950 Toyota implemented quality circles leading to the development of Toyota's unique "Toyota Production System". Toyota System is a system of continuous improvement in quality,

technology, processes, company culture, productivity, safety and leadership. The system also called the Deming cycle is based on four step that have to be followed in order to resolve a certain problem appeared. These steps are called PDCA – Plan-Check-Do-Act. Another Japanese concept was burn after the Second World War to defined continuous improvement in quality, technology, processes, company culture, productivity, safety and leadership. The name is *Kaizen,* it comes from the Japanese words 改 ("kai") which means "change" and 善 ("zen") which means "good". The Kaizen process asks each employee in the company from the upper management to the lowest roles to come up with small suggestions on regular basics. Companies such as Toyota and Canon requested from their employees a number of 60-70 ideas per year.

The foundation of the kaizen method consists of 5 founding elements:
1. Teamwork
2. Personal discipline
3. Improved morale
4. Quality circles
5. Suggestions for improvements

Another philosophy derived from the TPS in 1990 was the so called *Lean Management*. Lean is a customer-centric methodology that aims to eliminate waste in all activities and to create a continuous value-added for the client. The interest of the client is captured at any time by creating product and services with a new value.

The term Lean can be described by the following ideas:
- Maintaining an unrelenting focus on providing customer value
- Respecting people most of all
- Adopting a philosophy of continuous learning and everyday improvement
- Using techniques for reducing variation and eliminating waste
- Taking the long-term view
- Improving value not just locally, but globally — across the whole "value stream"
- Providing exactly what's needed at the right time, based on customer demand
- Leading by focusing not just on results, but how results are achieved, where customer value is created, and by building capability in employees
- Building long-term relationships with all its stakeholders, including employees, managers, owners, suppliers, distributors, customers, the community, society, and the environment
- Keeping things moving — flowing — in a value-added, effective manner

	Mass Production	Lean Enterprise
Primary business strategy	Focus is on exploiting economies of scale of stable product designs and non-unique technologies. A product-centric strategy.	A customer-focused strategy. Focus is on identifying and exploiting shifts in competitive advantage.
Organizational structure	Hierarchical structures along functional lines. Encourages functional alignments and following orders. Inhibits the flow of vital information that highlights defects, operator errors, equipment abnormalities, and organizational deficiencies.	Flat, flexible structures along lines of value creation. Encourages individual initiative and the flow of information highlighting defects, operator errors, equipment abnormalities, and organizational deficiencies.
Operational framework	Application of tools along divisions of labor. Following of orders, and few problem-solving skills.	Application of tools that assume standardized work. Strength in problem identification, hypothesis generation, and experimentation.

Table 1 – Mass production versus Lean Management - Natalie J. Sayer and Bruce Williams, Copyright John Wiley & Sons, Inc. © 2012, Publisher: John Wiley & Sons (US)

Not far from 1952, in 1957 it was the moment when incremental software development appeared for the first time being a combination between iterative design, methods and incremental build model. It was only in 2001 when 17 software developers met in Utah to discuss the future of developments methods. The result was a publication called the *Agile Manifesto* that defined new approaches on software development. The four values of Agile were:

- Individuals and interactions over Processes and tools
- Working software over Comprehensive documentation
- Customer collaboration over Contract negotiation
- Responding to change over Following a plan

The Agile methodology is also based on 12 principles presented below:

- Customer satisfaction by rapid delivery of useful software
- Welcome changing requirements, even late in development
- Working software is delivered frequently (weeks rather than months)
- Close, daily cooperation between business people and developers
- Projects are built around motivated individuals, who should be trusted
- Face-to-face conversation is the best form of communication (co-location)
- Working software is the principal measure of progress
- Sustainable development, able to maintain a constant pace

- Continuous attention to technical excellence and good design
- Simplicity—the art of maximizing the amount of work not done—is essential
- Self-organizing teams
- Regular adaptation to changing circumstances

Another iterative and incremental agile software development is *Scrum*, a framework used for managing software projects and products. A key principle of the framework is that unpredictable changes arrived from the client along the development phase that are now treated could not be solved using the traditional planning. As a short insight the traditional method is called the *waterfall model*. It is a sequential design process that flows from one stage to another, for example from requirements collection, design, implementation, verification, delivery and maintenance. Advocates of Agile software development consider that the waterfall model is a bad practice because it is impossible to end totally a development stage before passing to another. If clients change their requirements after the designed was created, the company will have to launch again the whole process from the beginning increasing considerably the costs. To fix this shortcoming, Scum is based on a holistic and empirical approach. Empirical due to the fact that even if changes appear along the development process, the team has to be able to respond quickly. Holistic because it sustains the importance of teams working tight even if distance may not offer an advantage. Teams have to plan face to face meetings and use as much as possible the collaborative work. As the Scrum community started growing from the beginning of 2001, it was expressed more and more the need to gather all the experts under a single organization. It was then when the Scrum Aliance (SA) and Certified Scrum Master (CSM) certification were put in place. There are three roles suggested to be used by the framework: Project Owner, Scrum Team and Scum Master. The project owner is responsible with the creation of the Product backlog, a document containing all the items to be developed together with the related estimations. The product owner is also entitled to prioritize all the items in the Product backlog. The Scrum team develops the product and sends the estimations for the items to the Project Owner. A typical team consist usually of 7 team members with no other roles assigned and implicates a high cross-functional communication. If the Product Backlog describes *What* has to be done, the team breaks down each item in delimited tasks that are included in a separate document, called Sprint Planning. Being an iterative framework, Scrum is based on monthly iterations with one day of planning at the beginning, then 4 weeks of development and at the end one day of review. In all this time enters in stage the third role, the Scrum Master being a coach and gatekeeper for the whole scrum team. In order to manage the time elapsed the Project Owner can use the *Burn Down Chart* that compares the work left versus the time. The figure below scathes an example of such a graphical representation. The ideal line has to show a descend trend to underline the fact that as the number of days elapses also the number of items included the Product Backlog has to decrease.
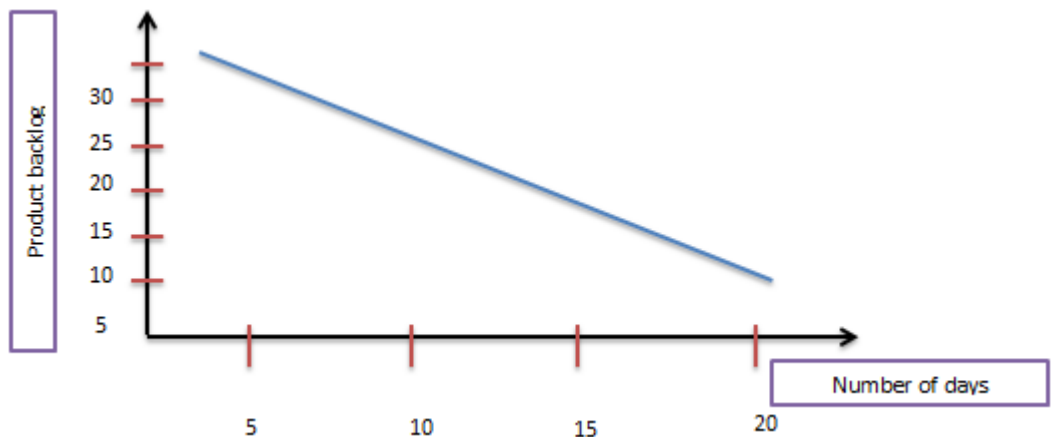
Figure 2 – Burn Down Chart

Scrum framework being based on iterations and continual communication with the users to complete any additional request arrived along the development process offers unlimited benefits and sustains the flexible advantage of the companies. Although the concept started from the software development it is today used in a large range of activities. Below it is a graphical presentation of the flow from the definition of the items included in the Product Backlog until the delivery stage where the product arrives in the client custody.
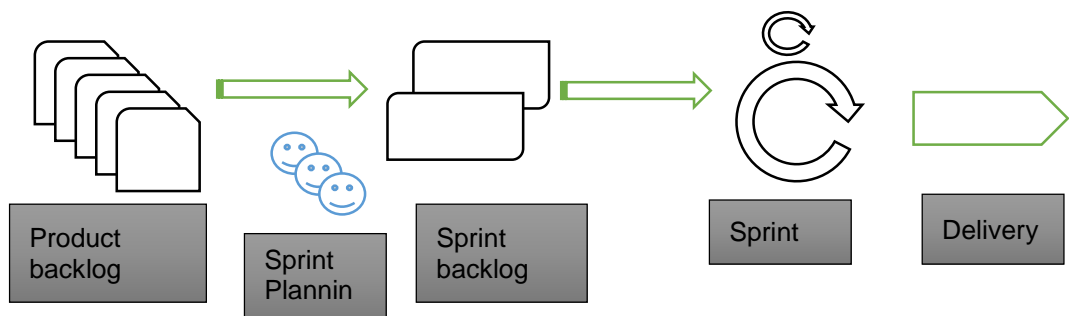
Figure 3 – Scrum process

3. Conclusions

Starting from 1950 companies started to be more conscious about their future being influenced to take action to de increasing demands received from the clients. Companies have traveled through several concepts from Just-in-time that concentrated on eliminating waste, Lean that sustains the creation of value added and finally to Agile and Scrum that develop principles on how to become more flexible. All the methods described brought a competitive advantage to the companies and become instruments used to respond to market evolution. It can be stated that all these methods have one thing in common and this is the opportunity to bring flexibility both in the production system and at management level.

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PECULIARITIES OF THE RENEWABLE ENERGY BUSINESS MODELS

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Abstract: *By exploring the competitiveness of industries and companies, we could identify the factors whose importance is likely to generate competitive advantage. An inventory of content elements of the business model summarizes the clearest opportunities and prospects. The objectives developed throughout the paper want to identify the pillars of a renewable business model and to describe the strategic dimensions of their capitalisation in regional and national energy entrepreneurship. The trend of increasing the renewable energy business volume is driven by the entrepreneurs and company's availability to try new markets, with many unpredictable implications and the willingness of these players or their creditors to spend their savings, in various forms, for the concerned projects. There is no alternative to intensive investment strategies, given that the small projects are not able to create high value and competitiveness for interested entrepreneurs. For this reason, the international practice shows that the business models in energy production are supported by partnerships and networks of entrepreneurs who are involved in the development of large projects. The most important feature of renewable business initiatives is on attracting the latest clean emerging technologies, and obviously the investors who can assume the risk of such great projects. The benefits of a well developed business model recommend a prudent approach in the launching in the investment strategies, because the competitive contexts hide always some dissatisfaction of the partners that endanger the business concept's success. The small firms can develop a profitable business model by exploring the opportunity of the alliances, namely the particular joint ventures (association between Romanian and foreign firms). The advantages of joint venture's partners are considerable; they include access to expertise, resources and other assets that the partners could not achieve on their own. The present research emphasizes a series of positive aspects and shows the dysfunctions encountered by the companies that develop business models in the Romanian renewable energy.*

Keywords: *business model, renewable energy, inside-out innovation, infrastructure models*

JEL classification: *O13; Q42; Q55.*

Traditionally, the industries of the last century were characterized by one or few dominant business models, but today the things have changed. The evolution of contemporary competitive forces involves a lot of options from which the entrepreneur must select the driver-variables describing the architecture of the new and new business models, taking into account the fact that *a good business model remains essential to every successful organisation* (Magretta, 2002, pp. 86–87).

There are many markets where totally different business models are in rivalry and the boundaries between industries are often blurred or even disappear. Thus is the case of power producers industry that exploits the renewable energy opportunities. Not coincidentally companies such as CEZ, Enel and Petrom, whose activities were essentially and exclusively based on the exploitation and distribution of conventional energy, mobilized their skills into new business concepts to exploit renewable energy, even in Romania. The same tendencies of diversification are also proves by the Hidroelectrica Public Company, a company that negotiates her involvement in wind energy production.

Frantzis et al. (2008) highlight that ownership of renewable energy assets is the most promising path for utilities, because it offers the largest return potential but it warns of the risk that the ownership of photovoltaic and concentrated solar power projects has been limited in the United States, because some states have prohibited utilities from owning and operating distributed energy resources.

1. Conceptual clarifications

The new ideas, initiatives and business concepts takes the form of business models through which the companies can build sustainable competitive advantages. The building and innovation of a business model does not mean a retrospective approach followed by the extrapolation phase, because the past can indicate very few tendencies regarding the business model's future. However, the concept *does not involve the copying of competitors' practices, as the company develops a competitive business model by developing new mechanisms for value creation and profit obtaining and not through imitative or benchmarking practices.*[16]

Particularly interesting are the observations of Baden-Fuller and Morgan (2010). They considered that the business model concept using can provides mangers and researchers with valuable ways to expand their understanding of business phenomena by building generic categories and the development of ideal types. Hence, the business model helps managers to capture, visualize, understand, communicate and share the business logic.

From a practical standpoint, the difference between business models and strategy is that business models are a coordination system, matching the parts of a business, while the strategy prioritizes the competitive struggle (J. Magretta, 2002). Some authors consider that a business model is an abstraction of a successful strategy that can be applied in other companies (Seddon, Lewis et.al cited by Osterwalder, Pigneur & Tucci, 2005). However, there are frequent confusion: many researchers use alternatively the two terms - considering them synonymous, although we believe that there are clear differences.

The business ideas and concepts have been investigated by most of the strategy theorists, starting with Ansoff, Porter or Mintzberg. Yet, Chesbrough and Rosenbloom are recognized as the ones that have shown the business models utility as a strategic tool. The substantive content of any theoretical approach regarding business models include the major aspects of running a business, but the name and the number of components coagulated by a business model are different.

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[16] syllabus of the course Competing through Business Models , prepared in the past academic years by Hanna Halaburda at Harvard Business School, accessed at http://www.hbs.edu/mba/academics/coursecatalog/1205.html

The components of business model, formulated in various forms and significances in the last decades, summarizes the contribution of many theories and strategic schools, recognized in all economic fields. The most important strategic approaches that contribute to the description of the attributes of a business model are: the resource-based theory, the transactional costs theory, the value chain theory (Porter), the school of dynamic capabilities, the relational approach of the strategy etc.

2. Hypothesis

We will analyze some assumptions highlighted by the economical analysts in their Romanian media appearances or the ideas presented by few comprehensive industrial analyses. The most important of these cover issues such as:

- The technological resources are paramount for the overall functionality of the business model.
- The network that adds value and the strategies are developed based on the principles of partnership, and by the existence of alliances and collaborations between the units in different areas.
- The heavily regulated market affects the rapid development of the businesses, but offers the certainty of production and distribution once the capacities have been / shall be operational.
- The renewable energy businesses are run by few Romanian companies and the capital sources are predominantly foreign; hence the high but risky shares of dependence on foreign entrepreneurial initiatives, taking into account the energy security of the Romanian state.

The renewable energy business fundamentals are represented by the technological pillar, namely innovation and upgrading technologies converting natural sources of energy into kinetic, mechanical, thermal energies and finally into electricity. Chesbrough & Rosenbloom's opinion (2002) is that the innovative technologies can be successfully applied in the new business models.

Whether they are based on the principles of kinetic energy transformation into electricity by converting the heat/light energy from the sun, or by processing and transforming of organic matter into ethanol or other types of bio-fuels, the engineering researches in the past years are reflected in improved systems, more and more efficient. Moreover, factors such as the worsening of environmental pollution and global warming trend, the unprecedented rise of conventional energy resources prices, the concerns of political decision makers and society as a whole regarding the energy security are just some of the trends that require to the energy market to change his supply structure; this process is accelerated by the claims of beneficiaries, seeking higher value from the energy producers.

The energy entrepreneurs can speculate these general trends exhibited in the market, by trying to take advantage of technological and engineering research results. Because the entry barriers in conventional power generation segments are huge (mainly related to capital costs of building the power stations, the hydroelectric or nuclear plants), the investors accept the challenge of developing new business concepts, original or similar with such business ideas arising from the exploiting of new technological inputs. Thus, the business concepts become business models by combining the available technical assets and the successfully economic outlook.

Our opinion is that a business model works as a driver of competitiveness because it integrates the manager's expectations regarding the business in the context of an organized framework that allows exploiting the opportunities (technological heritage is the most important) and converts them to the value proposition for the customers and the market.

3. Characteristics of the renewable energy business in Romania

In the light of the economic, competitive and cultural features, we can set the assertion that business models suitable to renewable energy producers typological correspond with the infrastructure pattern. Other standard models used in different industries falling (Ostervalder and Pigneur's opinion, 2010., p.57) in the category of the customer relationship based models (Delta model is representative for this pattern) or the product innovation models category. A company that coordinates all these types of models has practically more business and deals with many risks. Given the size of the companies they work to build power generation plants in Romania, their infrastructure business model is based on business innovation elements and infusion of innovative technology.

The content of business models reveals a static image, is a snapshot of the pillars that sustain the renewable energy business. The architecture of a business model is dynamic, is similar with the business development itself. The external environment exerts unpredictable influences at which the business model elements gradually adapt. The dynamics of the external environment is determined by the sources of innovation and also by the constraints that require creativity in every aspect of the business model. In our interpretation, the vectors that require dynamic adjustment of the content of business models in renewables are:

• the new clean technologies, proliferate on the energy market;
• the availability of large capital resources and the possibility of accessing funds that can be preferentially reimbursed by the promoters of these business.

The constraint which determines the changes of the business models includes, in our opinion:

• the legislative and regulatory trends of each market: the green certificates market, the regulated and competitive electricity market, the market of bilaterally negotiated contracts etc.;
• the structure of each market segment of producers: oligopoly in the hydropower sector; few players with equal influence in biomass and biogas energy; no serious initiatives for exploitation of geothermal and photovoltaic; a weak competition between few small and large operators, but each year more numerous, in wind energy production.

The financial issues have a vital importance for the developers of electricity generation capacities that use renewable resources. This factor causes a significant dependence between the strategies (of the industry companies) and the capital markets. No segment of the renewable energy sector does not benefit of facilities for funds obtaining from these markets, but the investors manifest a contingency predisposition for the wind farms/parks projects. The financial alternatives of capital participation that we recorded after a brief investigation of the investments made in recent years (table no 1) show that, in the most of the initiatives, they are used the industrial loans, the venture capital investment and the structural public funds (without reimbursement) for micro projects capacities - less than 1 MW - likely to be supported. We have not considered the geothermal energy, operated exclusively for her heating utility (buildings, homes, greenhouses, etc.) in Romania. Although they benefit from a good promotion through the green certificates system, the number of biomass plants is reduced, their capacities are small and all of them are cogeneration units; they produce principally heat but deliver also electricity in the Power System (the share of destinations is generally 2/3 - 1/3).

Table no 1 - *Systems for financing investment in the renewable energy generation*

	Prevailing system of financing
wind parks and farms	Venture capital, business loans
Micro-hydropowers	business loans, Venture capital
Photovoltaic	venture capital, business loans, structural fund assistance
Biomass, biofuels, waste (CHP)	individual investments, venture capital, structural fund assistance

Notes: We investigated the most of the projects reflected in the Romanian press. We also used the references published on the ANRE website.

It is noteworthy that most renewable energy businesses developed in Romania have a foreign ownership of capital (large multinational companies with business in several sectors of the energy industry). Solar energy projects are undertaken by consortia regrouping local companies but rely heavily on the support of bank loans. The largest investment in biomass processing plants are Austrian and Italian and the small hydro segment is operated almost entirely by Hidroelectrica through its partnerships with foreign suppliers of technology, consulting and engineering design, although the financial contribution is provided 90% by the large banks.

The loans are characterised by the disadvantage of bank dependency and the local banks require high shares (equity) of the new affairs. For this reason, the most common crediting are made by large investment banking units as the World Bank, the EBRD, the European Investment Bank.

However, the State companies are interested in these opportunities, but do not have their own sources (capital from the operation of the previous business), excepting perhaps Hidroelectrica, they cannot easily access the medium- or long term loans, or the budget subsidies. The remaining alternative is to attract direct capital investments of large global companies and the loans approved by the international banking consortia.

The strategic implications of foreign capital dependency have also positive valences because the financial flows are generally accompanied by the investors' interest for such businesses and they work for facilitate technology transfers. Not coincidentally, the strategic alliances involves traditional very close relationships, between business promoters and major manufacturers of turbines and components of electric plants as Siemens, General Electric, Vestas, etc.

Given these considerations, we must emphasize the high costs of financial transactions. Even if the renewable energy business models are highly profitable, the beneficiaries have mostly a foreign origin; the Romanian's advantage remains the creation of a large number of jobs occupied by local work force. From the perspective of Romanian participants in these businesses, the financial attributes of business models can improve, namely by increasing the domestic capital share and therefore the ownership percent of the generating capacities.

If we closely follow the value created in the electricity generation industries, we must notice the differences regarding the distance between the producers and the consumers. In the past few years, of all the manufacturers, only Hidroelectrica can sell by itself to consumers his production of MWh. All the other segments, wind, solar, biomass or geothermal, they negotiate the prices and the supply energy conditions with the regional distributors. Each manufacturer may cover the internal demand of electricity through self-consumption, and to deliver the remaining power through the National System.

The general approach of foreign companies in Romania wants to create value through open business models but requires an inside-out innovation approach. Our finding is based on the original objectives of many companies seeking to develop turnkey wind farms in the region to sell them after commissioning. This scheme aims to exploit its

assets: the licenses to use the technology and the skills of its engineers and specialists (intellectual property) and transfer of completed units to entrepreneurs who cannot build on their own such wind capacities (they also can benefit from operating consultancy, on demand).

For example, the Global Wind Power uses this strategy but also has the backup option of own operating the inaugurated capacities in the case of lack of alternatives for a profitable exit from the business. The Hidroelectrica involvement in the value creation is characterized by a different type of partnership - the company manages and controls all the operations: in case, they can use the subcontractors.

As a simple observation, we note that Hidroelectrica, Global Wind Power or any manufacturer that uses the renewable sources have the competitive epicentre of their business models the availability of capital resources, the existence of collaboration with specialized companies and, of course, the virgin opportunity of green energy sources.

4. Conclusions

Until now, the approaches of business models were and are only theoretical ones, used to decipher the internal analytical strategic variables; in the near future, the disaggregation of these models can lead to the strengthening of competition position of the industry players. The entrepreneurs manage today the business model's components by optimizing the prices diminishing, the more advantageous position in the value chain, the launching of new products, or the increase of advertising spending.

The Hanna Halaburda's course presentation (Competition through business models cited above) backed at Harvard Business School, highlights the opportunities generated by a business model in stimulating current abilities and creating dynamic skills, if possible at the level of each attribute of the business model. The advantages offered by a well-defined and know business model gives managers the position to identify and block the rivals' abilities and, furthermore, to find solutions to neutralize the virtues of business concept developed by these competitors.

The challenge of exploring business models can support as we have shown the outlining of competitive advantages and we also can affirm, therefore, that the usefulness of the dynamic researches of the business models greatly contributes to improving the strategic position of enterprises in the competitive theatre of energy markets.

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FIVE GLASS BONES OF STRATEGIC MANAGEMENT THEORY

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Abstract: *The present work takes into account the consistency of five reference points considered as highly significant for the current strategic management: the strategy, the competitive advantage, the five forces model, the VRIO framework and the generic strategies. They have been selected by taking into account both the frequency of their use in the textbooks, and also the consequences they have generated in the field theory and research. The study starts by considering the main reference points which assume the role of defining the selected concepts, in order to develop an analysis by highlighting their debatable features. The relation between concepts and virtual implications of the current stage in their development represents an implicit aim of this work. The methodological framework approached considers, as preliminary elements, the works referring the concepts in question and the significant milestones related to their approval. The next step is to take into account some critical references, assuming positions that contradict those promoted by the previous works. They enjoy a fairly limited popularity, which makes them more interesting for the development of an approach which counterbalances the standardized textbooks, characterized by a lush amount of bibliography that complies with the official trend. The methodology used is of qualitative type. At the first stage, an analysis of concept definitions and proximate elements is developed. Afterwards the results of certain empirical studies validating the concepts discussed are taken into account. Their results relate to the critical positions assumed by studies which raise an amount of relevant points of discussion. A logical filter has been used in order to mitigate the groupthink oriented effect caused by the appraisal of concepts in the American textbooks. In an absolutely predictable manner, the analysis results are able to temper the academic conformism involved in the dissemination of strategic management. One can infer there is enough evidence available for questioning the reliability of the whole field structure involved in the economic sector. An extreme frailty can be distinguished for a great amount of concepts and connected elements, a frailty able to generate insurmountable dilemmas for the practical use. The discussion dealing with the weak points of the researched concepts questions the reliability of the results acquired by empirical research, considered as relevant by the supporters of the current situation in the theory development. In practice, the problem of utilizing the tools derived from the studied concepts will be addressed, due to the fact that the results will be influenced by the problems identified as results of the present study. The topic selection relates this study to the category of works attempting at a more realistic approach of the "made in USA" theory. The author has selected the key concepts to be analyzed, identifying the most sensitive points involved in the theoretic elements network, developed on the basis of these concepts.*

1. Introduction

Each topic related to academic study or research in the field of strategic management refers to and relies on a limited number of key concepts. They have the value of "corner stones", being developed in form of a network associated with the concept of strategy. This term has been borrowed from the military use, but nowadays applies mostly to a commercial type organization.

After a more careful examination, a critic could generate the hypothesis according to which the respective network of concepts is similar to a house of cards. Lack of precision in a definition or its vague formulation may create the first "gap", in order to generate a chain reaction when other concepts are defined. In order to counterbalance this type of definitions, some concepts are defined by using lists providing a set of alternatives. As an example from the first category, the definition of Porter (1985) for competitive advantage could be mentioned, and from the second category the definitions of Mintzberg (1987) for strategy.

The feeling of inconsistency or imprecision still exists within the framework of empirical studies or works considered as referential for the edification of this field. The concepts affected by these shortcomings are then reinforced by their use as reference elements for other studies and works, in order to, eventually, turn into dogmas made available by certain textbooks.

There are two categories of elements which suggest that a more careful examination is needed for the manner certain concepts have been turned into "corner stones" of a certain theory. On the one hand, there is the category of theoretical elements associated to common sense and to the Cartesian rationalism which may be associated to the formal discussion of these concepts. On the other hand, there is an impressive number of cases when important corporations deal with catastrophic failures: even if they conformed to the current principles related to strategy, being acknowledged by strategy experts and publicly acclaimed for their performance, at a certain moment, without no strategic alert, they collapsed in a spectacular manner: bankruptcy, acquisitions or some form of governmental help.

2. Methodology

The present study focuses on five major concepts related to the current strategic management. The selection has been considered in order to acquire a mimetic effect for the title formulation, similar to a significant number of current models, definitions or methodologies related to the field.

The starting point is the concept of strategy, defined not only by using a set of five alternatives, but also by referring it to the concept of competitive advantage. The competitive advantage is analyzed due to its association with the firm performance. At its turn, the firm becomes a final system of reference for each element of strategic management which involves the manifestation of certain option. For instance, a firm chooses a strategy from an existing strategies family, hoping that it will acquire a better performance than if using another option from the same family.

As two different parties of theoreticians already exist – one claiming that performance is induced by the industry within which it operates, as the other claims performance depends on the resources owned by the firm – the research on their emblematic elements falls naturally into place. These elements represent the five force model and, respectively, the VRIO framework.

The fifth element consists of the concept of generic strategies. The analysis of these strategies refers, as it was expected, to performance and competitive advantage.

The analysis of concepts will be developed separately and starts for each and every one of them with definitions or models related to the most renowned bibliographic references. Their debatable features are detached by referring them to the logic specific to the practice. The qualitative features of supporting bibliographic references are taken into account, as well as the critical positions.

Then, for each and every concept are discussed the empirical studies which can be taken into account as points of interest for their validation.

In this form, the research assumes a mainly theoretical and documentary character. The revision of relevant literature will focus on taking into account the elements related to the concept, but it becomes obvious that in the majority of its sources the direction of the present study hasn't been yet developed.

The findings acquired for each concept analyzed will be noted separately in order to develop the synthesis of their composite correlation. What matters is the underlining of possible consequences of their accumulated effect on the current theory "standards".

3. Relevant literature and findings

3.1. Defining strategy

A reasonable approach of defining strategy involves the study of historical roots of the concept, the semantic point of view included. This approach is developed only by few authors of western textbooks, Quinn (1980) and Desreumeaux (1993) being the most renowned. The semantic discussion is related to the ancient Greek words *strata*, *ego*, *stratego*, with their equivalents army, general and plan to destroy the enemies respectively, synthesized in *strategos* with the equivalent "the art of the general". From the content point of view, the concept was related to the preparing and carrying out war. In military practice and in the related theory, this concept has been preserved and perpetuated in a fairly unaltered manner until the present moment.

This concept has permeated the theory of the firm only during the last half of century. Each author of management textbooks has formulated his own definition, related in a direct or indirect manner to the concept of plan. In this concert of voices, Porter (1985), differs by stating that strategy is defined as a means to use a competitive advantage, as Barney (1986) considers that strategy represents the theory involved in acquiring a superior performance.

Contrasting these authors, Mintzberg (1987) defines strategy by discussing five alternatives: plan, ploy, position, perspective and pattern. He claims that strategy may assume each of these forms of manifestation or even a combination of them. Using a similar approach, Johnson et al (2011) provide a set of four "lenses" for the definition of strategy, which represent according to them various approaches on the concept at the organization level.

In order to render more complex the problem of definition, Mintzberg (1985) also claims that the strategy formation can be deliberate, as a result of a planning approach, but also emergent, as a result of behavior consistency.

By comparing all these approaches, one can ascertain that the resulting idea related to the definition alienates from the initial concept, at least by diluting the synthetic character and by the involvement of the organization's leader. The involvement of more synthetically formulated organization aims, such as advantage or performance, generates a further shortcoming due to the difficulty supposed by their formulation.

If performance definition has been developed by management, the attempt is open to interpretation, even on short term and even if only the involved firm is taken into account. As strategy is involved, the concept of performance becomes ambiguous, as his relevance becomes questionable. Reference to competitive advantage becomes more

and more problematic, as its definition within the strategic management field is formulated after defining the strategy.

The definition approach, according to Mintzberg (1985;1987), induces the idea that rationality does not represent a sine qua non condition for strategy and that development may be attempted from the periphery without involving "the general", in a rather incidental manner, but yielding positive effects.

Even if they seem to have a consistent support generated by the organization practice, Mintzberg's statements cannot stand critical analysis. One can identify extremely few cases in the military field and also in the field of current companies, which are able to support the thesis of successful stories generated from the bottom up and concatenated for an extended timespan.

The direct consequence of the divergence related to modern definition, and to its relinquishment from the original concept is the confusion involving the necessity, the content, the manner of formation, and the effects of a strategy.

3.2. Competitive advantage

The concept of competitive advantage represents the key element of the strategy definition developed by Porter (1985). Afterwards, the career of this concept has become explosive, as it has become a symbol of management strategy and the corner stone for the so called "positioning school of strategy".

The quest for the Porter's original definition or for certain elements able to clarify this concept has yielded only negative results. The statements „competitive advantage is at the heart of a firm's performance in competitive markets" (Porter, 1985:XV), and, „competitive advantage grows fundamentally out of the value a firm is able to create for its buyers that exceeds the firm's cost of creating it" (Porter, 1985:3), in fact the only to be considered as close to a definition, represent an amount of vague and difficult to operationalize formulas, both in order to develop further coherent constructs, and also for generating management tools.

Reporting the advantage to the organization's performance, without discussing the induced position of strategy within an exclusively competition oriented context, generates criticism and questioning from certain analysts (Aktouf et al., 2005; Klein, 2001, Powel, 2001) who are not at all persuaded by concept and author marketing. They ascertain an obvious circularity in the definition of the advantage acquired due to performance, which generates the impossibility of an exact knowledge of advantage generating elements. That's why the company management cannot assume an anticipative character.

Turning advantage into a reference concept with sociopolitical implications related to strategy definition of certain states represents, according to critics, an extreme pressure point for the limits of the "balloon" utilized in strategic management.

As references related to the concept are discussed, one can realize that their number is at the rank of tens of thousands, a fact that proves that this concept has become a common place of field terminology. The assumption that this concept is used with no critical limitations is supported by whatever quota from the wide range of references. However, the strength in numbers cannot surpass either its definition ambiguities or the critics' expertise.

The essential background issue is that, due to the manner of defining the concept, all constructs involving it in this form are marked by inconsistency. At its best, the operational value of the concept may be considered as highly problematic.

3.3. Porter's five forces model

The named analysis model is known after the name of its creator, Michael Porter. Porter (1980) promoted a tool designed to estimate the impact of external factors on the firm profitability, assuming renowned ideas of the industrial economics (IE).

The new perspective of the model, which has determined its surprising popularity, involves the relative integration in the accumulate effect appraisal of influence factors, and also the coding in an approachable and seemingly intuitive language of relations involving the firm profitability. The fact that this tool allows the development of high speed "sentences", available in a seductive form and involving a small amount of resources, basic economics knowledge included, seems to explain the large scale promotion in the textbooks. Made visible by the increasing number of related citations and by the space allowed in the textbooks, this model is an absolute champion and seems to be an undisputed reference.

An amount of formal features generate the first queries related to its consistency. The reader may immediately learn that, even if principles of IE are synthesized, the bibliography which should be associated with them is actually inexistent. Afterwards, the delimitation of competitive environment and the division into five categories of "forces" associated with the model, with the allowance of a relative independence status interfere with the idea of strategy as an integrative undertaking. They also interfere with the idea of integrating forces into a unitary model. The concept of industry also displays a series of problems at the definition level, which are highlighted by its use in the regulators' practice.

Beyond these rather formal perspectives, a commonplace analysis of the manner the forces compose, in order to state an appraisal with a predictive character, demonstrate that its logic is debatable. Even the post factum estimations relying on the named model demonstrate the same character. By comparison, what IE proposes are models focused on separated factors with a distinguishable impact on performance, as the effects are estimated with a more complex tool, a fact that adds consistency to the results.

The queries mentioned above are justified by the prescriptive claims of the model. In other words, if this model is used, one can infer the type of industry recommended in order to acquire an above the average profit. Starting from this point, a series of studies have researched the degree to which "industry matters", namely if there is a correlation between industry and the performance level. Paradoxically, the number of studies is rather limited, as the results are rather negative as implicitly or explicitly points out.

At the moment of developing certain applications the operationalization difficulties begin to emerge. The more application differs from the academic exercise format, the more obvious problems and dilemmas become. Finally, even for a partial and rather perfunctory analysis of the model, a significant query emerges in relation with the tool effectiveness on the target, whatever that target should be.

The consequence of this result is that, however the pattern is used and marketed, one cannot avoid the appeal to IE tools. The separate pattern use in order to provide post factum explanations or to develop studies with a predictive character represents a significantly problematic undertaking.

3.4. VRIO Framework

The analysis model going under the label "VRIO framework" was initiated by Barney (1991), and represents a counterbalance for the approach centered on external causality related to firm performance. The so called "resource based view" (RBV) has developed around this model, in a relative opposition with the "positioning school". The key idea of RBV is that performance is caused by internal environment, mainly by resources available for the firm.

Before discussing VRIO, it should be mentioned that RBV uses as "corner stones" the concepts of resource, competence and capability. For their definitions, there is a series of available bibliographic references, even if Mintzberg (2004) highlights the differences between the authors' opinions. To this initial issue the problem related to the terms reflected by the VRIO acronym is added: value, rarity, inimitability and organization. After

analyzing the definition consistency of these terms, Foss (1998) argues that so far the theory reflects a "terminological soup". Even if the most significant ambiguities are related to value and rarity, the reciprocal relations are not at all out of debate.

Actually, beyond the theory claims assumed by the RBV approach, the VRIO framework essentially explains a relation between a combination of VRIO resource attributes and the competition position, estimated by referring the "size" of competitive advantage, which also presupposes a "size" of the performance.

A critical observation focused on the network of possible attribute combinations according to Barney and Hesterley (2006) proves to be rather indecisive: certain possible combinations are not at all taken into account, a fact that may be supported by the manner the attributes are defined. The integration of concepts of value, advantage and performance has also proved to be rather indecisive. One can distinguish the fact that VRIO has missed the opportunity to clarify the competitive advantage definition.

The previous integration has been obviously impacted by the ambiguity distinguishable in concept definition and also in the manner the organization is referred, a fact that justifies the concern that a questionable "entry definition" affects the logic concatenation of the explanatory undertaking, and also reduces at a significant degree the prescriptive effect.

Similar to the case dealing with the hypothesis "industry matters", the empirical studies focused on resources have generated several controversies related to the managerial utility of the RBV, both pro (Barney, 2001) and against (Priem and Butler, 2001) opinions being made available. Even if some empirical studies, as Rumelt (1984), have proved that the impact of the resources on performance is more significant than the impact of industry, this fact improves neither the predictive character of VRIO, nor its intrinsic logic.

To sum up, the VRIO framework does not clarify the problem of competitive advantage to which it refers, as the introduction of other conceptual reference points from the category of resource and value turn the named framework into an instrument difficult to use in the conditions of reasonable claims in what its predictive effectiveness is concerned.

3.5. The generic strategies coined by Porter

Even if the attribute "generic" refers to a whole category of components, at the moment, as the strategy families in the American literature are taken into account, the named attribute seems to represent an exclusive brand for a typology initiated by Porter (1980). Ansoff (1965) was the first to use a similar typology format, but without reaching the quoting popularity of Porter's theory.

The key problem of this type of generic family is the degree to which it reflects a real state of facts. As a consequence of a pertinent generalization, it would appear the possibility to choose a strategy able to provide the desired results.

Particularly, from the category of Porter's generic strategies, both the differentiation and the low cost strategies have a particular significance for the subsequent theoretical constructs. Both the manner of definition and the relation between these strategies are relevant, as they were explained by Porter and critically estimated by other authors of the field.

The differentiation, as it was explained by Porter, would depend on the perception of uniqueness related to a certain product, based on a number of features considered as relevant by the consumer. These features, which differ from those provided by the competitor, would allow a premium price and the acquirement of more substantial profits. The basis for differentiation would consist of better quality similar with technical performance, which would involve superior costs.

However, critics distinguish certain errors of logic in this judgment, and then debunk the assumption involved in the development of theory using empirical studies that prove the inconsistency of Porter's statements. For the first category of critics, one can quote Deming (1986), who claims that costs may be reduced due to quality, as from the

empirical studies category one can exemplify with studies of Ries (1996) or Datta (1997). Allaire and Firsirotu (1998) points out in deference, in the guise of an impartial opinion, that confusion between differentiation and segmentation strategy has been made.

In the case of "overall cost leadership" strategy (with its various label alternatives), the amount of dilemmas and ambiguities revealed after a more precise analysis becomes significant. If one accepts the idea that a strategy targets financial performance, then the relation between cost and profitability is to be demonstrated, as the cost related leadership has no impact on the final result involving the profitability. With no attempt at questioning overtly Porter's idea, Mintzberg (1988) and Johnson et al (2011) consider that this strategy is in fact a low price strategy.

The most controversial part of the topic is, however, the issue of integrating both strategies. Porter claims that such a combination is unsustainable and leads to be "stuck in the middle", as other authors (Murray, 1988; Miller and Dess, 1993) claim that such a combination is possible and able to generate a positive effect.

However, a limited number of studies (Hambrick, 1983; Robinson and Pearce, 1988) claim that the respective strategies are observable and valid as constructs. On the contrary, Bowman (2008) claims that, taking into account that topic represents a "substitute for thinking", it has a negative effect on the rationality of strategic decision making.

One should also point out that a discussion of generic strategies is associated with the acquirement of a competitive advantage, and so the ends meet both by defining the strategy and also by describing the advantage.

4. Discussion on crossed effect findings and conclusion

The analysis of each concept from the selected list has disclosed the same generic problems. The first problem is related to definition, which is characterized by imprecision and by using concepts which are difficult to identify or operationalize. A relative exception to the rule is represented by strategy definition, distinguishable due to a set of enunciations and options, whose common feature is the alienation from the meaning associated with the original concept.

The concept analysis shows that, in spite of the definition problems, they enjoy a highly noticeable popularity and an exceptional diffusion capacity, embodied for each concept into thousands or tens of thousands of citations. Actually, this represented the feature which has made them the object of the present research. However, assuming these concepts seem to be rather a result of the popularity related rather to the sound of this term than to its effects for the field, as the number of studies which acknowledge directly or indirectly either the validity of concepts or the success of their utilization in practice is highly limited. We should also point out that the number of positive opinions and entries to be found in textbooks does not provide an acknowledgement able to counterbalance the problems associated with definition, or the frailty of empirical validation studies.

On the contrary, even if the number of contradictory positions is highly limited and the respective positions are unpopular, with an impeded diffusion or interfered with immediately after they have been formulated, their reliability cannot be affected. The consistency and reliability of these positions are determined by the situation of the respective concepts, both in theory and in practice. They are not at all influenced by the number of appreciative votes. Finally, their implicit warning is real, even if is not at all taken into account.

These findings suggest that instead of concepts able to be considered as "corner stones" of the field, merely "glass bones" concepts have been chosen in order to be used.

The parallel study of the chosen concepts prove the existence of a series of crossed definitions related to them, and also of operating structures including de facto definitions of the other concepts. For instance, the competitive advantage is to be found as a

construction element in the case of VRIO framework, in the five forces model, in the case of generic strategies and also in Porter's strategy definition. In this manner, the frailty of a concept propagates into the whole field.

The general motivation for studying the basic concepts of management strategy using the suggested methodology is generated by the discrepancy between the current state of economy and the manner these concepts are used in order to develop a theory. The reputation and publicity associated with these concepts and the manner of promoting them via textbooks and standardized "official" approaches have proved to be relevant signals which characterize a presumable state of facts defined by significant shortcomings.

The implicit assumption that a first principle query lies in the very initial definitions has proved to be true. The study of definitions or of what could have been taken into account as such, and also the study of explanations associated with the topic have proved that these concepts are far from the reliability associated with the role associated with their placing as corner stones of current theory. The critical judgments, even if made available in an insignificant number by literature, point out in an unequivocal manner the weaknesses of the concepts in discussion.

The shortcomings in definitions are not at all addressed by the limited number of empirical studies acknowledging these concepts, or by their propagation via thousands of citations. If one takes into account that first critics belong to the North American space of English expression, then the concepts transfer into the European rationalist context dissipates in a more vertiginous manner their mythical aura. The style assumed by the present work, characterized by an East-European skeptic stance which is impervious to the American slang constructs, has allowed the highlighting of the real consistency of the concepts.

The effect of both parallel and crossed treatment of concepts has aggravated the frail aspect associated with the construction of the theoretical "network" associated with the concepts, foreshadowing the same snowball effect for the entire theory.

On the basis of these observations it can be inferred that tools derived from these concepts should be treated with maximum care, as the expectations should be considered in a realistic manner, according to the findings of the present study.

Another consequence could be that opportunities to use the named concepts in predictive constructs are indeed questionable, due to the frailty of this type of judgments, which rely on rather ambiguous definitions. In parallel, the prescriptive character associated to the concepts is also a subject of query.

Due to these facts, it becomes obvious that these concepts should be acquired in a critical and constructive manner, and used with maximum care and moderation.

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A QUALITY SPIRAL FOR KNOWLEDGE MANAGEMENT

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Abstract: Management of technology is crucial for all of us. It involves dealing with technical issues across a broad spectrum of functional areas. Recent innovations in the form of total quality management, reengineering work process, flexible manufacturing system have one thing in common serving the customer well thought improved operational efficiency. For instant Total Quality Management advocates emphasize the importance of achieving greater quality and flexibility at lower cost and waste. Technology is forcing organizations to become more competitive at every instance there are innovations taking place. The rapid development of models or prototypes may largely reduce the development cost and the product development cycle. In addition, they can be used in test markets prior to the entry of the product in the final production and commercialization stage. Since it is based on technological changes or improvements, the development of such models or prototypes is usually conducted by technologist, who has no regard for the cost of such a development.

Keywords: life cycle, quality iceberg, risk management, total quality management, new product development, quality, virtual product, management production.

JEL classification: M11, M10.

1.Introduction

Organizations are spending millions of dollars each year on information systems to capture knowledge and consultants to help organizations better share and use knowledge.

Modelling knowledge management is one big issue for those who are in charge of gathering information, documents, professional experiences and know-how at a corporate level.

There is a spiral of knowledge involved in their model, where the explicit and tacit knowledge interact with each other in a continuous process.

This process leads to creation of new knowledge, the central thought of the model is that knowledge held by individuals is shared with other individuals so it interconnects to a new knowledge.

The spiral of knowledge or the amount of knowledge so this paper deals with product life cycle cost management methodology.

A product life cycle cost management manages the cost of a product over its entire life span.

2. Research object

Technology management demands extreme dynamism to keep pace with the rapid expansion of human knowledge.

An extremely rapid rate of change is perhaps the only factor which is common to many spheres of our lives in present day society, answer to this simple question: *What do we expect from technology?* increase in productivity, saving in energy, consumption – recycle, or re-use materials.

Technology is forcing organizations to become more competitive at every instance there are innovations taking place.

Recent innovations in the form of total quality management, reengineering work process, flexible manufacturing system have only one thing in common - serving the customer well thought improved operational efficiency.

For instant TQM –Total Quality-Management, advocates emphasize the importance of achieving greater quality and flexibility at lower cost and waste, a dinamic quality model who is not ending in a circle, but it is increasing all the time in a spiral of quality and improving over and over the knowledge.

2.1. Study case: Design strategies

The paper research will try to identify the new orientation in organization activities and management to developed a new strategy for new generation of products. This can be done from the first step in manufacture and technological process from the design stage of the product, Matousek, O.and Zastavka, Z. (1977).

The implementation of the following design strategies are listed under four categories: reduce, reuse, recycle, restore.

Reduce: *Design for use* make things that truly improve people's lives, give them meaning, and are usable and useful to them.

Dematerialization – reduce the material and energy used in the manufacturing, use, recycling, and disposal of products and services.

Materials and energy substitution – substitute more sustainable and less toxic materials and energy.

Localization – design solutions and systems to reduce material and energy travel and support local communities.

Trans materialization – redesigns and deploys products as services that focus on customer value

Information– translates solutions into data and sends the recipe for the solution,

Reuse: *Design for durability* – the most sustainable solutions is products that don't need to be quickly discarded or wholly disposed of when one part breaks.

Design for reuse – intended reuse of products in other contexts can extend product life and divert them from disposal.

Recycle: *Design for disassembly* – clearly marked and easily disassembled products will more likely be recycled.

Design for effectiveness - dematerialization and increased efficiency is a great start but there is higher fruit to pick that involves rethinking value.

Restore*:* Design for systems – transforming systems at higher levels creates the most radical, sustainable change.

Following the Quality Spiral, along the life cycle of product, we can identify the importance of knowledge management, starting with product design and product harmonization with the new technological trends, with the new standardization ISO 14001, for example a new generation of green products, a new methodology of products manufacture taking in consideration the 3R trends.

3. Method and tools of research

Life Cycle is used to assess the environmental aspects and potential impacts associated with a product, process, or service.

It involves making detailed measurements during the manufacture of the product, from the mining of the raw materials used in its production and distribution, through to its use, possible re-use or recycling, and its eventual disposal process, the new trends of eco-age, must begin with a new design process of sustainable products.

There are a number of tools that can be used for problem solving and process improvement.

Process improvement of technological manufacturing approach systematic steps to improve technological process: process mapping, analyze and redesign the process

In Figure 1. it is presented a road map for product cycle taking in consideration the customers needs and demands having as target the product quality.
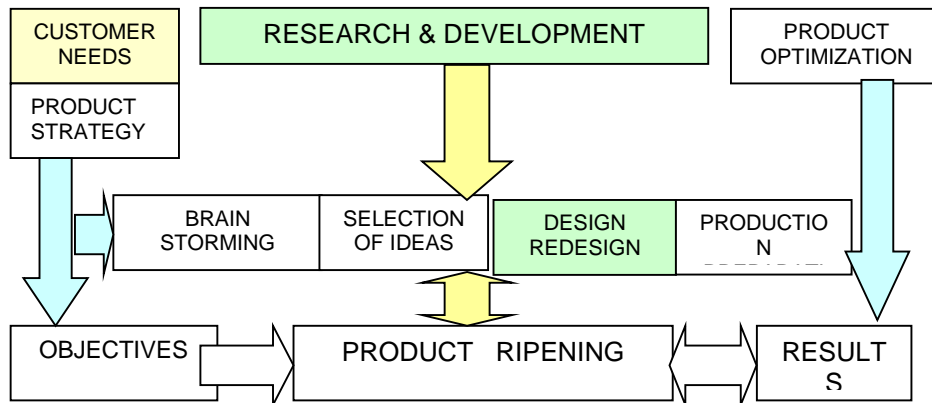
Figure.1. The

roadmap for product knowledge cycle
Source Made by Author

The tools which characterize the quality products can be identify in every technological process:

Beauty Design is based on the notion that while products may look attractive on the surface, they may have hidden ecological and social impacts.

Efficiency: the product in manufacture and use requires less materials, energy and water.

Cyclic: the product is made from materials or that are continuously recycled.

Safe: all releases to air, water, land and noise function for other systems.

Social: product manufacture and use supports basic human rights and natural justice.

Sustainability it is a new tool that helps organizations assess their level of involvement as well as ways to integrate sustainability over time across many organizational functions.

In Quality House we can identify all this elements as the pillars of the house witch sustains the Quality rooth.

4.Results

Life cycle costing methodology estimates costs of products incurred during his whole life cycle.

The method try to estimate life cycle cost of products which is the sum of the direct, indirect, recurring, nonrecurring, and other related costs incurred, or estimated to be incurred, in the design, development, production, operation, maintenance, and support of major system over its anticipated useful life span.

Except manufacturing cost and sale cost this methodology include preproduction cost (research and development cost, construction and technological preparation cost), liquidation cost and other cost which aren't currently included to operational costing and costing plan.

At the same time life cycle costing makes it possible to make provision for changes of service prices, prices in a market, factor prices and changes of services cost along whole life cycle.

To evaluation of products profitability, it is necessary take into account every cost related with product such as new product development cost, product sustenance cost and product phase-out cost.

The life-cycle cost calculation it is possible to complete before initiation of production process, along life cycle or at the end of product life cycle.

Decisive meaning for strategic management has life cycle calculation especially before initiation of the production process along with target cost calculation. In preproduction phase it is possible to do fundamental action regarding to future cost and revenues or eventually decide, whether product will be registered to the production plan or not.

Continuously following of product life cycle calculation along production and after finished production serves to evaluation of general effects that the product bears.

While at the beginning there are expenses in the form of research cost, development cost, running in cost, decisive earnings mostly come after sales initiation.

The life cycle costing methodology consists of target costing which focuses on cost rationalization in preproduction phase and kaizen costing which focuses on cost rationalization in production phase.

4.1 Target Costing

Target costing methodology represents a totally different approach to classic cost management. Target cost calculation can be characterized either as activity whose aim is to check up all possibilities of cost reduction in product planning phase.

Result those activities should be product design, which meet all consumers requirements and expectation and whose cost and price which will provide to company required profit from cost-plus pricing to market based pricing and from cost-cutting during production to cost control during design.

4.2.Target costing process

First step of target costing process is market requirement identification and product properties determination. These product properties have to satisfy all customers' requirements. This information's are obtained above all of these sources: market research-competitive intelligence relating to new product, internal development of new process and technology and customers requirements to new product properties.

Ansari, S. L., Bell, J. and the Target Cost Core Group (1997) identify the targeted cost which company must meet. This step can be characterized by this one equation (1):

$$\text{Target price - Target profit = Target cost} \qquad (1)$$

This application of Robust Design is currently being practiced by only a few leading companies worldwide.

If we choose the traditional design using Taguchi Method the new orientation on manufacturing design require a new way of thinking about product development. Achieving maximum efficiency and effectiveness in the research and development process is critical to this effort:

$$L(x) = k(x-N)^2 \qquad (2)$$

where: L (x) = Loss Function; k = C/d² = Constant of proportionality, where C -loss associated with sp limit; d - deviation of specification from target value; x = quality features of selected product; N = nominal value of the product and (x-N) -tolerance

These method differ from others dealing with quality problems center on the design stage of product development, and express quality and cost improvement in monetary terms.

The key to competitive leadership is the timely introduction of high quality products at the right price.

4.3. Kaizen Costing
Cooper, R. and R. Slagmulder (1997) agree that after successful finish of pre-production phase manufacturing phase incoming. In this phase company have to search new processes for cost reduction too.
Next cost reduction it is possible to achieve in manufacturing process such as:
- New manufacturing technology development;
- Increasing of machine performance;
- Limitation of wasting in manufacturing;
- Increasing of employees performance.

A Lfe Cycle Quality Iceberg can be created between time and management production actions, the organization behavior influence upon the costs and hidden factors which can influence the management production
Ultimately, we can identify like Zima, L. (2013) in her article that organization enthusiasm is achieved through the obtainment of business plan goals including cost reduction, warranty (cost & frequency), productivity, ergonomic and quality improvements.
Target cost has to be classified into all internal company departments such as: design, marketing, manufacturing, technology, administrative and logistics but also outside contractor too. In the next step it is necessary to search all possibilities for cost reduction in every department,.Monden, Y. (1995).
Kaizen costing gets on with cost reduction in manufacturing phase according to the Imai M. (1997). the research paper defines some models to relative environmental profiles of:
- new material choices or packaging options;
- to reduce environmental impact at its source in the design phase;
- to serve as a communication tool between companies and consumers;
- to establish from the design stage the re use of some materials;
- to identify which are the recycle materials;
- to compare existing products with planned alternatives;
- to compare existing company products with products of competitors;
- realize an internal information and training;
- new strategies in marketing, advertising policies;
- joining eco-criteria;
- environmental cost allocation;
- assess the gap from eco-label criteria;
- radical changes in product life cycle.

5. Conclusion
Companies an achieve a variety of benefits many of which have already been mentioned in this paper: ilnovation, cost savings. internal alignment and corporate reputation.
The benefits of life cycle concepts are summarized as follows (Emblemsvag, 2003):
-the life cycle concept results in earlier actions to generate revenue or to lower costs than otherwise might be considered.
- better decisions should follow from a more accurate and realistic assessment of revenues and costs, at least within a particular life cycle stage.
- life cycle thinking can promote long-term rewarding in contrast to short-term profitability rewarding.

- the life cycle concept helps managers to understand acquisition costs vs. operating and support costs, to find a correct balance between investment costs vs. operating expenses. especially net present value or index profitability.

During product life cycle receipts and expenditures don't proceed in the same time period that is why is better to use for accounting discount quantity.

Life cycle cost calculations we can exploit to evaluation of cost effectiveness spend in pre-production stage too.

Research and development costs have character of capital expenses and for evaluation their effectiveness it is possible to use all method of investments evaluation

The development of a new product by a company begins when the need to create a new product appears either due to be emergence of a new technology or the appearance of a competitive product or a change in the existing legal framework and is completed with the final introduction of the product in the market.

A company or an enterprise may proceed to a new product development whether that company or enterprise is part of a rapidly changing market or not.

Those new products may be based already on another existing products based on new technology without the need of support from others.

A company or enterprise decision to develop a new product is probably one of the most important decisions to be made in the history of that company because a new product development is directly linked with the development and the evolution of that company.

The paper present the results after the implementation of the new technology regarding the product design using virtual simulation from the first stage of product design.

Product development model can be realized if we followed the stages:
1. creation of ideas;
2. evaluation of ideas –selection of idea;
3. product development;
4. manufacture of prototype;
5. product promotion.

The high cost of those changes gave birth to the new product development tactic known as green design. This tactic consists in two strategies:
1. the first is trying to find ways to reduce environmental pollution during the production and development of the new product
2. the second one is attempting to find ways to reduce pollution after the use of the product, by optimizing, recycling or re-use of part of the product or the product as a whole.

Since it is based on technological changes or improvements, the development of such models or prototypes is usually conducted by technologist, who has no regard for the cost of such a development.

Misu Barbuta N. (2013), in her research activity observed the role of technological knowledge management and the influence in business incubators in economic sustainable activities development.

The cost of such a development is due to the cost of the material, additional personnel, training of that personnel and system changes.

Usually, the former submit developments propose and the latter assess it based on the cost of the proposal and the future profit after its materialization.

The rapid development of models will be successful only if the following apply and only then:

each prototype should provide answers to specific question;

the prototype should be as detailed and complex as necessary to provide the required information;

if there are multiple ideas, then is necessary that multiple prototypes be developed;
decisions should be made during he development of the prototype and one should not await its final form ;
the swifter the prototype development, the swifter overall development of the new product.
As we can observed the environment problems are an important target for the life cycle of new green generation products.
The objects from economical point of few will improve the costs and also will assure a new orientation in enter activity of design and manufacture of products.
A new orientation from management point of view it is necessary for the organization a change management and a new strategy.
The following are strategic plan points and provide the first sense of a new product marketing method

- Use the new product must be user friendly, safe and simple;
- Appearance the presence of shape provide singularity and originality is necessary in order for the new product to attract the interest of the consumer;
- Easy maintenance of the product should be easy and low cost;
- Low cost should have a low purchase cost;
- Communication between enterprise and consumers of the product in the market in order t solve any potential problems.

Each product should be subjected to a limited or extended market testing, so as to record the reactions of the market and thus perform the final changes or improvements on the product or even on the way it is possible to perform those tests before the product is introduce on the market, but ever after its introduction.
The four parts forming those strategies are presented below table 1.
The rapid development of models or prototypes may largely reduce the development cost and the product development cycle.
In addition, they can be used in test markets prior to the entry of the product in the final production and commercialization stage.

Table 1. The stages of strategy for new development product

Stage of the strategy	Primary objective	Secondary objective	Measures
Extraction of raw materials	To find and use environmentally friendly raw material	To use that material which meets the quality, cost and reliability demands	Use of recycled material such as aluminum and clean energy sources, such as solar energy
New product production and development	To reduce environmental impact during the production	Swift, simple, reliable and low cost development of the new product	
Consumption	To reduce or even completely eliminate negative environmental impact		Non use of that material, which harm the environment of the consumption of the new product

Disposal of new product	To find environmentally friendly disposal methods for the product after its use	Low cost disposal	Sort of material that can be partly or totally recycled

The market test can be realized using the classical instruments to define the quality improvement of the economical system before and after the introducing in the market of the new products and establish in this way the reliability and quality products, the impact upon the customers.

Also in some situation we can used the fish bone diagram, starting from effects to establish the causes and improving over and over the quality.

Below in table 2, there is an indicative way of conducting such tests:

Table 2. An indicative way of conducting testing for introduction in the marketing

Testing study before introduction in the market	Testing study after the introduction in the market
Market focusing identification	Reliability study
Market behavior study	Study of optimization needs
Focusing on involved consumers	
Testing the product idea	Study on new advertising methods
Study on the possibility to copy the product	

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TEACHING Y GENERATION – INFLUENCING FACTORS AND CONSEQUENCES FOR ECONOMIC EDUCATION

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Abstract

It is well known that economic education need adequately answers to global challenges. Despite to this, there is still a significant lack of understanding of how we can do this in practice. The purpose of this paper is to provide a possible answer, based on the idea of building economic education program focalized on the characteristics of the new generations of students.
We structure the paper as follows: first we offer a first approach about actual economic education, analysing the importance of understanding the new generation of students – Y Generation. In the next section we present the research method used for the empirical analysis, and we develop three hypotheses, based on interviews and data analysis. In our opinion, the operationalization of education centered on student in the field of economics is influenced by pragmatic orientation, of the management of communications and dialogue with students and also by presenting realistic and business models.
We test these hypotheses using a test administrated for 22 students in Management, enrolled in the second year, undergraduate studies. Then we include in our present paper the empirical results in order to show that all three hypotheses were confirmed. The results are presented with a thought description of the empirical analysis. Finally, discussion and conclusions are presented and implications for economic education are discussed.

INTRODUCTION

Any higher education analysis, especially of Economics, cannot be dissociated from understanding the economic and social framework of the university's activity. Even if it is asserted that a new paradigm in applied, mainly the one centered on the student, reality is in contradiction. On a declarative level, the post-Bologna Romanian higher education is centered around the interests of the student. Actually, the activity of each faculty is centered on teaching, research and obtaining grants for equipment, financing and a better pay for the professors. The gap can be observed between the assumed mission and the assumed practical strategies. This aspect is even more obvious if we talk about the actual financing system, which, as a survival condition, asks for the attraction of more and more students. And, the raising of number of students when the recruitment pool is diminished more and more (population segment made up of people with relevant ages for higher education) leads to a reduced medium quality. But, we continue to be tributary to a way of thinking which sees the university as an instance for general and academic education, to which only the best should have access and should educate the elite. It is rather the perception of a system which follows its own logic. The tenacity with which the universities try to defend their identity and autonomy is a merit which cannot be neglected. But, this

traditionalism has weakened their capacity to adapt to the new realities. Especially because the culture of the present students is being less applied outside of the Internet. New times require new ideas. And we have to do it especially in education. This is actually the purpose of this article, which proposes to make a foresight exercise of the economical university education from the perspective of filling with content the paradigm of education centered on the student. Our endeavor targets the finality of the economical higher education system by eliminating the flaw of self-centering.

THEORETICAL BACKGROUND

In the economical higher education, the exponential growth of the number of students, also encouraged by the development of numerous private universities, has inevitably led to a decrease of the quality of the offer. Staking on collecting the fees, the universities have made may compromises, which affect us. The economical higher education has become a land of paradoxes, fact signaled by many publications and reports (Maliţa M., Georgescu, C. (coord), 2010; ARACIS, 2010).

In the present article, we will stop at only one paradox, namely the one in which the system is declared as being "centered on the student", where in fact, the student is actually placed at the periphery.

How did we get here?

Traditionally, economical higher education set itself to offer the students' knowledge considered as being relevant for the rest of their lives. And, in the new economy of knowledge, everything that is acquired or learned is valid only for a maximum period of ten years (Giarini, O., Maliţa, M., 2003). The faster and faster development of the Internet has started to create databases, online encyclopedias and communication environments with numerous distance learning tools. Fascinated by this world, the students are becoming less involved in the traditional education, which is centered too much on reproductive learning. "The New World Order" (Laval, Ch., Weber, L., 2002) protrudes a new education (modern) based on the Internet as data source, credited as value and credible, with Wikipedia being a representative example. But, reality brings up a more and more powerful culture of corporative type of understanding of the educational system (standards, performance, incentives, competitiveness, market, competition, aggressive advertising etc.). As a result, we have a "hybrid between a production line and a sports type of competition" (Kohn, 2000, p.93).

At the same time, the education of the students is getting closer to scientific research. The first direction is given by the search methodology of data on the Internet (data mining). The success seems to be connected with the diffusion of data, quality of the debates regarding these in dedicated communication environments and also with the initiation of hypotheses and/or solutions as a result of specialized teamwork reunited by a communication environment certified with trust (Wikipedia.org/wiki/Data_mining, 2014). The second direction seems to be given by the learning techniques drafted by the discoveries in Neuro-science, IT, Psychology and Sociology in Didactics and Pedagogy (Miu A. C. & Crisan L. G., 2011).

A large study regarding the status of higher education was made by the Romanian Agency for Quality Assurance in Higher Education in 2010 (ARACIS - Quality Barometer, 2010). One of the results of this study, relevant for the purpose of the present article, is the one related to the "good student" and "good professor".

From the perspective of the students, "a good professor" is someone who, first of all, has pedagogical and trainer abilities (ability to communicate and explain) and, second of all, good professional qualities in that field. From the perspective of the professors, "a good professor" is someone who is a good professional and researcher, followed by communication and teaching abilities.

Following the survey regarding "the good student", again, the perspectives are different. In the opinion of the teachers, "the good student" is someone who is interested in knowledge, seriousness and discipline. Even though the same characteristics are (still) maintained in regards of the "good student", the opinions of the students are highly nuanced. "The students define "the good student" less through the intrinsic quality which he/she has, more precisely the one of participant/partner in the educational academic process and more through his/her lifestyle and also through a set of qualities and competences associated with this style of life. The ideal image of the cultivated, intelligent, creative, preoccupied with intellectual culture type of student in replaced with the image of a student gifted with social abilities and competences, with preoccupations which are connected with the academical field and also with spending his/her spare time outside of it and the one that succeeds in balancing these two" (ARACIS - Quality Barometer, 2010, p.19).

The present students are, mainly, components of "Generation Y", born between 1980-1995. It is a generation made up of the children of Baby Boomers generation, the first generation of families where both parents worked. Many times, single children feel the gap between the generations more, due to the technological advancement brought by the development of the Internet. Generation Y is still a mystery which needs to be researched. With one foot in college and the other one in the labor market, more often than not we find them playing with a smart-phone. They cannot breathe without the Internet, they believe in Saint Google and Facebook has taken them to a world full of "close" friends. Knowing English, they started to dilute the international and inter-cultural communication gaps. Most of them are captive in the mesh of multinationals or in the entrepreneur type of American dream. It is a highly educated generation which becomes committed latter on. They want everything and they want it now. They are more interested in different opportunities and challenges than in a solid career. They choose activities that they like and put aside or postpone until the last minute the things that they are asked to do. They took part at many extracurricular activities, which opened their appetite for "attractive offers". It seems that their adaptability is their strongest quality. It is followed by: pragmatism, individualism, detachment; nothing extra, nothing in common, nothing forced. For Generation Y, routine and exhaustion are negative factors which ruin the balance between work and personal life (Generation Y Research, www.ashridge.org.uk, 2014).

In these conditions, there is a need to forefront the development of a balanced personality and developing the predilections of the person who benefits from the educational services, according to his/her abilities and fields of interest. This endeavor has to be integrated into a program based on communication and team work, of practical application and simulation in realistic economical environments (Marin, C. C., 2001;Negreţ-Dobridor, I., Panişoară, I. O., 2005).

All of us foster hopes and wait for solutions, in our case being anchored in economical science. Science which, in order to fulfill its mission, has to be one that both knows and acts. A science which, "based on the assumption of general wealth (be it prosperity or well-being) is rather condemned to be a religion, a religion of social progress. It is a religion which, by not being able to anticipate the fall in sin (crisis), does not prevent its consequences by antefactum solutions" (Dinu, M., 2009).

It seems that it becomes more obvious the fact that, "if up until now humanity was mainly preoccupied with scientific, technological etc. development, it is time to focus on developing better humans, on mainly re-educating fundamental values like ethics, morality, truth, honesty, integrity, knowledge etc." (Dodescu, A., 2004).

RESEARCH DESIGN AND HYPOTHESIS DEVELOPMENT

For investigating the subject proposed in the present article, I used the following methods:
- in-depth interviews with teachers from high school and university economical education - 8, in March-April 2014;
- focused interviews with students and teachers regarding college life style - 12, in January-March 2014;
- secondary analysis of information included in self-evaluation reports regarding quality and in strategical documents of the universities, 2010-2012;
- testing of occupational interests, for a representative pattern of students studying at Economical Sciences - 22, management field, March 2014.

The relationship between education centered on the student (ICS) and orientation towards pragmatism

H1: *The operationalization of education centered on the student in the field of economical sciences is influenced by orientation towards pragmatism.*
Which is the difference between the traditional model of education and the education centered on the student? In the traditional view, the student is a receptor, mostly a passive participant, whose role is to write down and learn certain information in order to reproduce it later in a type of examination. The modified vision, the one of education centered on the student, suggests a model in which the student is made responsible, is considered an active and responsible partner under the guidance of the professor, who, as a holder of knowledge, becomes a *facilitator* and *a guide* for the student (Attard et al, 2010, pp. 7-8). In Economical Sciences, the encouragement of the student is highlighted for building up an own learning model centered on real economy: ideas-dreams-imagination-actions-accomplishments. In the Anglo-Saxon approach, the role of the university is to shape people, capable of becoming good specialists. An academic process, centered on the student, implies preparing the students for life, for a future career and for becoming active citizens in a democratic society. Under these conditions, their personal development has to be facilitated and an advanced knowledge base has to be assured, which can stimulate refinement, research and, in the future, innovation (The London Communique, 2007). Processing of data obtained by focused interviews with students and teachers (12) and as a result of secondary data analysis regarding the professional path of graduates of Economical Sciences, drove us towards the H1 hypothesis. Practically, students of fundamental Economical Sciences mainly see the bachelor studies in the light of their validation effect, which is given by the licensed economist diploma. This way, according to their opinion, they fundamentally gain a specialist title and the diploma represents the element which can assure access to certain jobs. Interviewed regarding the report between theory and practice, the obtained grade was 8.5 out of 10 - maximum possible in favor of practice. The students who work or who have worked in comparison with those who do not work, have given a smaller grade, the situation also being similar in the case of those who are involved in voluntary work. Mostly, female students are "pro-practice": they have given 8.9 in comparison to 7.6 given by male students. 82% of those who were interviewed agree with the fact that "in order to succeed you have to finish college", all of them have heard at least one time that "it's not worth going to college" and 55% believe that "finishing college is useless if you do not know someone". 90% see the Faculty of Economical Sciences as a "means for accessing a higher income". Interviewed in regards with the work-spare time rate, the students incline towards spare time: "work is important, but it shouldn't be always on the first place, if this means less spare time".

The relationship between education centered on the student (ECS) and the need for communication, dialog and explanation

H2: *The operationalization of education centered on the student in the field of economical sciences is influenced by the management of communication and dialog with the students*
The world that we are living in and especially the one which is being (re)formed facilitates the creation of a type of personality which can adapt to changes and it is ready to evolve towards other directions by means of evolutionary or adaptive abilities developed in school. The main characteristic of young people from Generation Y seems to be adaptability. They are not specialists in a certain field, but are capable to adapt much faster than the previous generations. "The present generation is rather defined by the search for references and the expectancy from college, as an institution, to offer assuredness in specialty and educational terms for a future economist profession" (acc. to interview data received from teachers). To the question "why do you think you are being considered as being passive?", the answer was "because we do not think it can be done and nobody teaches us how to do it". We want to highlight the fact that this aspect can be seen on a group level, because on an individual level, the youth of Generation Y is extremely critical and the main characteristic in connection with the colleagues is individualism. Self-oriented and relatively intolerant, the students of the present generation are in search of sense, significance, objectives and personal development directions. The interviews with the students have confirmed these things. Even more, the fact that they are "at sea" came out. From here, they have the need for explanation and to offer them a direction. The Internet, the virtual universe "informs" and shadows development. Formal education should not target "information" anymore, but "formation". This is the place for operationalization of the education centered on the student. In the direction of generating significance, sense and direction.

The relationship between education centered on the student (ECS) and presentation of accessible models

H3: *The operationalization of education centered on the student in the field of economical sciences is influenced by business and human models that are easy to accomplish.*
Formal education has to encourage the students' capacity of exceeding their personal limits due to consumerism and the influence of mass-media. The collapse of the labor market for young people, including economists, requires the reconfiguration of the educational system and a real step towards the student. The curriculum has to be directed towards a productive thinking. In the case of students of Economical Sciences, this has to encourage the exposure, search and usage of adequate specialized resources.
The youth of generation Y is not admiring Hollywood stars anymore, they admire normal people who succeed. With other words, they are looking for "references with which they can identify with and situations that they can set as objectives". Competition on the labor market makes their life more stressful in comparison to their parents and makes them to be afraid of missing opportunities. They want to be original (but they do not really know how), to prove that they are "doers", "to feel that they are needed", "not to be judged by their mistakes but by their courage to try".
The interviews showed that the students appreciate "the interest of the teachers in understanding what their needs are", "the ability to communicate during the lecture", "teachers that present experiences and give examples from the real economy, if possible, from the regional/local one". One third shows "the need to interact with the students beyond simple teaching, to answer potential questions". They want "professional models and ways of solving certain practical problems".

FINDINGS

The data used for testing these hypotheses was gained by a computerized appliance of an interests evaluation questionnaire (IEQ). This questionnaire assesses interests, more precisely, crystallized preferences for certain fields of knowledge or activity. The questionnaire was applied in March 2014 on a number of 22 students from the Faculty of Economical Sciences of the University of Oradea, signed up at the Management Studies program from the 2nd year. The pattern was randomly chosen and has the following characteristics: age of respondents between 18-24, 4 boys and 18 girls.

The computerized questionnaire targets six categories of interests. Realistic interests **a**re manifested by the tendency to lean forward activities which require manipulation of objects, machines and tools. Conventional interests assume preference for activities which need systematic and ordered manipulation of certain data or objects in a well-organized and defined framework. The investigative interests imply an attraction for research, investigation under different shapes and in diverse fields. The artistic interests are manifested by attraction towards less structures activities, which imply creative solving and offer the possibility of self-expression. Social interests imply orientation towards activities that require interpersonal relationship - preference for teaching or for helping people in solving different problems. Entrepreneurial interests are manifested by preference for activities which allow initiative and possibility for coordinating own activities or activities of a group.

The choices of the students according to preference for certain knowledge or activity fields are presented in the following figure:
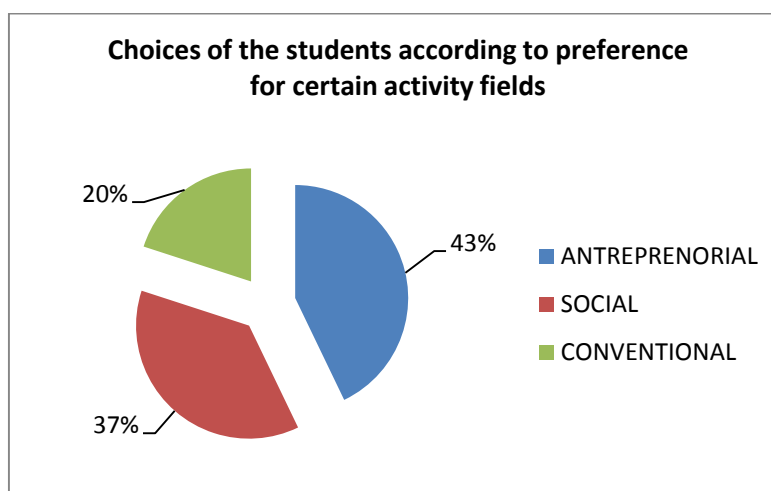
Fig. 1. Student's choices according to the preferences for certain activity fields

We would like to note that, according to Holland's theory (in Miclea & co, 2009), the individual's personality pattern is made up of "a dominant type, one for which the person shows the highest level of similarity and of secondary types ordered according to similarity". Thus, the first three choices are important, the dominant type of interests, with the highest rate (Miclea &co 2009). The received data, with its limitations, allows us to assert the fact that the presented hypotheses are confirmed.

Thus, hypothesis H1: *Operationalization of the education centered on the student in influenced by pragmatism* is confirmed because the tested students have a 43%

preference for entrepreneur interests (see fig.1). The interviewed students, part of Generation Y, have a global and entrepreneurial thinking. The preference for entrepreneurial activities in comparison to employee life can be observed. They are fairly optimistic and self-confident and believe that they "can do everything that they set their mind to". They are animated by the idea of having a job that they like, but also a job that offers them challenges and interesting experiments, one that encourages creativity and individuality, flexibility, involvement, acknowledgment of values and offers related earnings.

And hypothesis H2: *The operationalization of education centered on the student in the field of economical sciences is influenced by the management of communication and dialog with the students* is confirmed. We make this statement because the second choice of the students was the one related to social interests. Students of Generation Y are very interested in diverse opportunities and challenges and less interested in a solid career. Time spent with friends and family is very important for them. The student "would like to spend less time working and the practiced profession should also allow them a harmonious individual development".

Preference for conventional interests, meaning activities which need systematic and ordered manipulation of data or objects in a well-organized and defined framework make us assert that also hypothesis H3: *The operationalization of education centered on the student in the field of economical sciences is influenced by business and human models that are easy to accomplish*, is confirmed. Due to the fact that technology was a constant part of their life, the students of Generation Y always knew that they have the possibility to choose. They think that "they need entertainment and interaction" and, even more, "to be recognized and accepted". "They do not want to risk too much" and work based on the "maximum comfort with minimal effort" principle. Are very interested in accessible models and say that "if I do not see that I can succeed, I'm not in".

CONCLUSION AND DISCUSSION

The role of the teacher is changing. For the student of Generation Y, it is important to re-think it in terms of acquiring the quality of a mentor, capable of diagnosing, orienting, encouraging and learning together with the students.

The delay in switching de facto to an education centered on the student in the field of Economical Sciences is no longer justifiable from any point of view.

The students of Generation Y from the field of Economical Sciences are strongly oriented towards pragmatism, have the need for appropriate dialog and communication and want business and human models that can be achieved!

Orientation of the curriculum has to be done based on the principle of diversity of the offer and of choosing the product by the beneficiary of the educational services.

The problems related to developing the norms can be resolved by suggesting and having online courses.

Technology will continue to advance and it will happen very fast. We cannot remain lingered in the idea that "in order to be successful, I want you to work just like I do". We will get nowhere, because the youth of Generation Y says: "we do not want it this way; we also want to feel good, to have freedom instead of property and higher flexibility than responsibility". Technology can be the common ground between the generations, with the condition of considering the fact that the differences are determined by the way we see the world according to our education. The change is urgent and it has to be done right now because, even people of Generation Y with ages between 27- 30 do not understand and do not identify themselves with those who now have an age of less than 20 years (the Millennials!). If we are afraid of Generation Y, what will we do with the Millennials? They now learn to work conceptually, to resolve problems is groups, to resolve major problems,

on a global level. They will see us as being absolutely archaic people and will not understand why there is a need to stay in a bench in order to learn! They will want to take their technology outside, to learn in the open and to communicate even more than Generation Y does it now. (wall-street.ro, 2014).

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AN EXPLORATORY APPROACH TO INTEGRATION OF BUSINESS PRACTICES IN SUPPLY CHAIN MANAGEMENT

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Abstract: Literature on supply chain management focuses increasingly on the topic of supply chain integration. Morash and Bowersox (1989) show that integration links relationships, activities, functions, processes and locations. Integration links a firm with its customers, suppliers and other channel members. The empirical research brings supporting evidence on the theory that organizations achieve the desired competitive advantage only by focusing on one strategy – either collaborative closeness or operational excellence. Wang, Tai and Wei (2006) have developed a virtual integration theory in supply chains. According to them supply chain integration makes the chain agile, allowing a flexible and timely response to disturbances in the environment. Integration, show the above mentioned authors, involves (a) collaborative operation execution, (b) collaborative process planning & control and (c) supplier responsiveness. Collaborative operation execution and planning & control are operationalized through modern IT solutions linking partners throughout the supply chain. Supplier responsiveness reflects the extent to which a supplier meets customer requirements. Evidence shows that the greater the environmental volatility, the greater will be the extent of virtual integration in a supply chain. In the process of creating new value for consumers, the overall output in the supply chain is maximized through collaboration among supply chain members and integration of the key business processes.

After reviewing the literature on supply chain integration, present paper proposes an exploratory analysis of the measurement model corresponding to logistics integration. A Romanian dataset of 21 firms from various industries, covering all levels of a supply chain, from production to commerce is used to conduct a principal factor analysis to test for (a) content validity, (b) substantive validity, (c) uni-dimensionality and (d) reliability of scales used to measure integration in supply chains. Also the principal component analysis is used to forecast both dependent and independent variables subsequently used in an OLS estimation of the relationship between supply chain integration and performances in Romanian supply chains. Results support the conclusion that Romanian supply chains focus on a strategy of operational excellence.

Keywords: supply chain management, supply chain integration, performances, exploratory analysis

JEL classification: M10, C54

1. Integration of business processes in supply chains

Supply Chain Management (SCM) concerns coordinating the flows of materials, information, services, capital and information throughout the supply chain (Florian, 2013). Literature in the field agrees that SCM revolves around three key elements: (i) value creation, (ii) collaboration and (iii) integration of key business processes (Ho, Au and Newton, 2002, Florian, 2013). We see that the first defining element of SCM focuses on value creation. The overall aim of SCM is to better serve the ultimate consumers (Chopra and Meindl, 2004). Stank, Keller and Close (2001) analyse the benefits of supply chain integration on the organizational performances. They identify five core business areas within supply chain which require integration: (i) customers, (ii) operations, (iii) suppliers, (iv) planning and (v) measurement system (table 1).

Table 1. Major business processes of supply chains

Integration area	Content/Rationale
Customers	Best practices are needed to build long-term relations with key customers
Operations	Standards and best practices are needed to ensure integration of operations
Suppliers	Standards and best practices are needed to link externally and internally performed work
Technology and planning	Standards and best practices are needed to maintain information systems capable of supporting a wide variety of operational configurations
Measurement integration	Best practices are needed to build and maintain a measurement system that facilitate segmental strategies and processes

Source: Adapted from Stank, Keller and Close (2002)

For each business area they define several latent constructs representing different aspects of integration within each business area. Table 2 shows a detailed picture of the different aspects of customer integration. Table 3 covers the rest of functional areas (operations, suppliers, technology & planning and measurement).

Table 2. Customer integration

Factors	Indicators
Relevancy	Specific logistical operations focused on facilitating key customers' success
	Formal logistics visioning to identify customers' requirements
	Business relationships and programs designed to achieve customers' involvement over sales
	Regularly reviews of customer service offerings
Segmental focus	Unique logistics service strategies for different customers
	Programs to accommodate individual customer requirements
	Initiatives to identify end-customer value-added
Responsiveness	Programs to authorize and perform special requests
	Logistical operations can be synchronized with customers' operations
	Preplanned solution for accommodating a wide range of unique customer requests
Factors	Indicators
Flexibility	Increased operational flexibility through supply chain cooperation

| | Significantly more responsive logistical capability in comparison to three years ago |
| | Information linkages with customers |

Source: Adapted from Stank, Keller and Closs (2002)

The effectiveness of the best practices presented in table 2 as well as the creditability of adherence to them is enhanced by the existence of a supply chain strategy targeting cooperation among supply chain members. Such strategy relies on supply chain practices that covering integration of operations, suppliers, technology & planning and measurement (table3).

Table 3. Best practices promoting closer cooperation in a supply chain

Internal integration	
Factors	**Indicators**
Standardization	Common policies and procedures to standardize logistics operations
	Initiatives to standardize supply chain practices and operations
Compliance	Active programs to enforce standardized logistical performance
Material/Service Supplier Integration	
Factors	**Indicators**
Strategic alignment	Programs to integrate operations with customers/suppliers
	Belief that strategic direction, role and performance of supply chain partners are critical to organization's success
Operational fusion	Improved performance by integrating operations with supply chain partners
	Placing employees at business facilities of suppliers to facilitate operation
	Sharing technical resources with suppliers to facilitate operations
Financial linkage	Sharing research and development costs with key suppliers
	Willingness to help suppliers to finance capital equipment
	Willingness to enter into long-term agreements with suppliers
Technology and planning integration	
Factors	**Indicators**
Connectivity	Technology to accommodate cross-organizational data-exchange
	Information system able to accommodate sharing both standardized and customized information externally
	Information system utilizes industry standards for data exchange
Measurement integration	
Factors	**Indicators**
Comprehensive metrics	Performance measures to extend across supply chain relationships

Source: Adapted from Stank, Keller and Closs (2002)

Tables 3 focuses only on practices supporting cooperation among supply chain members. The majority of the practices depicted in table 3 are specific to supplier integration, promoting closer cooperation through strategic alignment, operational fusion and financial linkage. Practices related to technology and planning integration facilitate cooperation through greater connectivity among supply chain members. Finally, we have identified one practice pertaining to the area of measurement.

2. Integration in Romanian supply chains

In autumn 2012 we have conducted a research targeting an initial sample of 150 Romanian companies. Data was collected using a survey-based questionnaire returning 21 usable responses. The analysis of frequencies of companies in the working dataset reveals that the proposed analysis uses a sample of firms from various industries, covering all levels of a supply chain, from production to commerce. We see that most firms in the working dataset are from constructions (6), followed by commerce and other services (5 each). Initial random sampling has provided the desired national significance of the dataset used in the analysis.

2.1 Methodology

This paper follows the literature on supply chain management. In particular we have chosen to use the same questionnaire proposed initially by Stank, Keller and Closs (2001). As required by supply chain literature, the survey was pre-tested and validated using the feedback of local supply chain managers. Pre-testing ensured the content validity of scales used to measure different constructs employed in the analysis. Also a throughout review of existing literature has ensured the substantive validity of the scales, all the items being conceptually and theoretically linked to the construct (Dunn, Seaker and Waller, 1994). Afterwards, the measurement model was tested for the remaining dimensions necessary to ensure the adequate content validity. Specifically we have chosen to conduct an exploratory analysis by means of a Principal Component Analysis. Scale refinement has used item-to-scale correlations to eliminate those items with low (<0.4) item-to-scale correlations. Thus we have eliminated from our measurement model those items with low subjective loadings. As a result of the scale refinement process we have obtained uni-dimensional scales. Of course, the refinement process considered a content validity analysis, as recommended by similar empirical studies (Dunn, Seaker and Waller, 1994). Once we have ensured the uni-dimensionality of the scales, we have tested for reliability by means of a correlation procedure. Following recommendations in supply chain literature, scales are deemed reliable if Cranach's Alpha coefficient is above 0.7.

Following testing the measurement model we have investigated the relationship between organizational performance and integration in supply chain. As recommended by Richard et al (2009 we have used the principal component analysis to construct both dependent and independent variables in an OLS estimation of performances in Romanian supply chains.

2.2. Results

As shown previously, pre-testing and analysis of existing literature has ensured the content and substantive validity of the constructs used in the analysis. In what follows we present the results of the exploratory analysis used to test for validity of the constructs measuring supply chain integration.

Table 4. Customer Integration

Business practice	Factor Loadings		Final Communality Estimates	Cronbach Alpha
	Focus	Flexibility		
Specific logistics operations focused on facilitating key customers success (V_{111})	78*	19	0.66	0.88
Business relationships and programs designed to achieve customers' involvement over sales (V_{113})	79*	24	0.68	
Unique logistics service strategies for different customers (V_{121})	88*	25	0.84	
Initiatives to identify end-customer value-added (V_{123})	90*	13	0.83	
Preplanned solution for accommodating a wide range of unique customer requests (V_{133})	31	84*	0.80	0.78
Significantly more responsive logistical capability in comparison to three years ago (V_{142})	15	91*	0.84	
Total variance explained	2.93	1.72	4.65	

Initial analysis of customer integration considers four factors: relevancy, responsiveness, flexibility and segmental focus. The principal component analysis reveal that our data supports the existence of only two factors named Focus and Flexibility. We see that factor loadings are very high (above 70%) and statistically significant. Cronbach's alpha is above the threshold level (0.7) in both cases.

Figure 1. Rotated factors defining the customer integration

Figure 1 is a visual representation of the orthogonal rotated solution of the factor analysis of customer integration. We clearly see the clusters formed by the indicators of the two factors.

Table 5. Internal Integration

Business practice	Factor Loadings Internal integration	Final Communality Estimates	Cronbach Alpha
Common policies and procedures to standardize logistics operations (V_{211})	89	0.79	
Initiatives to standardize supply chain practices and operations (V_{212})	40	0.16	0.88
Active programs to enforce standardized logistical performance (V_{221})	96	0.93	
Total variance explained	1.87	1.87	

Table 5 shows that in the case of internal integration the two initial factors have been collapsed to one named simply Internal Integration. The factor loadings are above 0.4 and Cronbach's alpha is very high (0.88).

Table 6. Material/Service Supplier Integration

Business practice	Factor Loadings		Final Communality Estimates	Cronbach Alpha
	Functional alignment	Financial Linkage		
Programs to integrate operations with customers/suppliers (V_{311})	87*	34	0.87	0.86
Placing employees at business facilities of suppliers to facilitate operation (V_{322})	76*	34	0.78	
Sharing technical resources with suppliers to facilitate operations (V_{323})	91*	--8	0.83	
Sharing research and development costs with key suppliers (V_{331})	39	62*	0.63	0.71
Willingness to help suppliers to finance capital equipment (V_{332})	6	84*	0.67	
Willingness to enter into long-term agreements with suppliers (V_{333})	18	76*	0.60	
Total variance explained	2.44	1.90	4.35	

The analysis of material/service supplier integration confirms the existence of two factors named Functional alignment and financial linkage. We see that in both cases the item-to-scale correlations are high and statistically significant and Cronbach's alpha is above the threshold level for both factors.
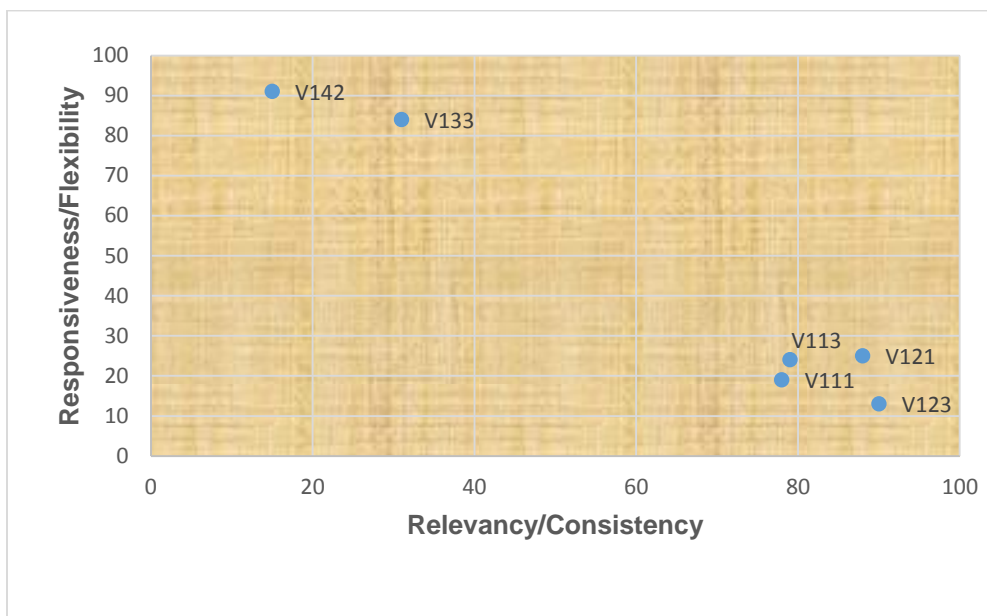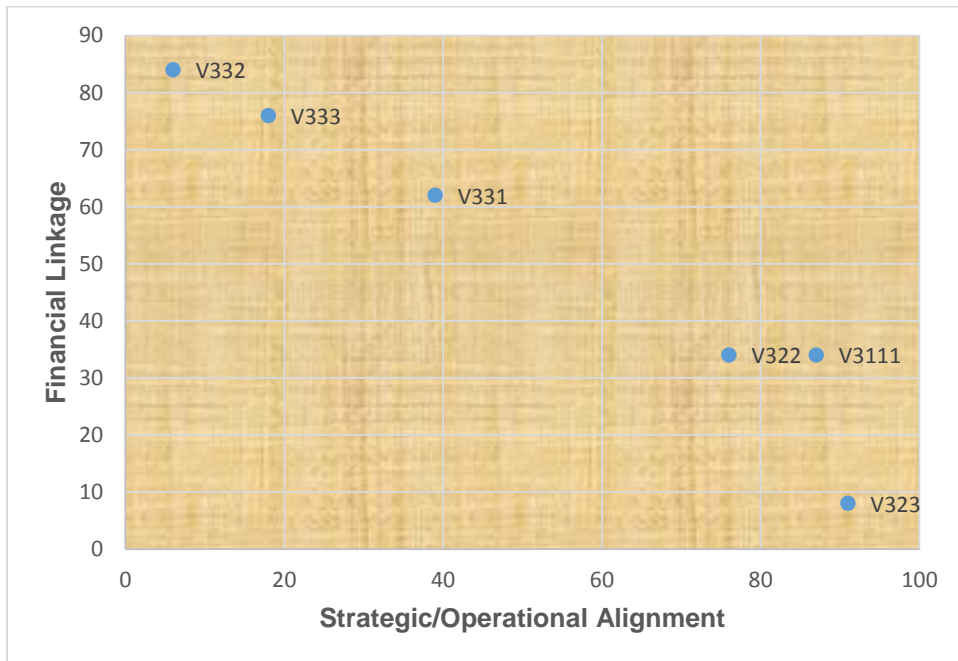
Figure 2. Rotated factors defining Material/Service Integration

Figure 2 is a visual representation of the orthogonal rotated solution of the factor analysis used for analyzing the Material/Service Supplier Integration. We clearly see the clusters formed by the indicators of the two factors.

Table 7. Technology and planning integration

Business practice	Factor Loadings	Final Communality Estimates	Cronbach Alpha
	Internal integration		
Technology to accommodate cross-organizational data-exchange (V_{411})	95*	0.91	0.90
Information system utilizes industry standards for data exchange (V_{413})	95*	091	
Total variance explained	1.82	1.82	

In the case of technology and planning integration, our principal component analysis has identified also just one factor named internal integration. The factor loadings are above 0.9 and Cronbach's alpha is very high (0.90).

Table 8. Supply Chain Performance

Business practice	Factor Loadings	Final Communality Estimates	Cronbach Alpha
	Internal integration		
Flexibility of offer	61*	0.37	
Predictability	90*	081	
Satisfaction	83*	0.69	0.80
Speed	83*	0.68	
Total variance explained	2.55	2.55	

Finally our analysis of the measurement model of the performances in the supply chain confirms that the four indicators are indeed measuring the same construct named supply chain performance. This analysis allow us to forecast a factor score for supply chain performance which we have used in subsequent performance analysis.

Table 9. Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr>ChiSq
relevancy	1	0.63	0.92	0.47	0.49
flexibility	1	0.23	0.65	0.12	0.73
Internal integration	1	-1.30	0.79	2.75	0.0969*
alignment	1	-1.48	1.08	1.88	0.1702
linkage	1	0.78	0.49	2.46	0.1163
Technology/planning integration	1	1.46	0.64	5.18	0.0228*
Measurement Integration	1	0.49	0.74	0.43	0.5112

Our OLS estimation reveals that form the 7 factors used in the analysis only 2 are statistically significant: internal integration and technology / planning integration.

3. Conclusions

The proposed empirical analysis proposes first a throughout analysis of the measurement model. The principal component analysis retained two out of four factors used initially to measure a latent variable corresponding to customer integration. Basically two of the initial factors collapsed to form a new factor named Focus (segmental focus and relevancy) whereas the other two formed a factor named Flexibility (responsiveness and flexibility). In the case of (a) internal integration and (b) technology and planning the two initial factors have been collapsed to only one for each business area. The analysis of material/service supplier integration confirms the existence of two factors named Functional alignment and financial linkage.

Factor scores have been used to identify both dependent and independent variables in an OLS estimation of performances in supply chains. Results shows that only coefficients corresponding to internal integration and material/planning integration are statistically significant suggesting that in Romanian supply chains integration focuses on operational excellence.

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A CONFIRMATORY APPROACH TO MEASURING RISKS IN SUPPLY CHAINS

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Abstract: In order to achieve the desired performances and the increased value added to the final consumer, organizations need not only to integrate their core businesses and align them to business strategy but also to handle disturbances in their environment. Existing literature on supply chain management underlines the need for adequate risks management in supply chains. Supply chain risks, if not managed properly do have a negative impact on business performance (Shah, 2009, Florian, 2013, Hendricks and Singhal, 2005*). Supply chain risks management (SCRM) emerged as a response to the increasing volatility in today's global supply chain environment.*
*We first review the existing theoretical framework for identification of risks in the supply chains. There is general agreement on the general framework for coping with risks in the context of supply chain. Thus SCRM involves (a) risks identification, (b) assessment, (c) mitigation and (d) responsiveness (*Wagner and Neshat, 2012).*Also it is generally accepted that supply chain integration and lean management are the main strategy for reducing uncertainty whereas agile supply chains and quantitative modeling are the main solutions to coping uncertainty.*
The empirical researchfocuses on measuring risks in supply chains. We propose a confirmatory factor analysis of the measurement model of risks in supply chains. Existing literature on confirmatory factor analysis agrees that this technique provides extensive possibilities to analyze the complexity of the relationships among the variables.
Results show that all estimated coefficients corresponding to indicator variables are statistically significant and have the desired positive sign. Also all the estimated variances and covariances among latent variables are statistically significant.
Our proposed research methodology reveals the advantages of a confirmatory factor analysis over an exploratory principal component analysis in the context of risks management in supply chains. Moreover, as Sodhi and Tang (2012) reveals, more than half of papers in existing SCRM literature are either conceptual or qualitative empirical (case studies). Our proposed quantitative methodology contributes to reducing the above mentioned gap, providing results that can be used for statistical inferences and for enhancing the efficiency of the managerial decisional process.

Keywords: supply chain risks management, confirmatory analysis, risks drivers

JEL classification:M10, C54

1.Risks drivers and strategies in supply chains

Sodhi, Son and Tang (2012) perform a throughout review of the diversity in scope and research methodology employed by research papers in the field of SCRM. According to them, researchers approach SCRM differently, the existing divergence concerning the definition of the concept of SCRM and the perceived differences between SCRM and SCM being depicted in table 1.

Table 1. The scope of supply chain risks management

What is supply chain risks management?	How SCRM differs from SCM?
Dealing with supply-demand stochastic	SCRM is a subset of SCM
Dealing with risk within supply chain operations	SCRM is a subset of SCM, with additional focus on risks
Focus on low probability – high impact events	SCRM is something outside SCM
Dealing with the unknown	SCRM is a subset of SCM but additional focus on supply sources
Dealing with disruptions/disasters	SCRM overlaps with SCM and risks management / finance
Dealing with risks within supply chain strategy	
Dealing with stochastic but need new probability –based approaches	

Source: adapted from Sodhi, Son and Tang (2012)

As it can be seen in table 1, dealing with risks, uncertainties or stochastic are recurrent in SCRM literature. While there are authors which clearly differentiate between risks and uncertainties (Hillson, 2006), for others distinction is blurred to the point it does not exist (Peck, 2006). It is agreed that both risks and uncertainties are deriving from the increasing complexity of the supply chain networks.

In what follows we focus on the problematic of SCRM, identifying the drivers of risks in the supply chain, the strategies to cope with them. We also propose a confirmatory model to measure risks in supply chains.

Supply chain risk can be broadly classified as shown in table 2.

Table 2. Risks drivers in supply chains

Risk factor	Risks indicators
Demand side risks	Volatile demand
	Insufficient information from customers about orders
	Distorted information from customers about orders
Supply chain risks	Poor logistics performance of suppliers
	Supplier quality problems
	Unexpected default of a supplier
	Poor performance of logistics service providers
	Capacity fluctuation or supply shortages on the supply markets
Regulatory, legal or bureaucratic risks	Legislative/fiscal instability
	Administrative barriers for the setup or operation of supply chains
Infrastructural risks	Downtime or loss of own production capacity due to local disruptions (labor strikes, industrial accidents)
	Breakdown of internal IT infrastructure (viruses, software bugs)
	Loss of own production capacity due to technical reasons (machine deterioration)

Risk factor	Risks indicators
Infrastructural risks	Perturbation or breakdown of external IT infrastructure
Catastrophic risks	Wars, civil unrest or other socio-political crisis
	Diseases or other epidemics
	Natural disasters
	Terrorist attacks

Source: Wagner and Bode, 2008, p. 323

According to Wagner and Bode (2008), coping with supply chain risks necessitates adequate strategies. Indicators of supply chain risk management are:
- Collaboration with suppliers to develop transparent supply chains and an open sharing of information;
- Business continuity or contingency plans addressing several supply chain risks;
- Monitoring suppliers for possible supply chains risks;
- Product differentiation for reducing demand side risks;
- A distinct organizational structure dedicated to SCRM;
- Insurance against supply chain risks.

2. Empirical studies of SCRM in Romanian supply chains
In 2013 we have conducted a research targeting an initial sample of 200 Romanian companies. Data was collected using a survey-based questionnaire returning 55 usable responses. The analysis of frequencies of companies in the working dataset reveals that the proposed analysis uses a sample of firms from various industries, covering all levels of a supply chain, from production to commerce.

2.1 Methodology
This paper follows the literature SCRM. In particular we have chosen to use the same questionnaire proposed initially by Wagner and Bode (2008) to measure the risks and the risks management in supply chains.
The measurement of risks in a supply chain relies on a five point Likert type scale, asking respondents to assess to what extent their firm has been experienced a negative impact in supply chain management in the past three years due to different supply chain risks. SCRM is evaluated also using a five point Likert type scale asking respondents to compare the supply chain performance indicators in their firms with indicators of firm's major competitor.
As required by supply chain literature, the survey was pre-tested and validated using the feedback of local supply chain managers. Pre-testing ensured the content validity of scales used to measure different constructs employed in the analysis. Also a throughout review of existing literature has ensured the substantive validity of the scales, all the items being conceptually and theoretically linked to the construct (Dunn, Seaker and Waller, 1994). Afterwards, the measurement model was tested by means of a confirmatoryfactor analysis. As opposed to an exploratory analysis, a confirmatory analysis relies on existing literature to hypnotize an underlying relationship between factors and indicator variable. The propose measurement model does not require refinement. Testing is ensured by existing statistical techniques in the field.
Our proposed methodology allows for revealing some effect patterns that simply cannot be analyzed by OLS estimations. A confirmatory factor analysis provides a customized effect analyzes (Dunn, Seaker and Waller, 1994).

For the required analysis we have chosen to use the statistical package SAS 9.2.

2.2. Results
Table 3 reports results of the measurement model for demand side risks.

Table 3. Measurement model for demand side risks

Risks category	Parameter	Estimate	Standard Error	t-Value
Demand side risks	Volatile demand	0.90	0.13	6.69
	Insufficient information from customers about orders	0.61	0.13	4.73
	Distorted information from customers about orders	0.81	0.14	5.92

We see that all coefficients have the desired sign and are statistically significant (t-values are above the threshold value of 1.96 corresponding to p=5%)
Table 4 reports results for the testing the measurement model for supply chain risks.

Table 4. Measurement model for supply side risks

Risks category	Parameter	Estimate	Standard Error	t-Value
Supply side risks	Poor logistics performance of suppliers	0.66	0.16	4.20
	Supplier quality problems	0.69	0.14	4.88
	Unexpected default of a supplier	1.17	0.11	10.57
	Poor performance of logistics service providers	0.35	0.18	1.93
	Capacity fluctuation or supply shortages on the supply markets	0.26	0.23	1.13

Table 4 shows that one indicator of supply chain risk is only marginally statistical significant (Poor performance of logistics service providers). There is also one indicator which is not statistically significant (Capacity fluctuation or supply shortages on the supply markets).
Table 5 reports results for the testing the measurement model for regulatory risks.

Table 5. Measurement model for regulatory risks

Risks category	Parameter	Estimate	Standard Error	t-Value
Regulatory risks	Legislative/fiscal instability	0.84	0.16	5.24
	Administrative barriers for the setup or operation of supply chains	0.89	0.13	6.99

Results show that all two indicators are statistically significant and have the desired sign.

Table 6. Measurement model for infrastructural risks

Risks category	Parameter	Estimate	Standard Error	t-Value
Infrastructural risks	Downtime or loss of own production capacity due to local disruptions (labor strikes, industrial accidents)	0.64	0.15	4.20
	Breakdown of internal IT infrastructure (viruses, software bugs)	1.16	0.10	12.03
	Loss of own production capacity due to technical reasons (machine deterioration)	0.88	0.11	8.33
	Perturbation or breakdown of external IT infrastructure	0.54	0.14	3.78

Table 6 reports results for the testing the measurement model for infrastructural risks. Results show that all two indicators are statistically significant and have the desired sign.

Table 7. Measurement model for SCRM

Construct	Parameter	Estimate	Standard Error	t-Value
SCRM	Collaboration with suppliers to develop transparent supply chains and an open sharing of information	0.53	0.23	2.27
	Business continuity or contingency plans addressing several supply chain risks	0.59	0.23	2.57
	Monitoring suppliers for possible supply chains risks	0.39	0.26	1.46
	Product differentiation for reducing demand side risks	1.13	0.21	5.41
	A distinct organizational structure dedicated to SCRM	1.56	0.15	10.37

Finally table 7 shows that there is one indicator of SCRM which is not statistically significant (Monitoring suppliers for possible supply chains risks). The other four indicators are statistically significant and positive.

Our models takes into consideration the covariances among different latent constructs of risks categories (table 8).

Table 8. Covariances among Exogenous Variables

Var1	Var2	Estimate	Standard Error	t Value
Supply side risks	Demand side risks	0.48	0.08	5.78
Regulatory risks	Demand side risks	0.46	0.09	4.94
Regulatory risks	Supply side risks	0.36	0.09	3.83
Infrastructural risks	Demand side risks	0.38	0.10	3.66
Infrastructural risks	Supply side risks	0.20	0.10	1.88
Infrastructural risks	Regulatory risks	0.51	0.09	5.61
SCRM	Demand side risks	0.35	0.08	4.52
SCRM	Supply side risks	0.45	0.07	6.41
SCRM	Regulatory risks	0.32	0.08	4.03
SCRM	Infrastructural risks	0.20	0.08	2.40

Results in table 8 reveals that all covariances among different latent constructs employed in our analysis are statistical significant. This shows that controlling for them is necessary in our model. Under these consequences a simple orthogonal solution (such as the solution given by the implicit settings of a principal component analysis) would have been biased and inefficient.

Yet we still have to control also for the variances of exogenous variables and the errors of the indicator variables (table 9).

Table 9. Standardized Results for Variance Parameters

Variance Type	Variable	Estimate	Standard Error	t Value	
Exogenous	Demand side risks		1		
	Supply side risks		1		
	Regulatory risks		1		
	Infrastructural risks		1		
	SCRM		1		
Error	Volatile demand		0.46	0.13	3.45
	Insufficient information from customers about orders		0.64	0.13	4.87
	Distorted information from customers about orders		0.53	0.13	4.00
	Poor logistics performance of suppliers		0.74	0.11	6.47

Variance Type	Variable	Estimate	Standard Error	t Value
Error	Supplier quality problems	0.67	0.12	5.71
	Unexpected default of a supplier	0.24	0.11	2.21
	Poor performance of logistics service providers	0.93	0.07	12.49
	Capacity fluctuation or supply shortages on the supply markets	0.97	0.05	20.71
	Legislative/fiscal instability	0.62	0.13	4.65
	Administrative barriers for the setup or operation of supply chains	0.38	0.16	2.42
	Downtime or loss of own production capacity due to local disruptions (labor strikes, industrial accidents)	0.74	0.11	6.74
	Breakdown of internal IT infrastructure (viruses, software bugs)	0.07	0.09	0.79
	Loss of own production capacity due to technical reasons (machine deterioration)	0.35	0.10	3.47
	Perturbation or breakdown of external IT infrastructure	0.78	0.11	7.28
	Collaboration with suppliers to develop transparent supply chains and an open sharing of information	0.91	0.08	11.07
	Business continuity or contingency plans addressing several supply chain risks	0.89	0.09	9.98
	Monitoring suppliers for possible supply chains risks	0.96	0.06	16.69
	Product differentiation for reducing demand side risks	0.70	0.12	5.92
	A distinct organizational structure dedicated to SCRM	0.39	0.12	3.13

Variances of the exogenous variables have been normalized to 1 by our statistical procedure used in the analysis. Error variances are all statistically significant. This supports our decision to control for them in the first place. In addition the statistically significant error variances of the indicators reveals that the variance in the indicator variables is not entirely accounted for by their relationship with the factor.

The overall fit is acceptable. The SRMSR is 0.0067 and AGFI is 0.81. RMSEA is also close to the threshold level of 0.005.

3. Conclusions

Literature on SCRM is relatively new. Although there is diversity in the scope and research methodology employed in the field, researchers agree that SCRM deals with mitigating risks in the supply chains. A plethora of studies reveal the negative consequences of a lack of SCRM strategies on the organizational performances.

We have chosen to focus on risks quantification in the context of supply chains. Most research in this field choose to use an exploratory principal component analysis. Yet we choose to employ a confirmatory factor analysis. This technique is superior in many

respect to both OLS estimations and exploratory factor analysis. For example is allows to control for all the possible relationships among factors and indicator variables. It provides a customized effect analyzes. And of course it makes possible a throughout analysis of overall model fit.

Our results support the existence of a rather complicated structure of relationships among the different types of risks in the supply chains. Thus our findings do provide supporting evidence for the existing theory in SCRM. Most importantly, we show that in the context of SCRM it is necessary to employ a confirmatory factor analysis in order to grasp the intricacies among different types of risks in supply chains.

Having illustrated the necessity for quantifying the complex relationships among risks in supply chains, it is necessary to further identify the impact of each risks on organizational performance. Future research in this field has to adequately quantify this aspect. Also as a direction for future research we propose controlling for different characteristics of firms and industries.

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THE ROLE OF EXTRACURRICULAR ACTIVITIES AND THEIR IMPACT ON LEARNING PROCESS

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Abstract: *In this paper, we will consider how the development of extracurricular activities based on entrepreneurship may assist in developing immersive, learning, which achieve the entrepreneurial experience. It explores their impact on student learning process in order to understand the extent to which such activities simulate entrepreneurial learning. The article reports one study conducted in the current academic year 2013 - 2014, which explores different forms of extracurricular activities.*
In terms of entrepreneurial learning student's engagement in extracurricular activities provides enhanced opportunities for 'learning by doing' through action and experience. The data show that an increased action leads to reflective practice and social learning is important for students. The article highlights the capacity of entrepreneurship education to stimulate entrepreneurial learning; illustrating the value of extracurricular activities and explaining how develop student's enterprising behaviours. Furthermore, it is very important to examine the need to develop a more enterprising approach to learning by adopting an experiential approach.

Keywords: extracurricular activities, an entrepreneurial process, entrepreneurship, students, and informal education.

JEL classification: L26; I25

1. Introduction

Entrepreneurship, or the process of starting up a new enterprise, presents challenges because of the need to make decisions addressing a very range of aspects of business management in situations where there is a great deal of uncertainty (Timmons et al., 2011). A further key issue for entrepreneurial education is how stimulating and enjoyable "value added" activities can be developed for students (Rae, 2007).

Entrepreneurial education has continuously over-looked the role of practice as an epistemological means of learning, and how practice can contribute to entrepreneurial development, which is different from traditional approaches (Higgins D. et all, 2013).

Entrepreneurship education has come in a number of forms: '*about'*, '*for'* and '*practice in'* entrepreneurship (Gibb, 2002). The *'about'* form can be related to formal education (curricular: courses and seminars). Education '*for'* entrepreneurship means focus on the acquisition of entrepreneurial skills through learning by doing (Pittaway, 2007). The '*practice in'* can be associated with informal education, extracurricular activities, experiential learning.

The varieties of techniques used to teach entrepreneurship are probably only limited by the imagination of the professors, the abilities and motivations of the students and the resources available to the university (Heriot, C.K. et al., 2008).

The importance of extracurricular activities has become an emergent theme within theorizing on how entrepreneurs learn. It suggests that the domain of entrepreneurship represents a special and unique context in which to study management learning (Cope, 2003).

Accepting that entrepreneurs learn through experience, it is a need to understand how entrepreneurs learn from experiences, through the identification of entrepreneurial learning activities.

Entrepreneurs use very informal methods for making sense of their activities; in other words they develop their own means of sense making of situations from the experience of the activity. However current entrepreneurial curriculum would seek to decontextualize experience in order to allow the entrepreneur to understand the process and learn to act in more effective ways.

Programs have understood for years that education in entrepreneurship requires practical application, more than other business disciplines. Beyond more traditional efforts such as internship, educational institutions are developing others ways to ensure that the students will acquire the necessary skills. The establishment of an open working and learning space can provide for students practical activities and allow the generation if ideas, space to test the manner in which they can be used in everyday practice (Higgins, D., 2013).

Entrepreneurship courses require a non-traditional approach in which students must learn to embrace the challenges of operating in a business environment that favours creativity and risk-taking.

The promotion of extracurricular activities has become increasingly important to the University as they respond to criticism about the lack of relevancy in the classroom.

Further empirical research shows that the entrepreneurship education programs and positive role models and entrepreneurs are strong incentives for students to choose an entrepreneurial career path (Fayolle et al., 2006).

The purpose of introducing the use of practice into entrepreneurial education is to enable the provision of a more informative pedagogy. This approach provides entrepreneurs with the opportunity to think about their own learning and growth, to create for them space to reflect and to lived experiences (Higgins, D. 2013).

We can consider the informal factors that potentially facilitate and hinder the development of entrepreneurial universities. Higher education institution associated with formal entrepreneurial education (courses, seminars, and curriculum) at all levels has the potential to contribute to the cultural dimensions.

Exposing students to extracurricular activities with a variety of aims could develop favourable student attitudes.

2. Why entrepreneurial extracurricular activities are relevant for higher education?

The entrepreneurial extracurricular activities are important within entrepreneurship education. Is a way of enhancing formal entrepreneurship education by allowing activities to be student-led thereby giving additional space outside of the curriculum for students to take initiative (Pittaway et al., 2010).

Abreu (2013), define as entrepreneurial any activity that occurs beyond the traditional activities, is innovative, carries an element of risk, and leads to financial rewards.

Entrepreneurial extracurricular activities involve *actions*, *experiences* and *newness* and are inherently learning-by-doing process linked to new business creation. Because entrepreneurship education is non-traditional business disciplines and there is no dominant pedagogical model, extracurricular activities must be utilized (Plumly, L.W. et al, 2008).

We must understand how extracurricular activities might affect student learning and how effective activities can accommodate changes in student learning styles and values.

In order to begin detailed understanding of this topic, the first question that must be asked is what an entrepreneurial extracurricular activity is? Entrepreneurial extracurricular activities can be seen as: informal education, non-accredited students activities like: games, competitions, clubs and societies, summer schools, exchanges, mentoring, job shadowing, internships, workshops, financial support, incubation, business support, simulation case studies in enterprise education, speeches by entrepreneurs and role models, networking events and so on.

Many programs discover the need for "accelerated" offerings to recruit and encourage students who have entrepreneurial aspirations and/or well-developed plans. If the extracurricular activities are very well integrated into the educational process, those can provide intensive practical experience for students, and can make the connection between their theoretical notions and real-world experiences.

This kind of informal entrepreneurial education can provide for students: a foundation for experiential learning, supportive environment which gives them a comfort within which to take risks and fail, aim to enhance entrepreneurial skills, raise awareness, aspirations and practical knowledge about what entrepreneurial activity means (Clark et al., 2008). Extracurricular activities are 'action oriented' and based on 'experience'. Action can be exposed in three parts: *the act of doing*, *the experience received in the doing process* and the *learning accumulated from the experience* (Pittaway, 2010; Rae, 2000). Extracurricular activities engage students in action and whether this action encourages students to acquire tacit knowledge about enterprising behaviour.

Extracurricular activities not only enhance learning, but they also seek to educate, inspire and encourage entrepreneurial interest and which is directed at the development of enterprising skills, either as a means to enhance employability or as a method of gaining skills relevant to future business creation (Edwards, 2001), help students manage their time better, make more informed and thoughtful decisions, and improve their ability to communicate (Kotts, 2011 apund. Warren 1997).

In terms of entrepreneurship education, the role of extracurricular activities in enhancing student learning in entrepreneurship is often noted. We can discuss about tactics for helping to create new extracurricular activities in order to improve entrepreneurial skills for students.

A benefit of entrepreneurial extracurricular education is the fact that although students have to act in difficult circumstance they are not financially exposed in the same time as an entrepreneur.

The students feel more 'like home' when they are involved in extracurricular activities. Activities came from students are more related to initiative taking.

There are few extracurricular activities that adopt a clear educational focus: case studies, specific project for the company, business plan competition at regional, national and international level, consulting projects for companies, etc.

Business plan competitions are a way to infuse some competitive fire into a coherently safe environment, and innovation is reaching even this "mainstream" tool of entrepreneurship education (Welsch, 2004).

Programs like case studies competitions are bringing more relevant content. Another example is the use of video case studies of entrepreneurial role models within an entrepreneurial module. This kind of exercise enables students to act as a consultant, apply models, theories, tools to gain and understanding the entrepreneurial process. Students were required to participate in cross-cultural teams and conduct specific tasks (Czuchry and Yasin, 2008).

Consulting projects for companies offers students an opportunity to integrate their academic and work experiences in the creation of a consulting solution for a company's real problem (Herriot, 2008 apund Cook and Bellieveau, 2006). The consulting projects provide students with experiential learning in a team, problem definition, research and application, project management, critical thinking skills and in making presentations.

Trainings and workshop participation is also a good opportunity to interact with specialist and to improve their capabilities. Entrepreneurial training increases involvement in all types of academic entrepreneurial activities, including in informal and non-commercial activities (Abreu, 2013).

In the same time, the quality of a member in NGOs, entrepreneurship clubs, for students is also a widespread phenomenon. Why are attractive for students the NGOs and their activities? Student clubs function as a platform that allows them to be actively involved in a wide range of activities, to take initiatives, to work in a team, to run projects and so on. The University must have a collaborative relationship with the Entrepreneurial NGOs and support their work and activities. Volunteering should be encouraged by the University, should not be imposed, but must to provide support in order to be manifested by students. In Romania, for example, there are between 2-5 students' organizations in each institution. Some of the universities have particularly societies how covers specific areas. The role of groups, social interaction and interaction with the "community of practice" of specialists define the entrepreneurial learning as a process of co-participation.

The success of any venture, project, or another endeavour depends upon the persons involved and an entrepreneurial program is no different. Important extracurricular activities 'influencers' include, among others, an advisory board, an entrepreneurship centre, a co-working space, a strong network and access to finance.

It is clear that from an educational perspective, this type of learning is invaluable because students get to act like an entrepreneur without incurring any risk, and potential or existing entrepreneurs get information at little to no cost (Knotts, 2011).

3. Data and methodology

Within this study, I want to explore how engagement in extracurricular activities can enhance entrepreneurial learning process. One of the sections of this article highlights the different types of extracurricular activities.

The research was designed to be an initial study. Before detailed surveys or questionnaires can be carried out it is essential to gain a deeper understanding of this subject.

In gathering data for the study, I designed a self-reporting questionnaire following a careful procedure to ensure adequate content. Data collection was based on the procedure of collective voluntary self-administration of the questionnaire to groups of students. During the academic year 2013-2014, a questionnaire survey was distributed to a sample of 400 licence and master students studying business and management studies at West University of Timisoara in Romania. From the 347 questionnaires returned, 285 were fully answered and usable by the researcher.

The questionnaire required participants to: (a) indicate which are the most five relevant extracurricular activities to them (b) rank order the factors that make the students more entrepreneurial (c) list up to five criteria reflective of a successful entrepreneurial students (d) entrepreneurial intentions and entrepreneurial experience. Respondents also provide up to three examples of entrepreneurial activities.

Questionnaire scales and items:

- During the academic year, you have participated in extracurricular activities?
- Each week you spend time participating in extracurricular activities (organizations, student associations, etc.)
- You have already done, an internship?

- During this academic year, you have blended academic learning in the workplace experience?
- Please mention the most important outcome of experiential learning based on extracurricular activities?

The study show many forms of active learning accumulated, for examples: "you can lead a group", "I have learned how to organize myself and use initiative", "I have learned how to communicate", how to work in a team, "I having to deal with some problems", we have challenges, findings way to identify potential projects, "I exercised my analytical skills", "Learned to communicate effectively", "I utilized creative through process to solve business issue"

Students' motivations for engaging in extracurricular activities are varied. For examples, the student's highlight: the benefits of events and networking, gaining practical experience, having the opportunity to put the idea into practice, awareness of business ownership; and assistance with knowledge directly to business start-up, to enhance curriculum vitae and the employability, preparation for starting a business; enhancing transferable skills and so on.

According with study results, first five common entrepreneurial extracurricular activities are reflected in Table 1.

Crt.no.	Entrepreneurial extracurricular activity	Percentage
1	Workshop, training and conference participation	71%
2	Active member within NGO	32%
3	Speeches by entrepreneurs and role models	47%
4	Internship and company visit	37%
5	Business Plan Competition/Presentation	23%

Therefore, the management of the University ought to continue they promoting of extracurricular activities since it clearly benefits the students' academic achievement.

4. Results and conclusion

The aims of this article were to answer two basic questions about entrepreneurial extracurricular activities: why are these activities attractive to students? And what entrepreneurial learning benefits do they provide? The paper has highlighted that extracurricular activities have become very important and are used by many universities to help enhance understanding the entrepreneurship.

From the empirical data, it is evident that entrepreneurial extracurricular activities provide an important component in entrepreneurship education.

Being involved in extracurricular activities provides greater opportunities for students to "learn by doing" through action and experience accumulated (68% of respondents).

Students must have substantive hands-on experience working with community venture to add value to real venture (Plumply, 2009).

The learning outcomes from being involved in extracurricular activities determine the changes that have taken place in the areas of awareness of skills, self-development, confidence and career aspirations (Robertson and Collins, 2003).

To conclude, it is clear that extracurricular activities have real learning benefits for students and there is certainly evidence that they raise self-confidence and provide the required skills to engage in new business creation.

5. Acknowledgements

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DYSFUNCTIONS IN THE APPLICATION OF THE MANAGERIAL CONTROL SYSTEMS IN ROMANIAN PUBLIC INSTITUTIONS: THE REPORTING IMPROPRIETIES, THE INFORMATION AND THE COMMUNICATION STANDARDS

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Abstract: *The development level of managerial control systems in the Romanian public entities is not a remarkable one, on the contrary, some institutions do not understand the real usefulness of the internal control system and the related set of standards; the compliance is determined only by the regulatory norms. The practice of implementing the internal control proves that the perception of executives and middle managers regarding that system is not a favourable and supporting one. The managers face difficulties caused by the ambiguity of some of the standards, poorly understood, and for which the body of laws does not provide advices. Thus, some institutions report the high compliance of standards, although the reality shows numerous inconsistencies. Other public institutions assess their own level of implementation only partially, but do not identify improvement solutions. Because of the lacking of benchmarking initiatives and knowledge transferring between institutions, the picture of this situation indicates dysfunctions that influence the efficiency of the activities and the achievement of the objectives. In this paper, we will analyze the correlation between the observed shortcomings in the implementation of three of the most important standards, namely the Reporting improprieties, the Information and the Communication. The methodology used is an analytical and exploratory one and critically examines the implementation status of these three standards in more than 40 public institutions in Dolj County, Romania. Also, by analyzing the answers to the questionnaire, our study identifies differences in interpretation and implementation of these standards between certain types of organizations (given the heterogeneity of the investigated sample). The results show a high interdependence between this control standards and our proposals focus on the strengthening of the interpersonal skills and the personal relationships. Our study is directed toward the conclusion that the three internal/managerial control standards and their potential impact on the organizational optimization are not optimal exploited.*

Keywords: public institutions; internal/managerial control; control standards; reporting improprieties

JEL classification: D83; H83; M48

The issues on managerial practices in Romania ranges from applauding several private initiatives and successful business models and the accusation of the inefficient public management, also characterized by bureaucracy, their lack of performance, not to mention the corruption issues. The state of managerial uncertainty, characterizing all the fields, was not yet saved by borrowing successful practices from the institutions with a remarkable management, and that because such model institutions did not detached from the great mass of mediocre organizations.

In such circumstances, it seems clear that the improvement of internal / managerial control is an imperative and crucial step. The point is reinforced by Henry Mintzberg in a recent article (published in Harvard Business Review and referring to the U.S. public health care system) which recommends a strengthening of the internal social systems in organizations. Thus, Mintzberg outlines some directions such as: "Look to the people on the ground, not outside experts, for ideas for real improvements" or "Encourage greater collaboration" or "Build communities that engage people rather than conventional hierarchies that control them" (Mintzberg, HBR October 2011, p. 44).

1. Introduction

Contemporary management increasingly recognise the need to measure other intangible aspects of performance to manage the value creating activities of the institutions. Romanian legislation (adapted to European legislation) requires that the public organizations to develop their internal control systems and to conform at a set of 25 standards. A higher sensitivity is observed for the three standards examined in our study. This research aims to quantify the robustness and functionality of the informational and communicational subsystems through their internal sides; therefore we tested the information and communication issues within the organization. The communications and the information flows realised with outside partners are not therefore covered by this study.

We will establish and test the following hypothesis: The link between the dependent variable (Reporting improprieties standard) and the independent variables (Information and Communication standards) is linear. For that, we used statistical tests offered by the instruments of the SPSS software (Statistical Package for the Social Sciences), as we will present further on.

2. Methodology

The sample of the research consists of county and local government institutions (an institution of the prefect and 5 municipalities), public health units (three hospitals), security units (a gendarmerie headquarters, three police stations and one fire station), education (two universities, seven high schools and three elementary schools, a county inspectorate) and cultural institutions (one municipal library and a museum), General Departments (nine institutions including the Department of Public Finance, the County Direction of pensions and health insurance House), county offices (6 institutions, eg. the Consumer Protection Office and the Office of Cadastre and Cartography), judicial institutions (three Courts and the Court of Appeal), two transport units (the public transport company and an airport), other county bodies (Directorate of Youth and Sport, Forestry Department, Customs Directorate, Directorate for Statistics etc.).

There were 58 questionnaires sent, 42 of which were completed and collected (= a 72% response rate). Even the response rate (although a reasonable rate is a not too high parameter) proves a certain reluctance of the recipients who we addressed with our investigation. The 42 responses comply with the heterogeneity of the selected public institutions of the sample.

We also sent the explicit request that answers be given by a member of the "Structure responsible for monitoring, coordination and methodological guidance". This functional structure is recommended through the legislation to operate and to support the implementation of the internal managerial control system in the public institutions. By involving a member of this structure in the phase of completing the questionnaires, we wanted to strengthen the relevance of the information collected from the employees having control responsibilities.

3. Preliminary remarks

Achieving the standard no 16 - Reporting improprieties is one of the complex managerial challenges. The difficulties are recognized even by the Ministry of Public Finance , because the standard is directly related with the "context of applying values such as culture of trust and ensurance of a morality level in the public entity, given the risk of interpretation of the standard as similar with the denouncement. a system of values should be cultivated to limit this risk, a system based on the understanding the fact that, in the public entity, all employees exert different levels of management and have essentially the same goals. In such an environment they can be created the immunity mechanisms necessary to rebalance the system. If they are not created such immunities, the management should ensure detection and removal of the irregularities through an open dialogue with members of the public entity".

From our point of view, the culture of trust and the favorable environment can only be built by using tools provided by transparent communication and information. And these two management concerns represents the content of other two standards of internal / managerial control: 12 – Information and 13 – Communication. As we will discuss below, the questionnaire that we applied proves inconsistencies regarding the understanding and application of an internal control system. And a major source of disagreements is represented by the vicious circle consisting of these standards: Information-Comunication- Reporting improprieties.

The first clear information regarding the disfunctions is shown through the overall self-evaluation on the state of implementation of the internal/ managerial control system in the public institutions. Almost all surveyed institutions reported a partial conformity of the control system, which means that a number of 3 to 6 out of the 25 standards are not yet implemented. Some institution asumed that the 16th standard - Reporting improprieties is not implemented, but also assess that their Information and Communication standards as implemented.

The evasive answers and those directly related with the existence of procedures or practices for improprieties reporting, We find, however, that the entities wich declared this standard as implemented, face, in fact, with an inconstancy of understanding of the content of this standard (hence their erroneous assessment) or with a deliberately favourable evaluation, caused by all the sensitive valences of the standard. Thus, half of the questionnaires responded negatively to the question regarding the constantly and officially registration of the submissions on irregularities from the lower levels to the top managers, even though over 90% of respondents said that their organization encourages such practices ("supportive attitude") and almost all organizations declare among their values also the following: culture of trust, transparency, honest working relationship or team spirit (open response questions in the addressed questionnaire).

The causes of failures in the implementation of internal / managerial control standards can be classified, from our point of view, in the following two categories: formal, procedural causes and subjective causes, related to the spiritual side of the organization..

The assumption about the lack of understanding of the standard's content is confirmed by the negative responses frequency (93%) given to the question "Did the job descriptions contain instructions regarding the communications addressed to the top managers related with the observed irregularities?". The very high frequency of these responses demonstrates the formal causes that generate malfunction.

Undoubtedly, the impediments encountered in the implementation of the standard no 16 - Reporting improprieties are also generated by the non-formal factors. Of these, the answers for our questionnaire highlight the lack of organizational trust. These responses demonstrate for almost all institutions an inefficient info-structure, less open that supports to a small extent the dialogue and the development. Nordström and Ridderstråle metaphorically draw the attention to the risks posed by "the lack of a trusted environment: doubtful cooperation and increased contract and monitoring costs; and the contemporary organizations seem factories of fear rather than temples of confidence" (2007, pp. 220-221, Romanian version).

And this non-conformity of organizational trust comes from the rigidity of organizational charts or from the frequently changes of institutional management (the political instability impose in many cases, the leadership reshuffle in many institutions) and even the exaggerated level of bureaucracy. All these shortcomings are reflected in the informational subsystem and in the communication procedures and practices, and through them, indirectly, in the methods for reporting improprieties.

The internal communicational subsystem contribute to achieving the 16th standard - Reporting improprieties: the procedures mention the transmitting codes of personal and confidential data and encourage staff to notify managers the potential weaknesses of the entire operational system. Thus, managers have a responsibility to facilitate and coordinate the reporting of information regarding irregularities.

4. Statistical analysis

Considering the analysis of the correlation between dependent variable, *Reporting improprieties implementation level* (1÷10), and the predictors, the *quality of information* and *communication systems* (1÷10).

Table no. 1 – The corelation matrix

Correlations		Report_impr opr_levl	Information _qual	Comunication _qual
Pearson correlation	*Report_impropr_levl*	1.000	0.905	0.865
	Information_qual	0.905	1.000	0.792
	Comunication_qual	0.865	0.792	1.000
Sig. (1-tailed)	*Report_impropr_levl*		0.000	0.000
	Information_qual	0.000		0.000
	Comunication_qual	0.000	0.000	
N	*Report_impropr_levl*	42	42	42
	Information_qual	42	42	42
	Comunication_qual	42	42	42

The statistical analysis presented in Table no. 1 containe three parts, in accordance with the significance of data, namely:

a) the first part reflects the values of the Pearson correlation coefficients;

b) the second part encompasses the values of the significance threshold (Sig.) corresponding to the testing of the significance of values registered by Pearson coefficients;

c) the third part points out the number of observations considered (n=42 in our case).

The level of Pearson coefficient offers information on the meaning and intensity of the correlation between the analyzed variables. Theoretically speaking, this coefficient can take value within the interval [-1, 1], when their value is oriented towards the limits of the interval, the correlation becomes stronger. As well, a positive value implies a direct

correlation, while a negative value implies a reverse correlation. When appreciating the intensity of the correlations between variables we took into consideration also the thresholds of significance (Sig.), considering a maximal significance threshold of 0.05, below which coefficients are considered statistically significant. In other words, the 0.000 Sig. values for each calculated coefficient prove in our case that there is a significant correlation between the Reporting improprieties level, the Information and the Communication systems quality.

To verify the correlation between the degree of implementation of the three standards, we have measured the dependence relation between the answers given to the three key questions of the questionnaire. The standard no 12 Information is highlighted by the question: *To what extent are implemented efficient procedures and processes for ensuring managers that the information flow is effective (information is transmitted correctly, completely, on time, operatively) and in accordance with rules and legislation?* (1÷10 scale).

The communication standard was investigated using the following question: *What is your evaluation regarding the quality of the communication system (quick, fluent and accurate information's dissemination so that the users received it completely and on time) and the adapting level of this system to internal users?* (1÷10 scale).

The recorded answers to the questionnaire largely correspond with the answers given to the question related with the 16th standard - Reporting improprieties: *How would you rate the quality of procedures for reporting irregularities, the manager's measures to treat them, to protect those involved and to build a confidence spirit?* (1÷10 scale).

The resulting values reveal a very strong and direct correlation between the *Reporting improprieties implementation level* (determined variable) and the *quality of Information managerial system* (0.905) and between the determined variable and *the Quality of Comunication system* (0.865).

5. Comparative interpretations

Some clearly superior results of public organizations were sustained by the stable comunication systems and by the informational platforms. Both are favorable for the improprieties' reporting, by establishing clear and direct communication linkages, internal controls may be strengthened without sacrificing organizational understanding. It is true that just a few public organizations in the sample have claimed the functionality of these standards, and the explanation lies with their size: they are just smaller institutions with staffing sized at most a few dozen employees. The organisations whose staff exceeds several hundred of people do not benefits from the flexibility of the formal and informal organizational relationships, and the management must ensure that all barriers to communication are removed.

Table no 2 - Determining factors for the compliance level of control standards

Differentiation criteria	Observations
Organization size	Standards compliance is higher in small organizations
Organizational culture	Newly created public entities (non-crystallized cultures) do not benefit from the standards compliance. Old organizations, associated with numerous groups have many dissipated cultures that are not beneficial for effective control systems.
Level of decentralization	Decentralization causes difficulties for information flow and communication (especially the horizontal and oblique flows) and for the reporting improprieties practices

Management stability	Managers having greater seniority can facilitate the development and the implementation of standards through the relationships strengthening, improvements in time and cultivating a culture of trust

Source: analyses of authors

Based on this observation, we identified several traits that underlie the high/ low level of implementation for the standards studied here (Table no 2). Of course that all factors are determined by the organizational size: the decentralization degree affect the circulation of information and the feeling of trust in management; the seniority of management positions is beneficial for the quality of human relations and the organizational culture diminishes reluctance for the open dialogue.

6. Conclusions and suggestions
An INTOSAI document emphasizes the connections between the information, the communication and the improprieties reporting and their combined impact on the level of development of the internal control system: Pertinent informations on irregularities should be identified, captured and communicated in a form and timeframe that enables staff to carry out their internal control and other responsibilities (timely communication to the right people). Information systems produce reports on irregularities that contain operational, financial and non-financial, and compliance-related information and that make it possible to run and control the operation (INTOSAI Guidlines, 2004).
We can conclude with confidence that most public organizations are confronted with control deficiencies related to reporting improprieties. Afterman (2007) quotes a definition, considering that "a control deficiency exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect on a timely basis noncompliance with a type of compliance requirement of a federal program". This standard of control is superficially treated; the organisations do not develope transparent procedures to encourage reporting and treatment of irregularities. As a result, the 16th standard - Reporting improprieties does not allow to the management the improvement of efficiency and effectiveness. Although organization's management are aware that the three standards are particularly important for the entire control system, their work affects the sequence of operations in a less favorable manner.
The weakness of this study which considers the correlation as analysis method, consists in the fact that these three standards analyzed are not quantified in interdependence with other standards, given the systemic nature of the internal / managerial control.
Our recommendation for the public managers is to use the organisational culture, group norms and a focus on goals (in parallel with the rules and procedures) to foster compliance with organisational goals. Because we highlighted the decentralized control problem, we also suggest the spread of the open-book management, based on the information sharing, encouragement of active participation, teamwork and cross-functional communication. Open-book management "helps employees appreciate why efficiency is important to the organisation's success as well as their own. The goal of open-book management is to get every employee thinking and acting like a top-manager or like the business owner. Open-book management turns traditional control on its head" (Daft, 2009, pp. 390-391) - being in this case a rather utopian solution, but having a partially applicable utility.

7. Aknowledgment

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THE LINK BETWEEN ORGANIZATIONAL CULTURE AND PERFORMANCE MANAGEMENT PRACTICES: A CASE OF IT COMPANIES FROM ROMANIA

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Abstract: *The aim of this research paper is to empirically test the relationship between the components of organizational culture and the practices of performance management. In this study, the primary data were collected through questionnaires from 81 employees working in IT companies from Bucharest. Strong cultures help organizations anticipate and adapt to changes in environment, thus proactive cultures should enhance and support organizational performance on the long-run. The results from the statistical analysis of primary data show that the dimensions of organizational culture have a positive impact on performance management practices. Moreover, all the four traits of organizational culture (adaptability, mission, consistency, involvement) have a significant and positive influence on performance management practices. However, consistency has the largest influence on performance management practices, meaning that effective organizations have strong cultures that are highly coordinated, consisted and properly integrated. Consistency is a great source for stability and internal homogeneity, as behavior has its source in the core values of the organization.*
Taking into account the relation between these variables and organizational performance, it is important to retain key employees that are aware of the organizational goals and values. Therefore, the organization should implement practices that increase job security and career development. In this manner, the organization will not only decrease turnover rates, but it would also form a stronger organizational culture by keeping the employees that are already accustomed with the values, beliefs and norms of the corporation. In order to analyze the data collected from the employees working in IT field, regression and correlation statistical analysis have been used. The results show that adaptability is highly correlated to the mission. The implications of my research for the field of organizational behavior is that the models that were developed for developed economies also applies to developing economies, such as the one from Romania.

Keywords: organizational culture; performance management;

JEL classification: M14; M15

1. Introduction

The recent scientific literature highlighted that human resource management has become an essential tool to increase firm performance and to achieve the business vision. In the new context of economic changes, employees are considered to be valuable assets to an organization. Therefore, effective management of the employees is needed. In spite of the dynamic competitive environment of the developing countries, most of the studies have been conducted on western countries. Some scholars even questioned the applicability of the western practices of management in developing countries, although it has been universally recognized that organizational culture is one of the main reasons for differences in performance management practices (Denison et al, 2004).

Although the relation between organizational culture and performance has been studies in many researches (Ogbonna and Harris, 2000), just a very few studies have focused on organizational culture as a factor on performance management. That is why this study's purpose is to analyze the relationship between the components of organizational culture and performance management practices.

In this empirical study, the theory of organizational culture of Denison is used. The theory focuses on four cultural traits: mission, adaptability, consistency and involvement. In addition, the theory explains the cultural traits of organizational performance, while the practices of performance management sustain the view that the members of the organization benefit from the culture seen as a contextual factor.

In the process of developing the organizational culture, not only the human resource department should be involved, but also the top management of the organization (Dorothy, 2008). Having a strong culture is not about being a good employer, but more about having employees that are committed to the vision and mission of the organization. However, there are companies that see their culture just as a recruitment tool and mean to motivate and communicate with employees. Instead of that approach, companies should focus on engaging employees at a fundamental level. On the long run the engagement will transform into high performance. An effective and strong culture aligns with the business strategy to ensure the organization meets its goals on the long run (Reinter, 2009).

2. Literature analysis

Culture is defined by Schein (1985) in terms of basic assumptions, shared beliefs or values. From his point of view, culture exists at three levels within the organizations: basic assumptions, values, and artifacts and creations. Organizational culture contains a set of norms that describe which behaviors are appropriate and which aren't within the organization. However, the culture is not necessarily homogenous across all departments of the company, as some norms might be embraced by all members of the organization. Moreover, different groups within the organization might develop their own sub-cultures over time. The increasing interest in studying the organizational culture is generated by the belief that the culture of an organization could influence its short and long term performance.

Schein (2004) defines organizational culture as "the set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about and reacts to its various environments". This definition shows three main characteristics of organizational culture: organizational culture is passed on to new members of the organization trough socialization, the behavior at work is influenced by the culture of an organization and that organizational culture operates at different levels.

Generally speaking, values are the foundation of any company so in order to set up a strong organization, it should have strong values. The values should be related to innovation and a methodology regarding the efficient use of resources. If these conditions are met, the organization will create a sustainable vision.

Every organization has its own unique set of values and therefore culture. Some companies focus on integrity and honesty, passion for customers while other emphasize on technology, self improvement or innovation. Irrespective of the organization's culture, the companies should align the core values with the overall performance, including employee retention. Organizational culture really matters to employees, so a negative and not transparent culture leads to high churn rates. It is important to focus on creating a performance culture and to help employees that don't achieve their goals, before finding a better match for the position.

Organizations cultural change does not happen by accident. In most of the cases, culture changes are implemented using a defined strategy for high involvement and by using a measurable action plan.

2.1. Performance management

The concept is defined as a strategic and integrated approach to achieve sustained success for an organization, by improving the performance of the employees and by developing the capabilities of the teams and of the underlying individuals. Performance management includes activities which ensure that goals are consistently being met in an effective and efficient manner. This approach suggests that people are the most important assets in organizations, as they create the competitive advantage and not the capital. Performance management is a system that aims to exploit the full potential of human resource by removing barriers and by motivating the members of the organization (Armstrong and Baron, 1998). By training strong people and by cultivating their capabilities, the organization will benefit, as the competitive advantage is improved. In essence, performance management is about creating competitive advantage by developing and keeping the employees motivated (Kandula, 2006).

2.2. The link between organizational culture and performance management

According to many scholars the main element that helps to attain good performance is to develop a strong organizational culture. Moreover, the culture can even represent a barrier when trying to implement new strategies. That is why, the same strategy can yield different results for two companies that compete in the same industry or geographical region.

Numerous studies have been conducted regarding the relationship between the culture type and the organizational performance, motivated by the belief that certain cultures might be more effective than others. The studies showed that a positive and strong culture help employees perform in a great manner and achieve success, while weak and negative cultures may decrease their performance and even demotivate an excellent employee. Therefore, organization culture has a direct influence on performance management. According to Magee (2002), organizational culture and performance management are interdependent. That is why managers should understand the impact of organizational culture in order to get the highest yield from practices such as performance management, as a change in one impacts directly the other.

Both research and observation of successful companies have showed a direct correlation between strong corporate cultures and performance. Moreover, the organizational culture has a vital and measurable impact on the ability of a company to implement its strategy. The culture of an organization cannot be ignored when dealing with concepts such as risk management, customer relationship management, change management or leadership.

More and more companies are encouraging employees to be more responsible and are given more freedom to act. In addition, they are also encouraging teamwork and the formation of teams. A strong culture is one in which the employees work together effectively, share the same core values, and take decisions to meet the organization's primary goals and objectives.

2.3. Organizational culture according to Denison's model

Denison's model has been developed staring from the Schein (1985) approach to organizational culture. Therefore, the core of the model is represented by the underlying beliefs and assumptions. At the more surface-level, there are the values and the artifacts (symbols, heroes) and the behavior. In this model, the comparison between organizations is made according to the surface-level values and their manifest practices.

The organizational culture model of Denison is based on four cultural traits: involvement, consistency, adaptability and mission. All these traits have been shown to have an influence on organizational performance (Denison, 1990).

2.3.1 Adaptability
High performing organizations distinguish from low performing organizations by their ability to understand and react to the competitive environment and customers. In addition, they restructure behaviors and processes that help them to adapt. Moreover, high performing organizations encourage new ideas and different solutions for solving problems. In addition, employees seek new and better ways to meet customer expectations on a continuous basis. Controlled risk taking is encouraged as the organizations learn from both successes and failures.

2.3.2 Mission
Successful organizations have a clear mission that shows employees why they are doing their tasks and how the work they do help the organizational performance. Strategic direction and intent are about multi–year strategies and high priorities are established. In successful organizations the goals and objectives are short term. In addition, specific goals are defined so that employees understand how their daily routines relate to the vision of the organization. Vision represents the main reason an organization exists and competes on a certain market.

2.3.3 Consistency
Consistency represents the main source of integration, coordination and control. In addition, it helps organizations develop a set of procedures that create an internal system of governance which is based on support that is consensual. Successful companies have a clear set of values that support employees and managers in making consistent decisions. When facing difficult issues and misunderstandings, the members discuss them openly and try to reach an agreement. In these organizations, each employee is aware of the fact that their work impacts others and how the work of others impacts them. The employees always make sure that their work is aligned with the organizational goals and objectives.

2.3.4 Involvement
Highly involved organizations differentiate from the rest of the companies by creating a sense of responsibility. This particularity creates a greater commitment to the organization and autonomy. In these organizations, employees know kind of decisions they are allowed to take and which ones are beyond their responsibility. In other words, employees are empowered to take decisions in an informed framework. Employees are encouraged to work in teams and they support each other to attain their work goals. Last but not least, the high-involved companies use training and coaching to develop employee capability.

3. Research methodology
The main aim of the present scientific paper concerns the analysis of relationship between the organizational culture and the practices of performance management practices. This research is based on non-probabilistic sampling, more specifically on rational theoretical guided sampling. I have selected employees working in IT field from Bucharest and used primary data collection, such as questionnaire and face-to-face interviewing. The studied population is represented by personnel from privately-own IT companies located in Bucharest. As far as the application of the questionnaire is concerned, I used a mixed strategy. On one hand, I sent questionnaires by email to 82 persons working in the IT

field, of which only 38 have been returned, 37 being valid. On the other hand, I went to the Chamber of Commerce and I identified several companies which are competing in IT market. I managed to fill in another 44 questionnaires. All the questionnaires were checked for validity, before numbering and loading them in a SPSS 17, data processing software. The graphs and the frequency were generating using this software. Taking into account the objectives of the research and the nature of the variables, the main analysis used were frequencies, Chi Square Test and the Correlation Coefficient.

Denison's model suggest that organizations with a higher measure of the combined four traits highlight a high level of performance, which is the result of performance management. The first hypothesis of this study (H1) is that organizational culture has a positive and significant relationship with high performance practices.

Since performance management also creates superior performance for organizations, the second hypothesis (H2) is that the four traits of organization culture (involvement, consistency, adaptability and mission) have a positive and significant on management practices (clear goals, performance measurement system, performance-based compensation and training effectiveness).

In order to measure the organizational culture Denison (2000) created an Organizational Culture Survey that consists of sixty Likert scale questions. The survey focuses on the four traits of organizational culture: adaptability, mission, consistency and involvement. Some of the questions are related to team work, core values of the organization, customer relationship, employee involvement or continuous improvement processes.

On the other hand, the practices performance management refers to the clarity of the organizational goals, measuring performance, training effectiveness or performance based compensation.

In order to measure how clear and detailed goals are, I have used the framework developed by Verbeeten (2008). The theory suggests that people with specific goals will outperform those employees with vague goals. The goal setting theory suggests that there is a direct and positive relationship between the clarity and measurability of goals and performance. Therefore, the mission of the organization should be properly formulated and the goals should be measurable and detailed.

Secondly, the performance system instrument evaluates the systems that have been developed by the organization to measure performance except performance measures. Such instruments could assess operating efficiency, customer satisfaction and other areas.

Thirdly, the training effectiveness refers to the ability of the organizations to analyze the need for training programs, their costs and benefits, as well as to evaluate if the objectives of the programs are met.

Last but not least, performance-based compensation includes how important the performance of an employee is when determining his earnings. In addition, this component evaluates how promotions are made in the organization (Ehtesham et al, 2011).

4. The results of the research

In order to analyze the relationship between organizational culture and performance management practices, I have averaged each variable in one construct. In addition, I have used the Pearson correlation coefficient to see the relationship between the two variables and to measure the strength of the relationship. On the other hand, I have used One-way Anova to determine the significance level of the correlation.

Table 1: Correlation between culture and performance management practices

		OC	PMP
Organizational Culture (OC)	Pearson Correlation	1	0.857
	Significance		.001
	N	81	81
Performance Management Practices (PMP)	Pearson Correlation	0.857	1
	Significance	.001	
	N	81	81

Source: made by author

As it can be seen in Table 1, there is a strong and positive correlation between the organizational culture and performance management systems, thus conforming hypothesis H1. The confidence level for the relationship is 0.99.

Table 2 shows the correlation between the four traits of organizational culture and the practices of performance management. As it can be seen in the table, all of the four traits have a positive influence on performance management practices.

The value of adaptability for performance management practices is 0.703 at a significance level of 99%. The value for mission is 0.813 which sows a high level impact for the trait on the performance management.

The values for the consistency is 0.862 is also shown a high significance of the relationship between the variables. Last but not least, the value for involvement is 0.702 at a significance level of 99%.

As it can be seen in the Table 2, the consistency has the highest impact on practices of performance management and involvement has the lowest impact. All the four traits of organizational culture have a positive and significant impact on performance practices management, so the second hypothesis is also valid.

Table 2: Correlation between organizational culture traits and PMP

		Adaptability	Mission	Consistency	Involvement	PMP
Adaptability	Pearson Correlation	1	0.866	0.822	0.9	0.703
	Significance	-	.001	.001	.001	.001
Mission	Pearson Correlation	0.866	1	0.84	0.772	0.813
	Significance	.001	-	.001	.001	.001
Consistency	Pearson Correlation	0.822	0.84	1	0.808	0.862
	Significance	.001	.001	-	.001	.001
Involvement	Pearson Correlation	0.9	0,772	0.808	1	0.702
	Significance	.001	.001	.001	-	.001
PMP	Pearson Correlation	0.703	0.813	0.862	0.732	1
	Significance	.001	.001	.001	.001	-
N		81	81	81	81	81

Source: made by author

On the other hand, there can be seen some correlations between the organizational traits. Therefore, adaptability is correlated to mission and adaptability, more than it is to

performance management practices. In addition, the least correlation is between the adaptability and the practices of the performance management, with a coefficient of 0.703.
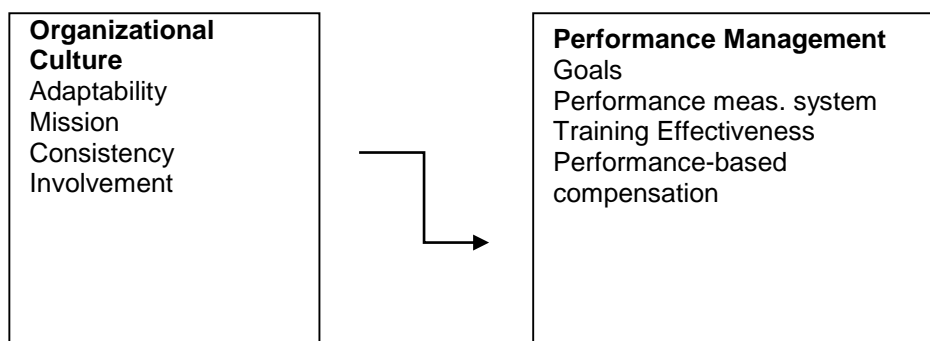
Organizational Culture Adaptability Mission Consistency Involvement		Performance Management Goals Performance meas. system Training Effectiveness Performance-based compensation

Figure 1: A model for Organizational culture and performance management

The coefficient of determination (R square) between the organizational culture trait and the performance management practices is 0.65, which means that 65% of the variance of performance management practices can be explained through the shift in orderganizational culture traits. Similarly, the coefficient of correlation between the dependent variable and the independent variable is 0.81, which means there is a strong positive correlation between the variables.

Taking into account all the information described above, along with the fact that that F is statistically significant, I can conclude that the model is valid. Therefore, in the case of the organizations that compete in IT field in Bucharest, there is a strong link between the organizational culture traits and the practices of performance management.

5. Conclusions

Churn rates for IT companies have been increasing in recent years, so that keeping the key employees has become a real challenge for any organization competing in this field. Numerous studies have shown that clear goals and a really strong culture could engage the employees to the organization's values and increase both the performance and the competitive advantage. Unpleasant work environment, not transparent mission and vision, weak culture or limited prospects of promotion contribute to low job satisfaction, motivation and involvement.

A significant percent of the personnel working in IT sector is dissatisfied with the facilities offered by the organizations, as well as with the climate at work. Nevertheless, due to the dynamic environment of IT sector, the need for experienced professional is growing and keeping the best employees has become harden than never before. Training programs and performance-based compensation system keep the employees motivated and fully engaged to the core values of the organization.

Implementing an efficient culture from the top of the organization is impossible, as it can be only achieved by training managers and supervisors to involve the rest of the employees in the process. The main elements that managers have to take into account are the vision, the way the vision is communicated and the management style across the organization.

The main purpose of the paper was to determine the relationship between the organizational culture traits (adaptability, mission, consistency, involvement) and performance management. After analyzing the primary data, it has been found that all the four traits have a significant and positive influence on the performance management practices. However, the greatest influence is represented by the consistency and mission.

Moreover the study shows that organizational culture and performance management are two complementary concepts. Therefore, when analyzing the organizational performance of an organization, these two concepts should not be isolated one from another.

Implementing proper human resource management strategies require an integrative approach, so that there are aligned horizontally with all human resource processes and vertically with the organizational goals. Achieving horizontal fit of the human resource strategies with all HR policies would improve the productivity of employees, increase the flexibility of the organization and facilitate the incorporation of new technologies. The main principle is to link learning and development to HR processes, to support the best practices on the long term. According to recent studies, training has become vital to knowledge management, therefore new structural relationships should be promoted.

The limitations of this research are about the number of respondents and their location, as the primary data were collected from employees working in several IT companies located in Bucharest. I intend to extend my future researches to investigate the link between performance management and organizational culture, in other regions of Romania. In addition, this study doesn't establish ways in which the cultural differences between organizations from public and private sector can be minimized. Taking into account these limitations, I will focus my future work towards eliminating these aspects.

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THE PRESENCE OF EQUAL OPPORTUNITIES IN HR MANAGEMENT

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Abstract: *Ensuring equal opportunities is a priority for CEO-s and decision makers, however, it is often not put into practice. Changes in recent years along with the priorities of the EU and the efforts made to banish discrimination becoming more prominent brought with themselves a pressure on firms to provide equal opportunities for the different under-privileged social groups. In Hungary the Act CXXV of 2003 on discrimination and equal opportunities lists the groups in need of protection. The law requires employers with more than fifty employees to have an equal opportunities program. In spite of this, these programs are often general and do not implement the changes and goals identified after the assessment. Still, strategies and plans are only worth how much of them are realized. Our article is about the conscious principles of the Hungarian business sector about equality and whether there are regional differences. We compare answers given by both employers and employees on the subject of the extent to which the above mentioned principles are realized by the management and whether the employees experience these changes. Our theory is that the prioritisation of equal opportunities in firms is more the result of access to project funds than that of inner initiative from the firm's management.*
We analyse our research questions using a quantitative method on a regionally representative national sample. We examined 992 firms with special attention on those and their employees who had some sort of written guidelines on equal opportunities and plans on implementing these.
In our paper we give a short review on the importance of equal opportunities, it's manifestation in HR management and it's written declaration, the so called Equal Opportunities Plan (EOP).
The efforts of the EU and access to financial resources for the EU projects as a condition our hypotheses are that (1) at least 30% of the firms studied have written guidelines or declaration on equal opportunities, (2) the majority of these firms have a higher rate of disadvantaged employees and operate in economically undeveloped areas.
Keywords: *equal opportunities, HR, strategy, Equal Opportunities Plan, disadvantage*
JEL classification: M51, M54

1. Introduction
In our study we look into how equal opportunities affects HR management.
Our aim is to examine our hypothesis according to which equal opportunities becoming a priority in the EU is affecting the attitude of firms towards this topic. With the help of our data base, containing information about 992 firms we look into the assumption that at least a third of these firms have some sort of written declaration on equal opportunities. The Hungarian business sector is regionally represented in our data base which gives an opportunity to further examine another hypothesis which states that in more developed areas firms encounter fewer underprivileged employees thus put less emphasis on the question of equal opportunities.
After introducing the importance of equal opportunities we discuss its role in HR

management, the elements of related documents and we also examine correlations in the business sector. The study concludes with deductions.

2. Theoretical approach of equality in HRM

When we talk about equal opportunities we have to consider that nowhere in the world it is completely realised. We are still living in an era of improvement in this field. The idea will only be fully implemented when people who are being discriminated against and those living on the fringes of society make a conscious and consistent effort and are committed to work for this goal (Chikan, 2001). This fight will only have the desired outcome in society is willing to accept the changes. Equal opportunities mean that the individual is invisible, fits perfectly into society as a building block. He learns, grows up, works, becomes self-sufficient, loves and is loved, lives his life like everybody else (Konczei, 2002.). In a society nobody should be discriminated against based on their sex, religion, culture, age, disabilities or sexual orientation (Malik, 2003.).

Equal rights are made to provide equal treatment for everyone. Since we live in a multilingual and multicultural world equal opportunities are essential for the individual to reach his full potential and it is a constitutional right.

There are several definitions of equal opportunities. The Helios II. (1996) program of the European Commission defines equal opportunities as follows: Every person is different and deserves equal opportunities to live his life the way he chooses to. For the individual to achieve this a support system needs to be put in place, obstacles need to be removed and he has to be able to access unlimited information.

Jacobs (2004) states that the principle of equal opportunities centres around the idea that competition should be run based on the assets risked in the competition and not on factors like social background, religion, sex, disabilities etc. which might prevent the competitor form succeeding.

According to Kadet (2008) the question comes up on what providing equal opportunities really means. Although providing and promoting equal opportunities carry different meanings the two expressions are often used interchangeably. The former is a passive action that provides opportunity for a group and the latter is an active action and means that the group can actually use the opportunity given. For equal opportunities both conditions have to be met.

Farkas et al. (2008) argue that procedures and conditions creating equal opportunities should be accessible to everyone. These are equal rights for training, employment relation and wages etc. Csehne (2007) states that in Hungary unemployment is at a high and it affects younger generations more when we consider the whole of working aged population.

With suggestions from the European Committee and taking Hungarian specifics into account we can distinguish the following fields in the matter of equal opportunities:

- creating family friendly working environments
- equality of the sexes
- accessibility for the disabled
- increase in life quality and better employment opportunities for the disabled
- increase in life quality and better employment opportunities for romas
- increase in life quality and better employment opportunities for other underprivileged groups

The CXXV Act of 2003 on Equal Treatment and Promotion of Equal Opportunities acknowledges that all people are equal and names several groups against which it considers discrimination to be unlawful and offers legal aid when the principle of equal opportunities is breached.

The scope of the law extends to Government Agencies with more than 50 employees and makes it compulsory for them to accept an equal opportunities program.

Berenyi and Kollar (2009) say that the principle can only be put to practice if the entities overseeing the process not only work out strategies but also ensure that the idea is manifested in the most important management areas which are the base for the strategy itself.

Equal opportunities is a subcategory under HR strategies. On a wider level it can be considered as a separate subcategory since it does not only affect HR management but other subcategories as well.

The main articles of the Equal Opportunities Plan can be:
1. Introduction
2. Assessment
3. Actions:
     - areas where actions need to be taken
     - providing the services of an equal opportunities consultant
4. Informing employees about the Equal Opportunities Plan
5. Improvement of the working environment:
     - building wheelchair ramps, accessibility
6. Providing information, representation, feedback

The Equal Opportunities Plan includes:
- the assessment of the employment position of underprivileged groups (women, employees over 40, romas, disabled workers, single parents with children under 10)
- the introduction of goals and tools (training, health and safety etc.) to achieve equal opportunities

Achievements of the existence of the Equal Opportunities Plan:
- the service increases corporate social responsibility and ensures the diversity of the workplace. Also hugely affecting the firm's reception on both the Hungarian and international markets
- the firm's communication of the plan boosts success in the business since it improves the firm's image among stakeholders (owners, consumers, competitors, banks, local communities, suppliers and authorities)
- implementing the changes makes it possible to reach wider potential employee groups while hiring. Eliminating discrimination also helps to create a diverse, loyal employee base thus minimizing fluctuation.
- a procedure gets established which helps to maintain equal opportunities and treatment on the long run

3. Material and method

In this study we analyze the data of a research on the aspects of equal opportunities in HR management in the Hungarian business sector. The research is unique in linking the answers and attitudes of both the employer and employees. This method has been used in the United Kingdom in several regular surveys but not in Hungary on a national level (WERS, 2004)

The study 'Employment Relations in the Workplace 2010' was carried out under the program 'TAMOP 2.5.2. The Reinforcement of Partnership and Professional Background of Communication, Supporting Common Achievements.' in 2010 (Neumann, 2010) The data was gathered with questionnaires in the business sector, in 1000 firms with at least 10 employees working onsite. The questionnaires were filled in by CEOs and by a maximum of 25 employees in positions most typical of the firm. Data was collected at 992 premises with at least 10 employees and from 8444 workers altogether. The sample is

representative of the region, the sector and also the number of employees due to the use of sample weighting.

The database created during the study is diversified. It provides information on several aspects of the workings of a firm from which this paper concentrates on the principle of equal opportunities and its institutionalisation. We analyze the answers given by both the management and employees. The former gives us a picture of equal opportunities as a motion while the latter shows it as a realised corporate practice.

Equal opportunities becoming a primal goal of the EU may affect the everyday workings of firms. Our premise is that the substantial increase of tender funds is a precondition to the enforcement of the principle of equal opportunities on a corporate level thus putting more emphasis on eliminating negative discrimination and creating equal opportunities for different social groups. To meet tender requirements actions took to implement equal opportunities have to be documented, for this tender funds are also a motivation. Carrying on the same logic we hypothesize that at least a third of these firms have some sort of institutionalised declaration of equal opportunities, EOP, strategy or some set of rules. We also believe that in economically more developed areas where there are fewer underprivileged workers equal opportunities are not a priority for employers.

3. Results and discussion

In spite of the fact that appointing or electing an equal opportunities representative is the first phase in the institutionalization of the principle it was observed in only 7.6% of the firms in the study. It shows that there are no representatives to whom the employees could turn to in case of discrimination etc. Another institutional to promote equal opportunities is naming underprivileged groups and giving them advantages in certain situations. Documentation of this method is even less common among the firms questioned in the study. Only 4.6% said that they have a set of rules emphasizing positive discrimination and 0.8% stated that such rules were being constructed. This number compared to the overall sample is not significant but still reflects the attitude of more than 50 firms.

Out of the target groups women going back to work from maternity leave (70.8%), workers over 45 (63.9%) and disabled employees (67.4%) receive special attention.

81.8% of the firms asked stated they have no written documentation on equal opportunities. The other 18.8% are more conscious and have written guidelines to stop negative discrimination and promote equal opportunities and treatment but these guidelines are not uniform. The method most often used is an inner procedure against discrimination (7.2%) and the use of Equal Opportunities Plan (6.7%) and in some cases we can find other documents, codes, rules. (Figure1)
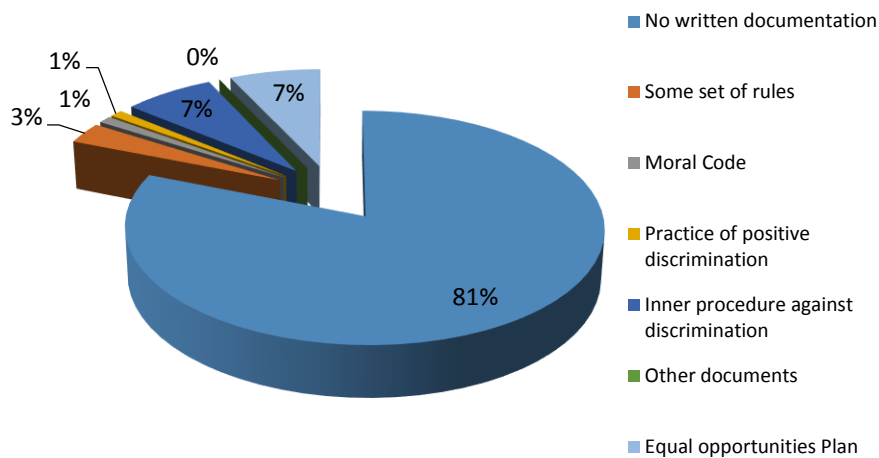
Figure 1: The appearance of each types of declarations (N=992)
Source: own research

The majority (60.6%) of firms with EOPs codifies the document to meet legal requirements but in 29% winning EU tenders was also a motivating factor. CEOs could give multiple answers so there are several examples in the sample to the outside pressure of legal requirements and winning tenders being the driving force behind equal opportunity practices in the firms.

Besides having the EOP its content is also important considering equal opportunities in HR. CEOs are often not aware of the contents of the equal opportunity documents of their own firm. As main sections of their EOP they list target groups, principles they wish to put into practice and the formal parts of the EOP. 78% of organizations with EOPs named the sections about the target groups as the most important while 20% mentioned their goals and principles and in 2% the CEOs considered the formal aspects and content of their EOPs as essential. (Figure 2.)
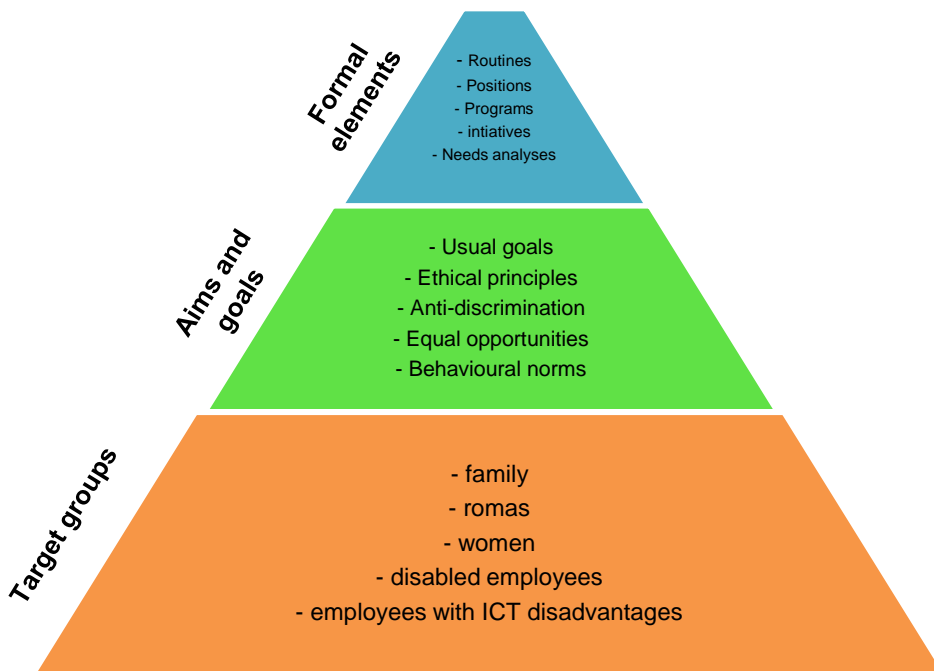
Figure 2: The importance of each element in Equal Opportunities Plans (N=181)
Source: own research

In connection with the target groups equality of the sexes is emphasized and the disabled and employees with reduced capacity to work are also a priority. We also have to mention that people with disadvantages on the job market as an important section. Women returning from maternity leave, over 45s and career entrants are also listed. CEOs when talking about these groups used expressions that often occur in tenders thus proving that tender funds have a significant effect on equal opportunity practices.

In economically backward regions there is a bigger need for the tender funds and there are more underprivileged workers which creates a greater need for emphasis on equal opportunities. Regional analysis shows that in Central Hungary there are significantly more firms with EOPs. With the use of crosstab method and we can prove with 90% reliability that the difference between regions considering the number of firms with Equal Opportunities Plan is significant.

Figure 3: Regional frequency of firms with Equal Opportunities Plan (N=181)
Source: own research

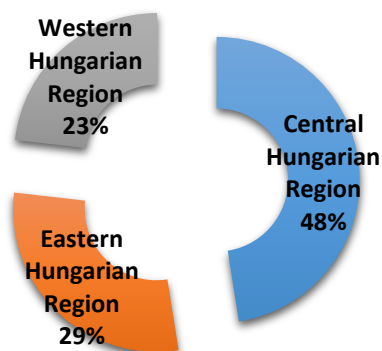Although different procedures and documents do not guarantee equal treatment and the elimination of negative discrimination 43.8% of firms named 'good practices' in their answers that are based on their EOPs or other written documents. The practices often mentioned were the reintegration of over 45s into the job market, favouring individuals with changed capacity to work or disabilities and employing mothers returning from maternity leave. These answers also suggest that the groups mentioned in project indicators are favoured in terms of equal opportunities.

Besides success and realised projects failures can also provide valuable information. Organizations who have named concrete programs or initiatives as a part of their EOPs in some cases reported that these were not carried out and put into practice due to the lack of interest from employees. Besides documentation and 'good practices' employee experience can be another objective benchmark of the realisation of equal opportunities. We examined negative discrimination in relation to working conditions, wages and promotion in firms that have documents against unequal treatment. (N=1987) The results show that equal opportunities are present in these workplaces, a very low number of workers asked complained about negative discrimination. Those who did mainly mentioned wage discrimination based on age (6.3%). A further 3% felt their age kept them from enjoying better working conditions and 6% experienced difficulties with promotions. Unequal treatment on the basis of ethnicity and family background is rare. 2.5 % employees queried said that they experienced sex discrimination and 1.8% faced obstacles in professional advancement. These low numbers suggest employees are not sufficiently informed about their rights and lack certain aspects in their attitudes toward equal opportunities.

Depending on their content EOPs might need extra input from the firms. A third of the firms with Equal Opportunities Plans say that to implement the changes listed in the document minimal financial contribution is needed. 2.5% say achieving the same comes with a substantial financial burden and 62.9% believe it needs no contribution at all.
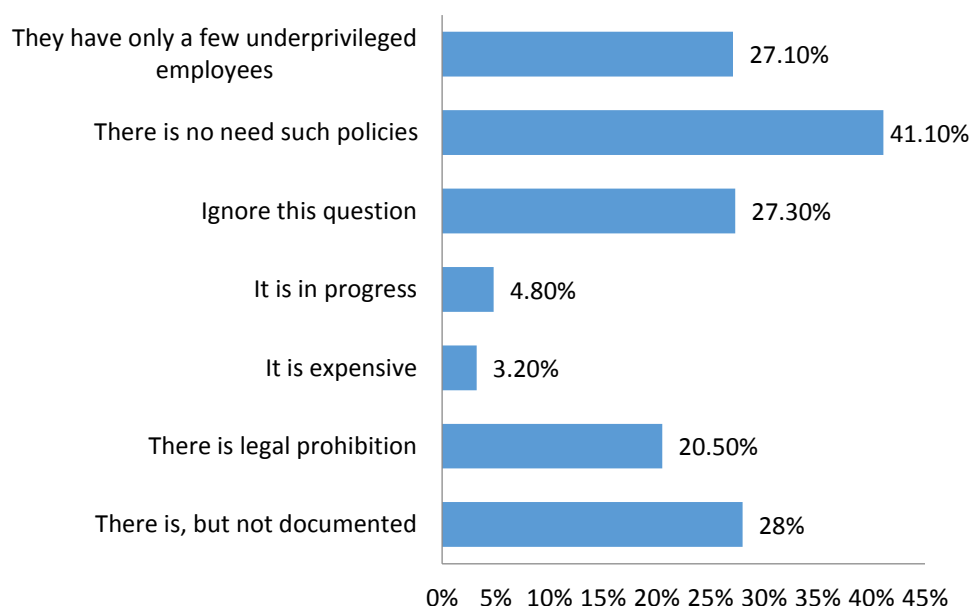

Figure 4: The reasons of lack of Equal Opportunities Plan (N=773)

Source: own research

If no financial contribution is needed to put the principle into practice the question rises: Why do only a small proportion of firms have EOPs?
Fig4. illustrates how almost half (41.1%) believes there is no need for a practice of equal opportunities while 28% enforces the principles but without proper documentation.

4. Conclusion and suggestions
Our premise on the proportion of written declarations might be considered exaggerated since only 6.7% of the organizations hat EOPs and only 12% had other kinds of declarations. This shows us that while promoting equal opportunities is gaining more importance its practical implementation is not a priority.
Based on the results we can conclude that the creation of equal opportunities is not a conscious effort nor is it the result of inner pressure or that from the market but is motivated by the will to meet requirements. Most firms consider the question of equal opportunities to meet legal requirements from the government or the EU and not out of concern about their inner workings. This supports our main hypothesis that the main motivation behind creating equal opportunities is the assumption of the EU.
Equal opportunity practices and strategies based on regional differences in levels of development and the presence of underprivileged target groups also fail to prove the links we expected. In the most developed region of the country, Central Hungary the number of firms with EOPs is significantly higher than in the other two more disadvantaged regions.

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THE ORGANIZATIONAL ADAPTATION OF FOOTBALL ENTERPRISES

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Abstract: Since the 1990s, professional football has undergone unprecedented economic uplift worldwide. From an economic point of view, this sport has evolved into an industry that beyond the football clubs participating in the championships that are organized by the various leagues also involves rather untransparent, complementary economic operations where companies increasingly perform their specific activities on the level of medium-sized enterprises – when they are measured against traditional industrial actors –, by following their unquestionable economic interests. Football is now a scene of structural changes worldwide that are embodied in the alteration of the legal forms of enterprises backing professional football, as well as the spreading application of modern controlling, planning, risk and financial management tools. From an economic perspective, with these recently emerging elements football clubs have started to build up a modern and complex, specialized sector where the most important requirement until the end of the championship season is the maintenance of licensing conditions. In our study we wish to rely primarily on the peculiarities of German professional football, since it shows most of all the presumable mainstream of the development of football. The outsourcing of significant branches of a football undertaking into the form of an incorporated firm should be deemed as a considerable step forward in comparison with the deficient regulations of the operations of associations, regarding the economic professionality of football clubs, partially from the side of commercial law and partially from the side of shareholding law. Through the introduction of organizational and legal structures that are necessary for the football clubs to be considered professional, there are further positive effects generated for football companies. In the event of the use of the form of the incorporated football firm, it is about the transformation and change of the organizational unit of execution and not about a total abandonment of the form of association. In Hungary the formal conversion of the first-league clubs into capital companies has actually been implemented. Another issue is how much in Hungary the preferred form of capital companies ensures additional capital resources.

Keywords: professional football; legal forms of enterprises; incorporated firm; association;

JEL classification: K2

1. Introduction

The general conditions of professional football change at a pace that is hard to follow by the adaptiveness of most of the football clubs. These changes are so intense that one cannot avoid agreeing with Caesar Luis Menotti, the legendary Argentinean coach: "The world of utopias has now gone. We live in a utilitarian society where football is condemned to big businesses."

Football is now a scene of structural changes worldwide that are embodied in the alteration of the legal forms of enterprises backing professional football, as well as the spreading application of modern controlling, planning, risk and financial management tools. From an economic perspective, with these recently emerging elements football clubs have started to build up a modern and complex, specialized sector where the most important requirement until the end of the championship season is the maintenance of licensing conditions.

2. Role, significance of the legal forms and organizations of enterprises in football

In line with the international outlook I wish to rely primarily on the peculiarities of German professional football, since it shows most of all the presumable mainstream of the development of football. Let us overview which are the forms of undertaking in the German League football, and what the changes in trends are.

On the basis of the 1998 Resolution of the German Federal Parliament, it is possible to operate football undertakings also in the form of an incorporated firm which means that the members are not responsible for the liabilities of the company; these are share companies, limited liability companies, and limited share partnerships], in addition to the classical form of association (Bundesliga Offizielles WEB-Seite 2011). The main point here is that such part of the association participating in League football can be outsourced into the form of incorporated firm. It is interesting that in Germany 21 teams from League I and 36 teams from League 2 are operating currently in the form of incorporated firms (table 1).

Table 1. Distribution of legal status in Germany (I-II. League clubs)

Legal Form	Frequency	Distribution (%)
Association	15	41,66
Share comp.	2	5,55
LLC	4	11,11
LLC with right	5	13,88
LLC & Co.LP.	10	27,77
I.-II Liga , **Total**	**36**	**100**

Source: Dworak,A.: Finanzierung für Fußballunternehmen, E. Schmidt Verlag 2010, p.52

2.1. Advantages and disadvantages of registered association

Funding, registering and operating an association is relatively simple, and the rules are transparent. All strata of society like to make use of the advantages of this form of non-profit company having legal personality, which provides tax benefits. The registered associations fill such an important social role in Germany that they are exempted, in respect of the public purpose activity, from corporate income tax, industrial tax, real estate and property tax, and in addition, they are only charged by a beneficial 7% general turnover tax (VAT). Otherwise, the general rate of VAT is 19%. However, these tax benefits touch professional football undertakings to only a minor extent as these professional associations may obtain only a small amount of revenues exempt from taxation. The tax benefit helps mostly amateur and mass sports.A further drawback of operations in the form of associations is that there are no rules concerning the distribution, utilization of the realized profit. In consequence, most of the football clubs expend the realized profit on efforts to increase the value of the team of players, while have a much

weaker focus on raising financial reserves, which would otherwise be beneficial for long-term operations.

The rules relating to associations do not provide satisfactory protection even for lenders. Associations are answerable with their own assets for their liabilities, but there are no detailed legal prescriptions in the relevant law of associations in Germany. Of course, in principle, regulations may be set up relating to publicity, application of profits and collateralising the loans in the statutes of associations, which is, however, scarcely feasible. We can hardly suppose that the elected management of an association would set up restrictions on itself. Logically, all this has a negative impact on the opportunities for financing with outside capital.

It follows from all this that a registered association may only make use to a restricted extent of any potential possibilities of financing. An increase in equity is allowed primarily through the retention of profits, but we must add that the profits may only be increased up to a certain limit per year, in order to maintain the non-profit status of the company. The hosting of shares and the involvement of contributed capital may only be secured after transformation into an incorporated firm. Therefore, in the event of associations, funding by banks or private individuals who are committed to the given association will be possible in line with own revenues and subsidies. The first-mentioned resources may cover current expenditures to a minor extent; they play a part mostly in the financing of long-term projects. Due to the aforementioned lack of publicity and of mechanisms of control and protection, the issuance of bonds or of the so-called participation certificates poses difficulties to associations.

Altogether we can state that the registered association will continue to function as one of the most significant legal forms of professional football in Germany as well, in spite of the fact that the law of associations is far from providing satisfactory conditions for the operations of football clubs carrying out modern business activity. Thus, it is no wonder that in Germany there appears a strong inclination towards the transformation from the form of association into the form of incorporated firm. This does not mean that the clubs (mainly the amateur and mass sports clubs) will turn away from the form of association. Professional football is such an area. The best example for an efficiently operated association is VfB Stuttgart (Figure 1).
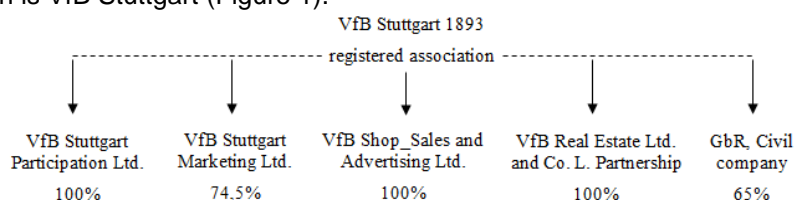
Figure 1. Organizational scheme VfB Stuttgart
Source: V. Schmid, Unternehmensführung im Profifußball, Berlin 2004

Proprietary association: VfB Stuttgart Registered Association. The task of VfB Stuttgart Holding LLC is the development of alternative solutions for financing, e.g. the involvement of investors functioning as dormant partners. The task of VfB Stuttgart Marketing LLC is operating the professional football division, and as a compensation it receives an agent's commission from the association, in a manner basically similar to an external agent selling external rights. The task of VfB Shop Sales and Advertisement LLC is organisation and arrangement of merchandising. The task of VfB Property GmbH & Co. KG [limited partnership with an LLC as general partner] is the management of leaseholds and real estate for the association. The GbR (civil law association) is a simple form of undertaking wide-spread in Germany, based on a specific contract of agency.

The traditional form of association as a basic model of management may also be successful in professional football, but it is true that this is realised also thanks to Stuttgart's main sponsor, its exclusive partners and its team partners. The list is deserving of attention: Gazi, Merzedes Benz, Puma EnBW, Kronbacher, BW Bank, Breuninger, Kärcher, and Coca Cola. Therefore, is no wonder that VfB Stuttgart was and is very successful.

2.2. Incorporated firms

However, the real concept of an incorporated firm of football refers more to the outsourcing of football undertakings and of the fields neighbouring football into incorporated firms, or, respectively, to the transformation thereof into incorporated firms. The surviving association operates as a so-called parent association, and it disposes usually over the majority of votes in the incorporated football firm.

2.2.1 Share companies

Share companies are advantageous, if there is a great need for capital and if it is possible to involve further financers into joint financing. However, in the course of the acquisition of capital, the majority of votes is in each case an indispensable requirement for the parent association, which can be secured through the issuance of registered shares and/or preference shares with restricted transferability (Nagy, Z. I., 2011). In the first case the permission of the management of a share company is also required for the acquisition of shares, while the latter ones do not secure any votes for the shareholders, and their issuance may not exceed the sum of the shares already issued (ordinary shares and shares with restricted transferability). In this way the formation of an undesirable majority may be prevented; but obviously, the involvement of capital will also be narrowed due to the restrictions, since in the event of contribution of further capital required due to the increase of capital or losses the parent association may incur obligations of payment in order to secure the majority, because the licence rights are possessed in this case by the parent association. The League Association strictly controls compliance with each regulation. FC Bayern Munich has succeeded in setting up a successful company limited by shares. Successful Football Club: Bayern München Share Company (Figure 2).

⊞FC Bayern München e. V.   ■Audi AG   ⧄Adidas AG

Figure 2. Ownership structure
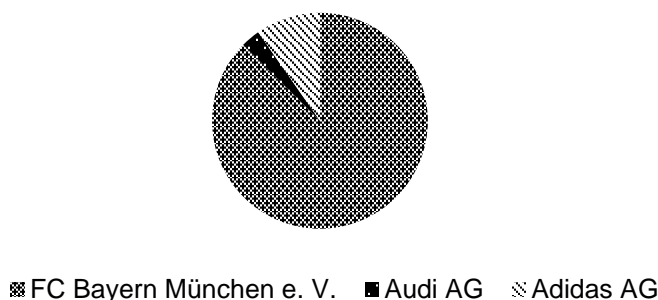Source: FC Bayern München WEB site

According to the pre-agreed plans, until July 2011 Audi AG increased its share up to 9.09% in three phases. As a result, the company approached the existing share of Adidas AG. The association has retained shares making up a quota of 81.2%, while the amount of the subscribed capital has risen to EUR 27.5 million. The company limited by shares is

the sole owner of the Allianz Arena München Stadion GmbH, which constructed and now operates the stadium. Until 2006, this limited liability company was 50% owned by TSV 1860 München, which then – due to its financial difficulties – sold its share to FC Bayern München AG in consideration of EUR 11 million.

2.2.2. Limited liability companies

The legal form of limited liability companies is highly popular in other sports, such as in the field of handball and ice-hockey, too. Limited liability companies tend to take various forms in football.
One of these forms represents a football limited liability company where all the businesses associated with football are included, and that is generally operated as a subsidiary of a parent company otherwise not involved in football. The license is held by the parent company. In this case, it is the majority owner, the parent association that determines the foundation of the limited liability company. This solution in fact means the establishment of a subsidiary limited liability company. An example here can be Borussia Mönchengladbach.
The other form of limited liability companies is the entity holding the right to participate in the championships, where management by the parent company is also in place, but in this case the entire license comes to the possession of the subsidiary. Nevertheless, all the other areas (marketing, merchandising, etc.) remain with the parent company, or they are outsourced to further entities. An advantage of this limited liability company form is that the license has to be secured by the company that uses it, and therefore it is not the entire parent company that needs to comply with the strict licensing requirements, as on the whole the parent company may be in a much worse situation than the limited liability company focusing solely on professional football.
The third situation is when the limited liability company plays an essential role within the group, and agrees to apply a broad range of tools for capital acquisition, while it would prevent external investors from having any weighty word in management.
From among these various solutions, in Hungary it would be expedient to frame such a limited liability company representing a real pool of capital resources that is a part of a business group, which facilitates access to capital without causing problems in management. In this case, the group in fact operates a limited partnership via the limited liability company where any investor can enter in the position of the limited partner, without causing any change in management. Towards this end, Hungary should implement the necessary legal changes, and in addition the attitudes and management practices of clubs need to be modified, as well.

2. 2. 3. Limited Partnership with Restricted Liability of Partners

This is a company having legal personality, in which, as is well-known, at least one of the partners (the general partner) must bear unlimited and joint and several liability vis-à-vis the creditors. The other owners, who have otherwise interest in the registered capital embodied by the share capital, need not warrant for the liabilities of the company (dormant partners). This is an intermediate legal form that shows the marks of a share company and the personal liability existing in the case of limited partnerships, where the general partner provides for the management of the undertaking. The supervisory board elected by the general meeting of the dormant partners supervises the work of the general partner acting with personal liability, on the one hand, and executes the resolutions of the general meeting, on the other hand, which includes the dormant partners' declaration of acceptance and agreement in the case of more important decisions. Within the scope of legal forms such solutions are interesting for football clubs, since they are vested with the

marks of restricted liability covering the general partner of a limited partnership, and at the same time they open a lot of alternative opportunities for finding equity. This limited partnership with restricted shareholders' liability also exists in the case of the forms of GmbH & Co. KG. (Figure 3)
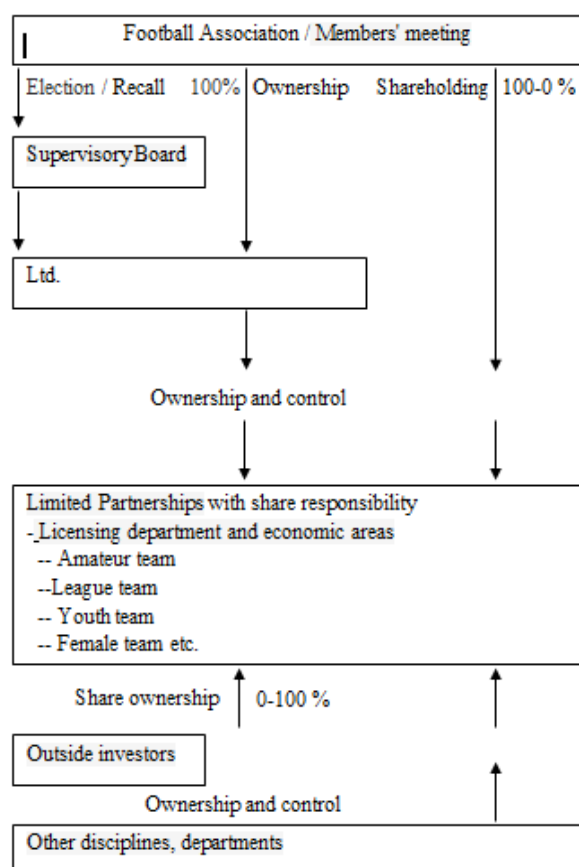
Figure 3. Organizational Scheme " Limited Partnerships with share responsibilities"
Source: A. Dworak : Finanzierung für Fußballunternehmen

In the case of the legal form operating with the limited liability of a limited partnership, the parent company as general partner may not restrict its personal liability. Thus the association should act simultaneously as general partner and dormant partner if it wishes to retain the aforementioned limited partnership directly as its own property, which is not at all permitted from the legal aspect. Therefore, it is required to insert a limited liability company between the existing association and the limited partnership. This subsidiary LLC is a personally answerable general partner, and it functions as managing director at the same time. The shareholders as dormant partners may consist of the parent company itself and of external investors. This has the advantage, on the one hand, that the parent company is secured by an LLC of limited liability, and, on the other hand, that the possibility exists to increase the dormant partners' share in the limited partnership up to almost 100%, without violating the rules of the League Association relating to majority

share. In Germany, 10 GmbH & Co. KG companies were operating in 2009 in the Licence Leagues (League 1 and 2). See table 1.

Should a football GmbH & Co. KG be floated to the stock exchange, it must tolerate a significant handicap as opposed to the companies operating in the form of share company, if it has issued also preference shares without voting right. It is a further problem that the possibility of controlling efficiently the leading bodies of an incorporated firm is missing also in the form of football GmbH & Co. KG for the potential investors; they must satisfy themselves with the role of dormant partner if they are not members of the parent association. Unfortunately, this may repel potential investors or, at least, it may be taken into account as a significant negative factor upon the valuation of the participation. It is very important in this solution that separation between the rights of general partners and dormant partners should be complied with strictly in practice. It occurs that potential investors frequently link their possible commitments to being involved into the direction and operation of the undertaking, which will of course appear understandable from the aspect of taking care for the safety of investment. In the event of a football GmbH & Co. KG, any influence by investors may only be implemented within certain limits. By the way, this is shown by the objection made by the League Association against an investor agreement entered into by TSV 1860 München in the 2009 spring season. The investor agreement contained decisions in respect of persons as conditions for contract, which would have for consequence illicit influence on the side of dormant partner, and/or it would have secured the right of veto in respect of the decisions of the associations.

We can finally state that the outsourcing of significant branches of a football undertaking into the form of an incorporated firm should be deemed as a considerable step forward in comparison with the deficient regulations of the operations of associations, regarding the economic professionality of football clubs, partially from the side of commercial law and partially from the side of shareholding law. Through the introduction of organizational and legal structures that are necessary for the football clubs to be considered professional, there are further positive effects generated for football companies: for example, the football undertaking has to reevaluate its assets due to the transformation, which usually has a positive effect on the proportion of equity. This is still complemented by the fact that in the event of incorporation, the equity will increase through the accumulation of profits based on the compulsory regulations of the application of profits. Incorporation allows external investors to get involved in football undertakings, which may be implemented through investment into the respective business quotas of an LLC or a share company or a limited partnership. Here we must stress above all the obligation of publicity and information which makes the incorporated firms transparent for the potential investors of debt capital, and allow for reliable credit ratings and risk assessments. Furthermore, it is also advantageous that incorporated football firms operate similarly to incorporated firms functioning in other fields, from the point of view of the protection of creditors. Finally, a large palette of alternative financing is available for incorporated firms which which are not available in the event of the original legal form and organizational structure of associations. Nevertheless, it should be underlined that in the event of the use of the form of the incorporated football firm, it is about the transformation and change of the organizational unit of execution and not about a total abandonment of the form of association. The form of association will continue to be the main form for football undertakings and a fundamental solution for the procurement of capital. Due to the reasons above, professional football is partially an exemption in this respect.

3. Organizational requirements for professional football entities in Switzerland

In Switzerland, the Football League stipulates rigorous reporting obligations, and in addition it prescribes the structures and mandatory statuses for the operation of a Super League team. Relying on these foundations, the right-minded Calvinistic Puritanism operates all the clubs in highly structured forms. Therefore, I would recommend the introduction of the Swiss organizational requirements in OTP Bank League, as well.
Swiss mandatory minimum organizational requirements for the teams of the Super League:
1 person, UEFA-licensed trainer
1 person, assistant trainer with Super League license
1 person, goalkeeper trainer with Super League license
1 person, fitness trainer
1 person, managing director and administration manager (the same person can work in both functions)
1 person, finance manager
1 person, marketing manager
1 person, media manager
 Recommended: 1 person, security expert, possible cooperation with the representatives of supporters.
In Switzerland, any omission of the monthly reports or non-fulfillment of payment obligations would promptly entail a fine of CHF 10,000. In response to further omissions, negotiations are commenced in relation to the withdrawal of the license.

4. Teams of the Hungarian OTP Bank League by the legal forms of business and organizational forms
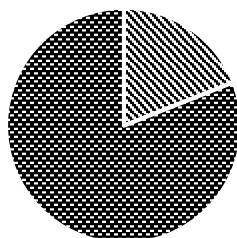
⚬ share company   ⚬ limited liability company

Figure 4. Teams of the OTP Bank League by the legal forms of business and organizational forms
Source: Own research

At first sight, it can be claimed that there is nothing wrong with the clubs participating in the OTP Bank League in terms of their restructuring into capital companies, as in Hungary the formal conversion of the first-league clubs into capital companies has actually been implemented (Figure 4). In Switzerland, this restructuring move has been executed on the basis of the Association's mandatory requirement. In contrast, as it has been pointed out above, the German first league still has a number of clubs operating in the form of associations. Restructuring into capital companies has also been implemented in the Greek first league on a mandatory basis.

Nonetheless, another issue is how much in Hungary the preferred form of capital companies ensures additional capital resources. For instance, a club achieving successes both in the sport and economic fields currently operates as a private company limited by shares, with one private person being its sole owner. Here, the question is how much the form of a one-man company serves the ends of capital acquisition, as the amount of the capital subscribed by the sole owner is only HUF 49 million. On the other hand, one would find a limited liability company with 2 legal entity partners and registered capital of more than one billion Hungarian Forints. The individual situations can be highly varied. In view of the unfortunate, yet typical lack of capital resources that is a dominant feature of domestic football in spite of the corporate income tax allowances and preferential aids, I would propose the establishment of real capital companies, especially the operation of groups described above (Borussia Dortmund). Similarly in Hungarian football, such capital companies have to be established that are able to attract additional, fresh capital resources. A large proportion of business processes – primarily in the field of ticket sales and player trading transactions – remain outside the balance sheets. Considerable problems are caused by kickbacks provided on corporate income tax allowances and other aids, as well as other uncertain and invisible incomes and expenses.

From several respects, the government would be interested in elevating 3–4 clubs in Hungary to make them capable of outstanding and high-standard sporting and economic performance, which would have economic, budgetary benefits – not to mention the social implications that cannot be directly assessed with economic indicators.

The balance sheet figures of DVSC Futballszervező Zrt. reflect significantly positive results for the past four years, and moreover on the 2009 profit the owners were paid dividends in an amount of HUF 800 million, while a decision was made on the establishment of the training center of the Debrecen Football Academy, an investment of HUF 800 million (Bács – Szilágyi, 2012).

5. Establishment of controlling organizational units at the football enterprises

In Germany, the teams of League 1–3 were involved in a questionnaire survey concerning the application of controlling. 53 associations and capital companies responded to the questionnaires, which indicated and extremely positive approach to the effort (Table 2).

Table 2. Application of controlling at German football clubs

Time of application of controlling	Distribution (%)
1-5 years	58,5
5-10 years	13,7
more than 10 years	17,1
no answer	10,3

Source:Controlling im Profifußball, Roßbach, Th:2011, p. 43

It is an even more interesting question what means of controlling the clubs of League 1–3 use in Germany – some of the clubs do apply more than one of these tools. Applied controlling devices and methods in League 1–3. of Germany: Benchmarking (27,27%), Comparison of the planned and factual figures (12,12%), Balanced Scorecard (9,09%), Obtainment of liquidity (6,06%), Rolling forecasts (3,03%), Scenario procedures (3,03%), Profit and loss analysis (3,03%), Detailed budgeting (3,03%), Target cost analysis (3,03%), Quarterly and monthly reports (3,03%), Addison controlling tool (3,03%), Own analyses (3,03%), Deviation analyses (3,03%), ABC analysis (3,03%), Business plan (3,03%), Others(3,03%) (Roßbach, 2011).

An important question is what controlling targets, meaning what the focal point of controlling is at football enterprises. The subject-matter of controlling In League 1–2 of Germany: sponsorship (96,6%), marketing (89,7%), (payments (89,7%), operations (89,7%), media rights (82,8%), stadium use (79,3%), merchandizing (79,3%), player transfers (69%) (Roßbach, 2011).

Considering that in Hungary many first-league clubs prepare only annual budgets to serve as the basis of economic management, one could claim that it is not only goal scoring and excellent defense where Hungary has gaps to close nowadays, but also in the field of the application of developed methods of market economy. Long-term successes can be achieved only with a firmly grounded, stable organizational and financial background (Borbély, 2008).

6. Conclusion

As a summary, it is to be pointed out that financial foresight and controlling constitute such indispensable subsystems for football associations and enterprises that are responsible for the alignment, coordination of various other processes and subsystems. With reliance on the set of indicators of controlling, a higher level of transparency is put in place to support the supply of information and managerial decisions (Tarnóczi-Fenyves, 2010). As a result, environmental changes become recognizable in their early stages, and therefore the necessary measures can be taken sooner, which then allows active management. Furthermore, controlling promotes the continuous review and correction of own activities. For this reason, it is very much expedient to set up a planned, documented and consciously implemented system of controlling both in the operative and strategic fields. The above-described tools that have already been partly applied by the German clubs – such as the Balanced Scorecard – are excellently suitable for helping adequate responses to future challenges. These means of controlling can be combined with each other, and therefore the Balanced Scorecard system can be structured together with a risk management system and detailed budgeting (Haas, 2006).

Controlling has an increasingly important role in the operation of foreign football clubs, though its potentials still have not been exploited optimally even abroad, in the major football nations. The processes will be accelerated by UEFA's new licensing regulations posing strict requirements and attributing an even more significant role to financial stability (financial fair play). Football is becoming more and more professional and business-oriented, which requires the application of modern management systems. The application of controlling is spreading, which improves the effectiveness of the business areas. This relatively new, gradually strengthening aspect, i.e. the economic side of football seems to be extremely important for the clubs and the federations alike via the issuance of licenses. Additional stakeholders include football-related market vendors, agents, owners, as well as shareholding companies, creditors and even auditors. Abroad, in the major nations of football the current focal point of debate is the organizational forms of controlling systems. Experts deem it to be expedient to operate independent controlling departments organized in the light of the individual controlling tasks at the football clubs.

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THE MANAGEMENT OF THE ENERGY COMPANIES

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Abstract: *This paper aims to contribute to a better knowledge of the problems of energy services provided that both the international economic literature and in the Romanian, it continues to be addressed in a low position. Therefore, the author examines energy services through mechanisms that can be saved primary energy and final energy in the context of declining energy reserves worldwide. Economic and financial crisis and the current recession contribute to preventing the development of the energy services market and solutions on the framework conditions of political, economic, legal and financial aspects of energy performance contracts associated with these companies. Some Member States have already established a system requiring the national energy industry to achieve energy savings, achieving positive results: there were savings of up to 6% of final energy consumption. In a system of this type, utilities are required to obtain a fixed amount of energy savings by implementing energy efficiency improvements in their clients (such as households, companies, government or housing associations) and other sectors and energy production and transport. As an alternative to savings by themselves, some systems allow utilities to purchase energy savings from other actors such as energy service companies (ESCOs). Energy saving obligations stimulate providers to change their business model from retail energy products to the provision of energy services. Energy Service Companies continues to be a key area for financing energy efficiency in the EU. In this respect, several Member States mention providing model contracts for energy services, the introduction of legislation or removing legal barriers for ESCO access to energy services in the public sector. Meanwhile, many of the measures encouraged on ESCO contain too little detail on specific actions to be taken.*

1. Introduction
In recent decades, the recent global economic crisis and the current recession, not so much talked about energy and saving it. Economic equilibrium is dependent on imported oil and gas burning them decisively contribute to climate change, and replacing them with clean renewable sources is urgently needed but sluggishly economically and technologically. So far the safest, cheapest and most affordable clean energy is saved. This has created the idea of energy conservation.
A prerequisite for an energy efficient Europe is creating value for energy savings through market mechanisms. Thus, tools are required to assign a financial value of energy savings and profits to bind utilities (suppliers or distributors) energy efficiency and not the amount of energy supplied.

2. Saving energy in liberalized energy market

2.1. European regulations

Energy efficiency plays an important role in European legislation. In addition to being included in the package "20-20-20", representing one of the three targets achieved (20% reduction of primary energy use compared to projected consumption in 2020 by energy efficiency improvements), is also a top priority one in the European strategy for energy competitive, sustainable and secure for 2011-2020.

Hence the attention given to a proposal by the European Commission in 2011 to adopt a new Directive on Energy Efficiency (DEE), which will require the repeal of the Energy Services Directive (ESD) and Directive 2004/8/EC on the promotion of cogeneration. The Directive aims to create conditions for the development and promotion of a market for energy services and for the development of energy-saving programs and other measures to improve energy end-use efficiency.

Energy efficiency is one of the most cost effective ways to strengthen the security of energy supply and reducing greenhouse gas emissions and other pollutants. In many ways, energy efficiency can be seen as the largest energy resource in Europe. Regarding energy efficiency target for 2020 to save 20 % of EU primary energy consumption compared to projections is not legally binding on Member States. However, after several years of growth, primary energy consumption reached a peak in 2005/2006 and a slight decrease from 2007, which is partly due to the economic crisis, and increasing energy intensity (Figure 1).
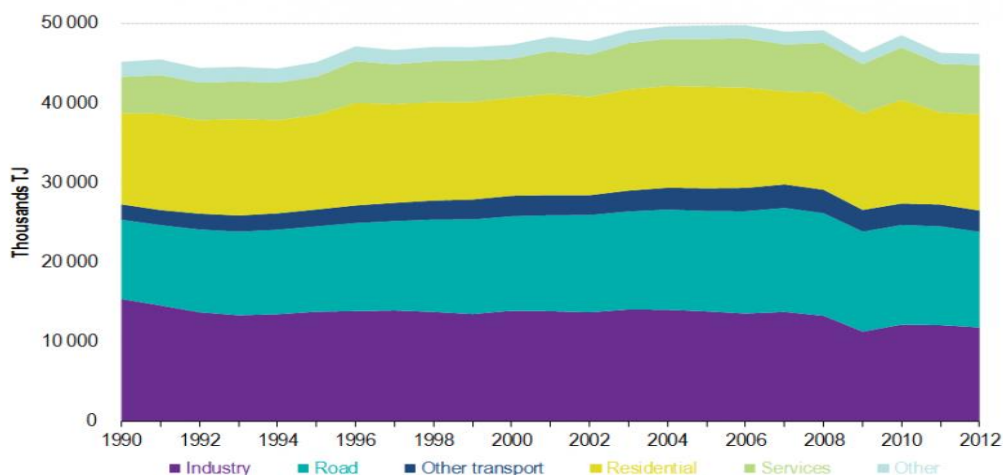
Figure 1: Final EU 28 energy consumption
Source: Eurostat

Regarding the end-use sectors, DEE focuses on measures that establish requirements regarding both the public sector to renovate buildings owned by it and the application of high energy efficiency standards when purchasing buildings, products and services. Under this Directive, shall set national systems energy efficiency obligations, including the periodic mandatory energy audits for large enterprises and establishing a series of requirements for all domestic and industrial consumers. Directive through the actions difficulties encountered by public authorities wishing to purchase energy services by providing remote energy performance contract models to the public sector. Accounting and financial impossibility especially local authorities to pay ESCO recorded energy savings will find a solution by requiring Member States to adopt laws and regulations on procurement. From 1 January 2014, each Member State must ensure that 3% of the total

floor area heated and / or cooled owned and occupied by government are renovated annually to meet the minimum requirements for energy performance based on Article 4 of Directive 2010/31/EU. "Europe 2020 " flagship initiative includes energy, "Resource efficient Europe in terms of resource use", which incorporates the EU's determination to achieve goals 20/20/20 reducing emissions of greenhouse gases, producing renewable energy and energy savings (Table 1). However, the initiative includes requirements for completion of the internal energy market and implement the European Strategic Energy Technology Plan (SET Plan). The objective of the Europe 2020 is Europe out of the crisis with a stronger and more sustainable economy.

Table 1: Energy consumption in the EU 28 (Mtoe)

	1990	1995	2000	2005	2010	2011	2012	2020 target
Primary Energy	1569.7	1566.4	1617.8	1711.6	1653.6	1596.4	1583.5	1 483
Solid Fossil Fuels	453.2	364.0	320.3	316.8	281.5	286.2	292.6	
Oil& Petroleum Products	549.9	563.2	567.4	580.9	521.8	503.5	483.9	
Gas (Natural&Derived)	282.4	321.1	380.4	429.7	433.2	389.7	379.4	
Nuclear Heat	205.2	227.3	243.8	257.5	236.6	234.0	227.7	
Renewables	71.2	83.4	97.4	117.2	168.7	168.7	184.4	
Other	7.7	7.5	8.5	9.6	11.9	14.4	15.4	
Final Energy	1 080.2	1 079.0	1 131.2	1 189.3	1 160.0	1 107,2	1 103.4	1 086
Solid Fossil Fuels	124.2	83.0	62.2	53.3	49.8	48.7	47.3	
Oil& Petroleum Products	446.7	464.4	489.8	505.8	458.3	445.2	430.2	
Gas (Natural&Derived)	229.9	247.2	267.5	281.2	273.0	244.7	252.9	
Electricity	186.0	194.3	217.6	239.5	244.4	239.9	240.6	
Derived Heat	54.3	45.4	44.6	52.4	53.4	47.2	48.3	
Renewables	38.1	43.2	48.1	55.3	78.1	76.7	79.4	
Non-renewable wastes	0.9	1.5	1.3	1.8	2.9	4.8	4.6	

Source: International Energy Agency

EU Energy Efficiency Plan considers energy efficiency a central element of the Europe 2020 strategy and the transition to an economy in which resources are used efficiently. Energy efficiency is one of the most cost effective ways to strengthen the security of energy supply and reducing greenhouse gas emissions and other pollutants. In many ways, energy efficiency can be seen as the largest energy resource in Europe. Plan places in order of potential energy efficiency, buildings, transport and industry; also mentions energy efficiency in public spending, the importance of financial and consumer efficiency (Figure 2).

Unrealised potential energy efficiency
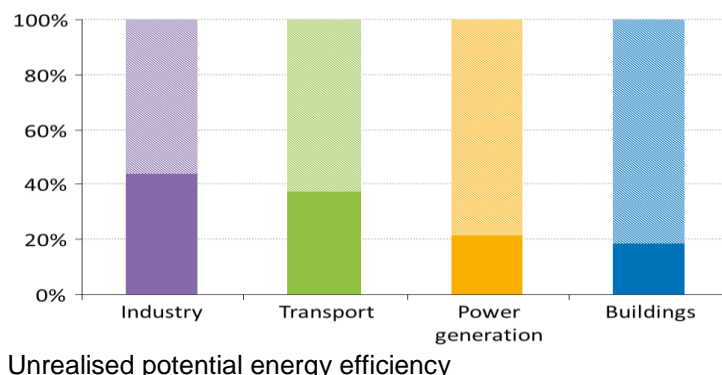
<   Realised energy efficiency potential

Figure 2: Projected energy efficiency potential which will Be realised by 2030
Source: International Energy Agency

Reducing energy consumption through energy efficiency is a key priority and requires sound policies at all levels. Target to achieve 20% reduction of primary energy consumption in 2020 is an overall EU target, with no targets individual Member States (Table 2).

Table 2: Energy saving in the EU 28 (%)

	2005	2006	2007	2008	2009	2010	2011	2012	2020
Primary Energy	0.00	0.01	2.23	2.77	8.36	5.69	9.28	10.49	20
Final Energy	0.00	0.76	3.04	3.55	9.30	6.29	11.00	12.11	20

Source: International Energy Agency

Each Member State shall establish a scheme obligations regarding energy efficiency. Basically, until 31 December 2020, every country has to make savings in each year of 1.5% of annual energy sales to final consumers.

2.2. Final energy savings
Energy Services Directive requires Member States to establish and their achieve the 2016 national indicative energy savings target of at least 9% final the energy. Most of the provisions have been replaced by the more specific provisions contained in EAD. However, the requirements for the 9% will not be repealed until 2017. Though the calculations and methodology are very different, the objective DSE should be considered a step towards meeting the EU to its ambitious target consisting of 20% of energy consumption by 2020.
Therefore, the figures presented in Table 3 below can be used only as general indicator of the actual impact of EU economies.

Table 3: Objectives in final energy savings

Member State	Objective for 2010 terms of final energy savings		The stated objective for 2010 in terms of final energy savings		Outlook 2016 final energy savings	
	Mil.TOE	% of consumption reference	Mil.TOE	% of consumption reference	Mil.TOE	% of consumption reference
Austria	0.428	2.0 %	1.180	5.5%	1.87	8.8%
Belgium	0.789	3.0 %	1.301	4.9%	2.985	11.4%
Bulgaria	0.209	3.0 %	0.305	4.4%	1.066	15.3 %
Cyprus	0.060	3.3 %	0.066	3.6 %	0.191	10.4 %
Czech	0.355	1.8 %	0.532	2.7 %	1.596	8.2 %
Denmark	0.449	3.0 %	0.664	4.4%	1.285	8.6 %
Estonia	0.061	2.3 %	0.079	3.0 %	0.213	8.1 %
Finland	0.507	3.0 %	1.040	6.1 %	2.123	12.5 %
France	5.000	3.8 %	5.159	3.9 %	18.000	13.5 %
Germany	12.181	6.1 %	17.937	9.0 %	33.868	17.1 %
Greece	0.439	2.8 %	0.794	5.1 %	1.415	9.0 %
Hungary	0.152	1.0 %	0.293	1.9 %	1.371	9.0 %
Ireland	0.559	4.5 %	0.523	4.2 %	1.576	12.6 %
Italy	3.066	2.7 %	4.102	3.6 %	10.880	9.6 %
Latvia	0.006	0.2 %	0.294	8.8 %	0.299	9.0 %
Lithuania	0.054	1.5 %	0.067	1.8 %	0.341	9.4 %
Luxembourg	0.045	2.7 %	0.128	7.6 %	0.238	14.1 %
Malta	0.011	3.0 %	0.014	3.8 %	0.033	9.0 %
Netherlands	0.978	2.0 %	2.278	4.7 %	6.416	13.1 %
Poland	1.021	2.0 %	3.037	5.9 %	5.779	11.3 %
Portugal	0.344	1.9 %	0.662	3.6 %	2.240	12.2 %
Romania	0.940	3.0 %	2.222	7.1 %	2.800	9.0 %
Slovakia	0.224	3.0 %	0.668	9.0 %	0.671	9.0 %
Slovenia	0.102	2.5 %	0.101	2.5 %	0.591	14.5 %
Spain	2.179	3.0 %	4.720	6.5 %	13.126	18.1 %
Sweden	2.003	6.3 %	2.846	9.0 %	4.626	14.6 %
United Kingdom	11.737	9.0 %	8.547	6.6 %	17.816	13.7 %

Source: International Energy Agency

Energy Service Companies (ESCOs) continues to be a key area for financing energy efficiency in the EU. In this respect, several Member States mention providing model contracts for energy services, the introduction of legislation or removing legal barriers that ESCOs have access to energy services in the public sector. At the same time, as noted in the first reporting period, many of the measures reported on ESCO include too few details on specific actions to be taken.

In terms of financing energy-saving measures, several Member States reported use of EU funds and the income from the sale of Assigned Amount Units under the Kyoto Protocol. Meanwhile, efforts to increase private sector involvement in financing energy efficiency improvements are increasingly numerous throughout the EU.

2.3. Necessity of energy companies in Romania

Romania has made significant energy savings target the total committed to the European Commission, but the important factor in this direction was the recession and not investing in energy use. Currently, discussions are held with various stakeholders to assess the potential for ESCOs and energy efficiency programs in Romania. Since ESCOs have been very successful in other countries, we have every reason to believe that this success can be replicated in Romania, where there is a pronounced need of focusing on energy efficiency. Romania is not ready to deadlines imposed by the Energy Efficiency Directive. Energy consumption decreased following the reduction of industrial activity, but not increased efficiency. There are very few buildings energy efficient and no certainty of improvement for the next years. Romania thermal rehabilitation works are superficial and energy efficiency is promoted effectively through effective policies. In Romania, buildings use about 41% of final energy consumption. In comparison, residential buildings in Romania consume eight times more energy than the EU average due to inefficient heating systems and thermal insulation inappropriate.

3. Market energy companies

3.1. ESCO organization

ESCO is a company that provides integrated solutions aimed at reducing energy costs. This company is remunerated according to the performance of the implemented solutions. This definition refers to two essential elements that differentiate companies ESCO conventional energy consulting firms namely providing integrated solutions and the link between pay and performance. In the traditional operating mode, the client (be it a company or a public institution) who wants to implement an energy efficiency program, must go through several stages and come in contact with: designers, financial institutions, equipment manufacturers, contractors, suppliers. On complex projects may cause problems due to the large number of parties. If a change occurs, have resumed contact with all parties involved, which leads to long achievement. If the workings of the whole project ESCO companies are treated with a single entity

for all components and all stages. Working with a single intermediary helps reduce costs of implementation of projects, expenses are often significant barriers to implementation of energy efficiency investments.

3.2 . Services provided by an ESCO customers

3.2.1. Analysis of energy consumption and energy audit

An essential component of the package of services offered by ESCO is detailed analysis of the energy consumption and achieve an energy audit, which allows to identify possible energy savings. If an energy consultant considers energy analysis as the final product for ESCO companies this is only the first step in the project.

3.2.2. Energy management

ESCOs services firms can sometimes be limited to conducting an activity of "energy manager". Management of energy consumption, using external sources allows client company or organization to benefit from the experience of specialists without requiring additional staff and focus on core business.

Energy management services generally involve equity modest ESCO reduce costs by providing improved systems of management and not the installation of expensive components.

3.2.3. Design and implementation of the project
In many cases the relationship between an ESCOs and its customers are focused around a specific project that is deemed most likely to offer big savings in energy consumption. A typical example is the replacement or modernization of the heating and lighting in a building. In such a project, ESCO assumes responsibility for designing, defining technical specifications, procurement and installation of equipment. ESCO will oversee maintenance of equipment installed for a certain period of time.

3.3. ESCOs financing

3.3.1. Traditional financing facility
An important role that ESCO and frequently assume is participating in the development of a funding mechanism for the project. Even if sometimes ESCO has no direct role in the contract, the borrower is not the end customer ESCO, ESCO guarantee performance by increasing confidence in the bank's proposed project.
ESCO financing package will be negotiated by conventional, consisting of a combination of self-financing from its own resources the client along with a classic loan from a financial institution. ESCO involvement in the development of the negotiation of the loan can lead us to obtain better financing conditions to the situation in which the client would apply directly to obtain financing (Figure 3).
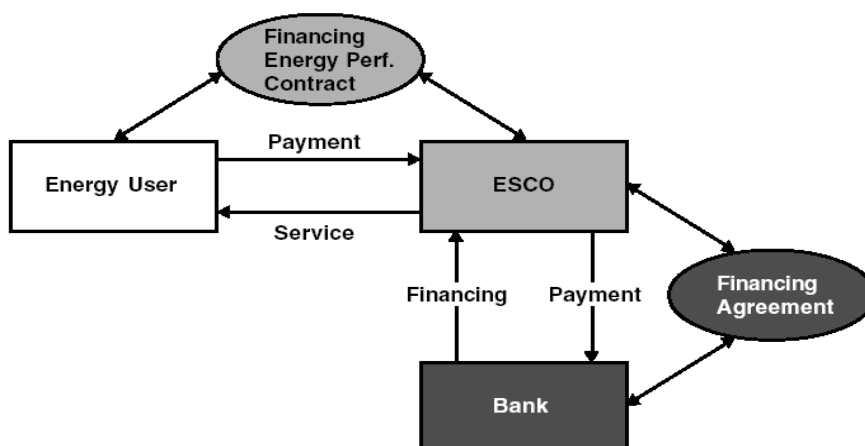
Figure 3: ESCO financing
Source: Energy Service Company

3.3.2. Funding "by third party"
Unlike models financing traditional funding model "by third party" (TPF-Third Part Financing) ESCOs companies promoted an alternative solution for providing the resources needed for the project. ESCOs can invest their own money or call a loan in its own name. Customer may cover part of the costs from their own resources but has no additional financial risks. To protect the obligations from the client, ESCO will retain ownership of the equipment during the contract period.

3.3.3. Monitoring and evaluation of savings
Since ESCO remuneration is linked to performance of the project will conduct periodic monitoring and evaluation of the savings achieved. ESCO will be paid according to results achieved in operation.

4. Model contracts
A second crucial component in defining an ESCO is the link between pay and performance project. Guarantee savings is by contract between the ESCO and the client. A contract with guaranteed performance can be defined as an agreement whereby ESCO offers complete or partial resulting in energy savings within a building or a company, to ensure that the savings from the project will be sufficient to repay all the costs of implementing the program in a certain time.

It is important to note that this contract is not only a simple guarantee correct operation of the equipment, but that ESCOs guarantees that the energy efficiency measures recommended and implemented will reduce energy expenses up to a certain level. ESCO guaranteed level of savings is greater than the financing costs of the project and ESCO charges. Therefore the client is assured that since the project implementation, energy costs will be reduced and he will be eligible for a portion of these savings.

4.1. The contract with guaranteed savings
This specific contract, the ESCO guarantees that the implementation of energy efficiency measures will reduce energy costs the end user until a certain level. Normally the project will be designed so that the energy savings to be greater than the ESCO expenses and financial expenses related to the project. Client markers right from project implementation financial benefits. In the early years, the period for reimbursing the external loan, the savings are smaller. Of course that after completion of the contract period between ESCO and customer resulting financial benefits will be fully allocated client. If savings do not reach the level specified in the contract, the ESCO is responsible for the differences and to ensure customer payments to cover the difference (Figure 4).
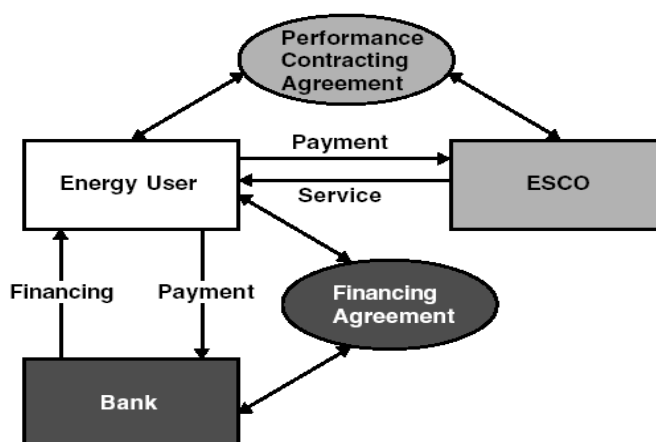

Figure 4: User financing
Source: Energy Service Company

If the guaranteed savings exceeded, the excess returns ESCO. Through this contract the customer is protected from the risk of failure estimated performance. With guaranteed

savings contract, the ESCO is responsible for the risks involved in project performance, so it is normal to reduce risks of bank credit. Funding is ensured by "third parties"; funding responsibility lies with the customer directly.

4.2. Share savings contract
Share savings contract shall distribute the monetary savings from the implementation of the project between the ESCO and the client according to a formula agreed by contract. If the project generates greater energy savings and financial so than it was expected, both the client and the ESCO receive extra benefits and vice versa, if the savings are small, both sides lose. Since the customer support part of the risk involved in project performance, it is not normal and it should bear all the financial risk. So this contract is often tied funding provided by the ESCO.

4.3. Potential clients ESCO
In principle, the ESCO can work with clients in all market sectors. However, in practice, are some barriers that should be taken into account for each sector.
• Individual residential market: it is generally seen as a market more difficult for companies ESCOs contracts due to be agreed with each customer. The costs are very high if you need more low-value contracts negotiated;
• Public and Institutional Market: ESCOs firms representing interest due to low financial risk and the existence of a large potential energy savings. The concept of guaranteed savings contract may become an attractive mechanism enabling public institutions reduce energy costs and financial benefits that can be used in the local community;
• Market Trade office buildings and large spaces, hotels, are attractive because of the potential for energy savings. Owners of such places not often benefit from competent technical resources necessary for the realization of such projects;
• Industrial market: in most countries, large companies seem ideal clients. However, these companies are sometimes large enough to have energy specialists in their staff can achieve energy efficiency projects without outside assistance. ESCOs companies can thus find as industrial targets SMBs that do not have internal technical and management resources to implement an energy efficiency program.

5. In conclusions
In practice, the implementation DSE generated above all, measures aimed at final energy consumption, for example, the renovation and refurbishment of buildings. Energy efficiency plans of Member States shows that so far yielded high levels of energy savings to end users and the indicative target of 9% for 2016 will be exceeded in a great extent by most Member States. This is encouraging and shows that the commitment of Member States has produced results in terms of energy savings. Progress should continue to meet the ambition of the EU for 2020, which is to achieve energy savings of 20%, the concrete and implementation of EAD, which is an essential tool for achieving this goal.
Uncertainty, lack of knowledge, lack of awareness, and confusion regarding processes and contractual provisions relating to energy service companies (ESCOs) and energy performance contract (EPC) are widely recognized as key barriers to further market development according to a study conducted at European level.
To develop the energy services market has been considered the legislative transposition completion energy services directive, the inventory of public buildings, which facilitated ESCOs marketing companies, the introduction of certification schemes for providers of energy services, auditors, installers, which increased the level of confidence of local authorities and other categories of energy consumers. Have encouraged energy providers

listing and dissemination of information on available financing mechanisms for energy services.

At the present stage it is difficult to predict the pace of development of ESCO, and the improvement of local authorities' capacity to organize and to bargain auctions CPE. Achieving NAPs is needed is a critical mass of public sector investment, and if the energy market catalog will not meet these requirements will be assessed other options to stimulate this market, as the European experience.

It recommends that a central entity for preparing tenders in the public domain, able to deliver packages large projects with a large amount of investment, cash flow, respectively attractive to large companies ESCOs creation of a public, making ESCO subsidiary in energy companies. It is also advisable efficient lighting program in all schools in Romania, using the method of external financing payment of energy saved after program implementation system (ESCO). One such program was also implemented in other EU countries has a great educational impact.

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NEW TRENDS IN MANAGEMENT

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Abstract: *Over the last years, management have been facing a series of profound changes in trends coming and going, one being more productive than other or causing more damage when applied improperly. The paper focuses on the last trends in management that have evolved in the last years, trends that have been marked by a Darwinian business environment and made more unforgiving since the financial crisis and the innovations in technology, social media and management philosophy. The paper will present and describe the most important new trends in management that enabled select organisations to remain competitive and overcome the multiple difficulties caused by the ever-changing economy based on a qualitative research. From the "outside innovation" that is considered always to be the key in overcoming the obstacles facing an organization, to the new buzzword "design", that is said to ensure the organization long-term competitive advantage, the paper will analyse new trends and also will be describing the impact they have on the welfare of the organization. The research has also shown that managers tend to put a greater accent on searching for innovation rather than efficiency in order to ensure a continuous progress in the organization and to maintain business sustainability. The paper will not be comparing the efficiency of these different philosophies, or the results they generated, as time will still be the ultimate judge.*

Key words: new, trends, management, change, organization, business, innovation

JEL classification: M10

1. Introduction

The management of a business it's considered one of the most important aspects in determining the competitiveness, innovation, profitability and sustainability of that business. That is why this has become one of the most studied disciplines in business and inspired more than a few bestsellers.

There are certain men and women, like Henry Ford, Richard Branson, Larry Paige, Jeff Bezos etc., which are revered as extraordinary managers being singularly responsible for the success of the companies they headed and are considered role models by people around the world. That is why in business there is always great interest in the latest management trends and innovations because everybody wants to make the best use of limited resources and to be competitive in an ever increasingly demanding market, achieving in the process a place in *"the hall of fame"* of managers.

Over the years we all came face to face, in one way or another, with downsizing, re-engineering, restructuring, delayering (Ostroff, 1999) and so on, that we are now referring to as past trends. If downsizing is being regarded by management most often as a cost-cutting measure (Mellahi & Wilkinson, 2004), delayering is seemed as a radical redesign of an organisation's structure and restructuring is considered to be a solid management tool (Ostroff, 1999). Further on, the paper will present and describe the latest trends in management that have been captivating the attention of managers worldwide.

2. New trends in management

2.1. The Outside-in Innovation
Everybody agrees that innovation is always key. That is why the corporate world in general has a major flaw by transferring, willingly or not, the philosophy of the corporation to its employees. This, combined with each one's personal expertise, which is usually accumulated in the same corporation, makes it difficult for the employees to recognize new, potentially "game changing", ideas, leaving it up to the competitors to implement them for an increased market share. That is why it is important to change the corporate culture from valuing the people who know to valuing the people who can learn, so that open innovation can be promoted. This trend was first implemented by the CEO of P&G, A.G. Lafley who implemented a new R&D policy by promoting the idea that half of the innovations implemented by his company should come from their own researchers and half *through* them (Huston & Sakkab, 2006).

This new concept meant that instead of dismissing the innovations developed outside of the company they should be embraced and incorporated into P&G's own R&D so that better, cheaper and more appealing products could be offered to the consumers (Huston & Sakkab, 2006). By implementing this new model, a new perspective for overcoming challenges emerged, by looking to other industries and adapting the solutions developed for their technical problems to solve your own specific "puzzle" with the help of parallel experts (Huston & Sakkab, 2006). Although it is common knowledge we must always remember ourselves to not only learn from our own mistakes, but from the mistakes of others as well (Maddock & Viton, 2009).

2.2.Social Media as an Innovation Tool
In the past few years, social media has come to define us as a person and to define our social interactions with each other (Maddock & Viton, 2009). Facebook, Twitter, Pinterest, LinkedIn, Google+, YouTube, Flickr or Instagram are social media sites used by millions, if not billions around the world, to express themselves, their ideas, hobbies and interests or to connect with each other. These websites are even specialized on certain interests or certain social connections and thus we all have a higher influence on our fellow man by showing them what we like or what we find interesting and suggesting, deliberately or not, for them to try the same thing. The concept is simple: if it's good for them it must or could be good for me too (Darrell & Bilodeau, 2013).

In this manner, the social media platforms that we all use daily have come to represent the zeitgeist of our generation and this presented a whole new set of opportunities for commercial innovation. They became the perfect place to test and to look for, new ideas, concepts or insights on the preferences and needs of the consumers (Haysa, Pageb, & Buhalls, 2012). The sheer amount of information and new tools made available to researchers and marketers is staggering and in a few years has completely changed the way things work (Banerjee, 2013). Everybody is looking for new ways to utilize and to take advantage of the new opportunities made available through these platforms. Those who aren't are simply left behind.

2.3. War games
As we explained earlier, a very good innovation tool is to look to the solutions applied by others to their problems and to adapt them to yours. Every manager's nightmare is that a new start-up or a rival company will appear overnight with a competitive product that will be so innovative that it will take over the whole market share before you have a chance to adapt. Think eBay, iPhone, Dyson, Windows or other such examples that have become the subject of countless case studies. The solution to this kind of threat, that more and more managers have started to implement, is inspired from the military. Every army in the

world organizes war games that are intended mainly not to train the soldiers but to highlight their weaknesses and the strengths of the enemies (Maddock & Viton, 2009).

For a company, these kind of exercises were mostly intellectual ones by analysing the market and adjusting its SWOT diagram accordingly. But now a new concept is emerging to put together a team of specialists, which are not involved with your industry, to try and develop a new product/service or business model that would be the equivalent of an atom bomb, by giving them access to all the research and resources that you have at your disposal (The Economist, 2007). In the worst case they can't come up with anything that would pose a threat to your company's position but it could also lead to a "eureka" idea that your company can use to get ahead (Gilad, 2008).

2.4. Sustainability, Corporate Social Responsibility and Shared Value

Every business's future is interconnected to its community, which is composed from the people and the environment, which affects the interests of that business. One of the principle concepts in economy is that people will first address their basic needs (healthcare, food, shelter, safety etc.) and after that they will satisfy their other needs like entertainment for example. This means that for a company to be sustainable the environment in which we live, that affects the basic needs of the consumers, needs to be sustainable (IBTimes, 2011). That is why complex social issues like access to healthcare, quality of life or energy security are becoming of more interest and influence to business management with the objective of creating shared value (IBTimes, 2011).

Also, aside from the positive public response, a "think green" approach could also improve the workspace. For example using eco-cleaning supplies could improve the working conditions for employees that suffer from certain allergies, not to mention the probable long time health benefits for all the employees. This kind of approach will also improve the attractiveness of the work environment and of the company for all the people that work there, which could mean a more meaningful work experience leading to improved productivity (Jamali & Sidani, 2012).

For this reason a lot of companies have started to intensify their efforts with their corporate social responsibility programs and the innovative methods by which they try to address the current social problems. There is a trend to change their methods from the philanthropy style, which consisted in making an immediate but short-lived impact in the community to trying to solve the systemic conditions which give rise to these social problems (Morgeson, Aguinis, Waldman, & Siegel, 2013). Basically this new trend can best be described by the well-known proverb "*give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime*".

2.5. Brightsizing

One of the latest fashionable and sticky words in management nowadays is *brightsizing*. The interesting thing about brightsizing is that it isn't really a trend but it is considered to be a reaction to the past trends (Reh, 2014). Though this issue have been a comic material all over the Internet, one should not underestimate the impact it has on the organization. Paul McFedries explains this concept on his website Word Spy, as "corporate downsizing in which the brightest workers are let go. This happens when a company lays off those workers with the least seniority, but its those young workers who are often the best trained and educated." Brightsizing is common in both union and non – union contracts, but it is more likely to be attributed to the union contracts, because they are characterized by seniority-based hiring and firing practices (Reh, 2014). Moreover, in terms of downsizing, many companies state in their employees' handbooks that "among equally qualified candidates preference will be given to the employee with the greatest seniority."

One of the common mistakes regarding layoff decisions is judging by the extenuating factors such as seniority in the company and bypassing the value of the employees. As the company grows, some of the employees start to outgrow their capabilities among their positions in certain departments. Thus, in order to keep it's loyalty towards the employees, the management is allowing an individual to keep his job inside the company by any means, such as finding him different jobs in other departments, due to the fact that he was one of the first employees hired by the company (Saxena, 2009).

There is always the risk of one individual to become a great liability to the company due to his inability to adapt and adjust to the change and growth of the company (Reh, 2014). Therefore, every decision should be made based on what is best for the company.

2.6. Business Analysis Focused on Design

A trend that will most probably evolve in the next years is the concept of *design thinking*. In order to innovate and be successful, companies need to focus their business analysis work around design (Frisendal, 2012). In his book *The Design of Business*, Roger Martin describes design thinking as "a balance between analytical and intuitive thinking". Moreover he states that design thinking and also combining explorative thoughts with an exploitative mentality in the process is necessary for companies to maintain long-term competitive advantages. One of the common mistakes for companies nowadays is that they rely too much on analytical thinking, and only some of them take advantage of that knowledge and use it in ways that will provide them breakthrough innovations (Frisendal, 2012). The main quality of design thinking that also separates it from the traditional business analysis method is that designers experiment in order to find a "better answer" starting from the "best answer" already provided by the traditional business method, thus "creating the new while providing the best of the present".

Although the business analysis have been including design work for a long time but using other names to describe it such as "to-be requirements" and "logical design", it is only now that the IIBA® (International Institute of Business Analysis) has given "Design" an equal place in the business analysis table of the 3rd edition of the BABOK® Guide, referring to it as "a usable representation of a solution".

2.7. Better communication

A new trend in management that will continue in 2014 is the idea of a better communication between the members of the organization and also its shareholders. The lack of employee engagement for a better communication impacts performance and productivity and the costs are being reflected on the entire organization. One of the obstacles that managers are facing nowadays is the fact that many projects have team members distributed geographically, thus making it difficult for them to connect properly with their team members (Brockmeier, James, Larson, & Larson, 2014). In order to maintain a good communication with their members, and also their shareholders, companies started embracing the use of communication tools, both audio and video, instead of the classic documentation or e-mail, which is based only on the exchange of written words. Further research has shown that direct interaction with team members or even shareholders can produce positive results and also bring value to the company rather than simply producing documentation that does not always includes all the relevant information (Brockmeier, James, Larson, & Larson, 2014). Some of the benefits of an effective communication reflect on employees' engagement with their jobs and the business. In order to maintain an effective communication, managers must prove themselves to be very able to observe, listen, question and also to identify and state the real needs of an organization (Alla, 2014). A great communicator is the one who not only manages to captivate one's needed attention for understanding the recommended

solution but also communicates the information in a way that endorses acceptance and recognition.

3. Conclusions

Organizations are facing many challenges and choices. Some organizations may come to find that their time for decision-making is very limited and others may find themselves having more choices that they can handle. On the other side, management trends come and go. They are good or bad depending on many variables: industry; company culture; education level of workers; existing contracts and laws; etc. Mostly, however, they are good or bad depending on how well they are applied.

From the analysis of these trends we can observe that managers put a greater accent on searching for innovation rather than efficiency. This is why managers tend to search for the "next big thing" rather than the "best thing" currently available. Also we can observe that the search for this innovation can only come by first innovating the way the company thinks. Almost all these trends suggest in one way or another a radical change in the business philosophy and the way managers relate to the market and to their employees. Although technology has always changed the way of doing business the recent development in social media platforms has changed the way that consumers relate to one another and to the products or services of businesses. Social media has also lead to the development of a new way of marketing and of doing research, and it has permitted businesses to better adapt to their customers, leading to the challenge to adapt to these new tools and to implement them better than the competition.

Apart from these new trends there is also a reinventing of old ones, like the study of psychology or the implementation of corporate social responsibility, which is determined by a new understanding of these fields. Nevertheless, the key to success is not necessarily to follow trends, but to be a trendsetter.

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CASE STUDY: TRANSPORT EN OR: A LOGISTICS THAT MAYBE GO WRONG

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Case Abstract:
The case presents the situation of a medium-sized Canadian company specialized in the transport of goods and moving, which wants to implement a computerized change in connection to the general logistics of the company. Because of an awkward setting-up, this change, which seemed to be simple and fast in the beginning, finally turned out to be difficult and destabilizing for the company. The case addresses itself to the management students, who are invited to perform an analysis of this change by using certain models (Bareil, 2004; Rondeau, 1999) and to propose solutions for correcting the situation.

Key words: change, human resources, preoccupation stages, transport and logistics
JEL Codes: M0- Business Administration and Business Economics; Marketing;

Accounting: General

1. Context

Gabriel Barrette, a young entrepreneur and visionary, is the leader of a constantly growing company. He engaged the services of his aunt Mélissa Johnston, who holds the position of Human Resources Manager. A private company specialized in the field of moving and goods transport in Canada, *Transport en OR* has been carrying out its activity in the field since 1995.This company provides moving and goods transport services to individual customers as well as to corporations. The various types of trucks are adapted according to the clients' needs. The registered office of *Transport en OR* is located in Val-d'Or, in Québec, and it holds other offices and branches in Rouyn-Noranda, Montréal, Calgary and Toronto.

The business
At present*, Transport en OR* has almost 150 employees, who are not union members. Among them, there are removal men, marketing personnel, appointment coordinators, invoicing, payroll, health safety at work office workers, etc. The office workers are especially women, aged between 30 and 55. As for the removal men, the majority of them are males, with ages between 25 and 65.

The tendency is to ask more frequently the removal men to hold a secondary education diploma, although many of them do not fulfill this demand. As for the office workers, the requirements vary according to the position and job description.

Various procedures
The functioning methods in point of appointment bookings or the collection and delivery of goods are comparable to the methods of all the others moving companies. We can telephone directly to the registered office and a person in the call center shall obtain the necessary information and then he will introduce it manually in an appointment book. With this done, the coordinators have access to the information and are able, if necessary, to assign a driver or a team.

All the information concerning the transport is transcribed again by the employees on the company's order forms. After the deliveries or moving are performed, the drivers must bring all their delivery proofs and roadmaps to the company offices. After all these documents are submitted, the employees use them in order to produce the payrolls, to invoice the clients and to draw up various reports and follow-ups for the company.

During the past few years, the number of complaints coming from the clients and employees of *Transport en Or* has been continuously increasing. Employees call at the office in order to complain about their payroll not being submitted, but the payroll clerk cannot find their roadmaps. As for the clients, some of them blame *Transport en Or* for constantly prolonging the timeliness of invoicing. The accounting department is also putting pressure on the invoicing office workers so that the invoices are issued as soon as possible so that they may represent the sales on a monthly basis. We often hear the employees' comments saying that a solution ought to be found, that things should change.

A few issues

The main issue for *Transport en OR*, which is also valid for any industrial company, consists of optimizing the use of the trucks and of the human resources. This is even truer for this company since it is headquartered in an area which is remote from the large cities. In this area, it is the delivery of goods to big centers which causes troubles. Actually, there is a great amount of goods which comes from the big centers to this area such as groceries, clothes, materials, motor vehicles, etc., but very few products leave the area. As far as moving is concerned, one should have an excellent sense of logistics in order to arrange the appointments so as to limit the waste of time.

Finally, the competition is a constant concern for *Transport en OR*. Indeed, there are several moving and goods transport companies on the market, without counting the freelances who possess their own truck. The freelances who are all over the territory of Québec and across Canada represent a threat since the prices are lowering due to the harsh competition and to the price war.

Course of the change

In response to various issues and the need to improve the general logistics, Mélissa announced her employees in September 2012 that the company was going to be endowed with an IT system. Most of the people were informed directly by Mélissa in a more or less informal way, but some of them found out about this from their colleagues. The change was aimed to affect mostly the coordinators, having as a purpose the improvement of the logistics and the follow-up of the appointments and of the drivers so as to improve in this manner the quality of the services provided to the clients. The new software was intended to have less influence on the other departments such as accounting, invoicing, data base and removal men. The change involves buying the software, a server and equipment (readers, barcodes, etc.).

Initially, it was Gabriel who considered it was necessary to computerize the company procedures. With the help of Mélissa, they evaluated various types of software, the prices, the procedures, the training etc. After discussing and evaluating three or four types of software, they chose LogisPresse, mainly due to the fact that it was developed in Québec and the technical support was available in French. Afterwards, they bought the equipment adapted to it, they installed the WI-FI networks on the loading quays of four branches and they bought barcode readers which could facilitate the package tracking. The owner and the Human Resources Manager benefited from a training which lasted a couple of hours

at LogisPresse and after that, the company initiated the installing of the program on the new computers. The next stage consisted of providing training to a person (from outside the company) so as to enter the data necessary to the software operations (clients, suppliers, etc.). The staff training has also been planned both in what distribution is concerned and at the administrative level. As the software was an adaptable one, one had to choose the desired modules and the papers, to redo the logo, to choose the paper printing mode and have everything programmed by the company LogisPresse. To repeat what Mrs. Johnston said, a lot of «since we are there» were added. Finally, the only scheduled follow-up was going to be carried out as a «big discussion» (in a few months).

2. Experiences, reality

In fact, the change affected several other departments. Here is what certain employees of the company commented on the subject;

> *Germaine (billing agent):* «I have never touched a computer and I am not trained to do it. Nobody said anything to us, nobody knows anything. I do not know where to start. I do not supply, I am afraid I might lose my job. My job has no longer been the same because of the new system. Nobody asked for our opinion. »

> *Louis (payroll clerk)*:« Moreover, all of us who thought it was a good idea to have everything computerized are now seized by panic. The drivers keep calling me, they do not know how to enter the information into the system, and nobody trained them to do it. The majority of them have not even graduated from the secondary education, how we could ask them to do it! Sometimes, I would rather have everything just the way it was before. They tried to talk to Mélissa, but she did nothing to solve the situation! »

> *Caroline, while crying (computer technician):* «When using the software, I must take care of everybody … I am supposed to manage the computer software, the server, but who provides me the necessary support? The software company does not provide me support as they promised. I wonder if they took the right decision... Moreover, I am not trained to manage a server… And they did not even adjust my salary according to the new responsibilities. They could have hired somebody specifically trained to do it. I wonder if we shall succeed in the end! ».

> *Lucie (administrative clerk):* «It is true that we do not benefit from any training here, it is the same thing every time, as for me I have already started looking for a new job, I am really affected. In my opinion, the Human Resources Manager really keeps her head in the sand; she tells herself that everything is all right. She tells us she is not affected by the change, but she uses the software every day. It is amazing that she does not even realize it! ».

> Germaine: «I agree with you, after all the demands we make, she is not really aware of the problem. It is important to us that Gabriel seems to be more sensitive to what we tell him, but we barely see him. ».

> Luc (coordinator): «It is really the hell; we have to learn everything from zero. I thought this may improve things. I have the feeling that I will never succeed on my own, I must go and see Caroline twenty times a day. We spend our time discussing between colleagues if one of us had the same problem, hoping that

he will be able to give us a direction, we make suggestions so that the Human Resources Manager brings modifications to the software in order to ease our job, but all these cost a lot so she ignores our demands.»

3. Other information to be taken into consideration

Goods tracking (barcode)

The tracking of the goods by means of barcodes is very complex. We need to introduce optical readers in every loading quays and this will affect all the employees working there.

Entering data into the software by the removal men

The management of the packages which are transiting the company requires a great rigor. The fact that it is necessary to enter the data in connection to the transported goods requires more time and more employees. This involves a reorganization of the duties or even hiring new staff.

Service provided to the clientele

At present, the efficiency of the service provided to the clientele is delayed as a consequence of the system learning process. This involves a huge delay in invoicing, fact which postpones the account recovery for later.

Productivity

A decrease of productivity is marked by the fact that everybody is in a learning process. Invoicing is delayed, so the clients are waiting for their invoices, the payment service is slow, several tracking processes are put aside.

Administrative costs

The company plans to hire a new person for the invoicing for the same amount of invoices that needs to be done. Moreover, there is an amount of hundreds of thousands of dollars (the owner evaluates that invoices in amount of 800 000 $ are ready to be issued) left on the desks because of the invoicing which has not been done within the prescribed period.

Staff reduction

Initially conceived so as to contribute to the reduction of the number of employees, this change caused in fact an increase of the number of employees.

4. At present

Finally, what was meant to be a minor change involved unexpected difficulties. In spite of the fact that the leaders thought the change would only bring along positive consequences, what the employees experienced proves the contrary. Several months after the implementation of the change, we notice that no training was performed; no follow-up and no discussion took place as planned. No comment expressed by the employees was heard by the management. Anyway, the employees' experience leave them thinking that their comments will not be taken into consideration. Since the software was implemented, the employees are still unable to perform their tasks in an appropriate manner, and never have the receivables been so late and the clients so dissatisfied.

Questions:

1- Which is the nature of change? Explain.
2- How did the change take place? Analyze the change according the Rondeau

model (1999) and the Bareil model (2004)[17].

3- Which was the involvement of the human resources manager in planning the change?
4- As a manager, what do you think Mélissa Johnston could do in order to correct the situation?

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[17] The description of these two models can be found in the list of references

THE ROLE OF EMPLOYEES AND MANAGERS IN HOTEL INNOVATION - EVIDENCE FROM BRAŞOV COUNTY

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Abstract: *This paper seeks to relate the effects of human resource management on innovation, from the perspectives of both employees and managers in the hotel area.*
The first part of the article consists from a literature review for hotel innovation. Thus, the innovation processes could be very diverse due to the different approaches to new developed products or services from the tourism area. Within the hotel industry human resource has become one crucial element for innovation, mainly because of the increasing role of the customer-contact employee. Considering the specificity of the Romanian hotel industry we appreciate that emphasizing the human resource role could generate and sustain a competitive advantage in a more dynamic environment. Within human resource approach, we point out that training program for employees and managers' expertise are important factors in sustaining innovation. Therefore, three hypotheses are stated. Two of them refer to the training programs while the last one to the managers' expertise. All of them are confirmed by the study's findings. The second part of the study consists of developing findings for the region of Braşov County based on the presented research methodology. We consider two dependent variables, innovation decision and innovation level, respectively. Our goal is to determine the correlations between those two and the explanatory variables referring to employees and managers- training, constant training, occasional training, manager's experience and manager's education. The results demonstrate the need for an articulated training process in the hotel industry with a stronger emphasis on managers from the view of making decision process. On the other side, the role of employees is obvious when these decisions should be implemented. Meanwhile, the interference between the two categories is more and more intense due to the increasing process of employee empowerment within the hotel industry area. Thus, innovation could become a more competitive weapon and a source of increasing efficiency, also.

Keywords: hotel; innovation; ongoing training; management expertise

JEL classification: L83; L25; M10

1. Introduction

In this time of globalization, technological advancement, dynamic hospitality environment and fierce competition, hotels have to identify and respond quickly to clients' changing needs, preferences and expectations in order to achieve and maintain a strong competitive position. Innovation in this context allows hotel managers both meeting the changing requirements of tourists and increasing hotel performance.

Even though hotel innovation is an understudied area (Hjalager, 2010:1) and managers often rely on gut feeling, speculation and their experience about the keys to innovation success (Ottenbacher and Gnoth, 2005:206), many studies have recognized the importance of human resources in hotel innovation (Ottenbacher and Harrington, 2007; Ottenbacher, 2007:434; Hu et al., 2009; López-Fernández et al., 2011:146).

Therefore, investigating how hotel innovation can be developed by human resource management practices is very important. We focus on one specific HRM practice (training), because it is vital in the hotel sector, which is characterized by low skill levels among employees (Chang et al., 2011:812). Moreover Hjalager (2010:10) points out towards skills deficits as major barriers to innovation in tourism.

2. Conceptual framework and research hypotheses

In 2010 Hjalager stated that innovation research in tourism is a young phenomenon and we believe that this affirmation is still standing and is also characterizing the hotel sector, one of the most important one in tourism. In consequence, there is no general consensus regarding how hotel innovation is defined. Some researchers state that innovations may be new services, products, processes or ideas, but they can also be existing ideas that are applied in different settings for tourists (Vila et al., 2012:76). We observe that innovation is defined in terms of "new" to the hotel or to the current target clients. To other researchers, acceptance and implementation is central: innovation is the generation, acceptance and implementation of new ideas, processes, products or services (Hall and Williams, 2008:5). A pragmatic approach derived from manufacturing sector argue that that innovation is generally characterized by everything that differs from business as usual or which represents a discontinuance of previous practice (Johannesson et al., 2001).

Even though there is no general consensus on hotel innovation definition, we agree that hotel managers should focus on this process because it allows them to improve the quality of services/products offered, increase hotel performance, fulfill the changing requirements of tourists, gain a greater market share and gain a competitive advantage.

Within the hotel context, Sirilli and Evangelista (1998) argue that training activities are one of the main channels to upgrading a firm's technological capabilities and lead to successful innovation. Along the same lines, Leiponen (2005) indicates that hiring skilled employees may not be enough; employees also need to learn to use their skills within the organization. Ottenbacher (2007) argue that training is one of the factors underlying hotel innovation success in the employee–customer dimension. Wong and Pang (2003) found training and development programs to be the most important factors in enhancing staff creativity, one important factor that influence innovativeness.

Although other studies didn't specifically focus on hotel innovation, their findings suggest that training might enhance hospitality innovation because of the increased level of capabilities (Tracey and Tews, 2004).

Indeed, the role of human resource skills and knowledge seems to be more important in hotel innovation process. We consider that effective training leads to a successful empowerment of the employees which is a good foundation for innovation, also.

A good employee training program provides important benefits such as:

- Enables employees to master new processes and offer a new type of services (Martínez-Rosa and Francina Orfila-Sintes, 2012). More important are customer-contact employees who are responsible for screening and testing new ideas; they determine the quality of output, given the closer provider–customer interaction. These are the reasons why they need to have multiple skills and knowledge in order to evaluate the potential effectiveness of various ideas;
- Leads to positive attitudes towards training and company. Hotel managers need employees that are attitudinally as well as technically developed. Also, Roehl and Swerdlow (1999) found that training could indirectly lead to greater organizational commitment among hospitality employees;
- Motivates employees to provide better services and achieve differentiation from competitors in a higher standardized competition (Martínez-Rosa and Francina Orfila-Sintes, 2012). In general, recent research suggests that training employees to do their jobs effectively is one of the most important tasks undertaken by managers to improve competitiveness (Saks and Belcourt, 2006).

These arguments lead to the following hypothesis:

H1: Training core customer-contact employees has a positive impact on innovation decision and innovation level among hotels.

Hotel managers are those who provide the opportunity for employee to develop specific skills through trainings. Therefore, the managers have the proper set of tools for making improvements in current operations such as innovation and they must be aware of its importance. They are seen as main "core employees" that contribute to the activity of the firm and whose skills and abilities determine organizational differences in capabilities and efficiency when performing the organization's base operations (Lopez-Cabrales et al., 2006). Managing innovation requires a great amount of practical experience and specific knowledge in order to achieve hotel performance.

These arguments lead to the formulation of the second hypothesis:

H2: Hotel managers with higher expertise will increase the probability to make decision regarding innovation process initiation and implementation.

Hotels' training program may have different characteristics and goals: enhance staff creativity, improve technical knowledge, better use of new technologies or develop ability of providing better or new services. However, hotel managers should have a continuous concern regarding this important issue.

H3: When the training is done on an ongoing basis, the effect on innovation decision and innovation level is positive and higher than when the training is occasionally planned.

Training programs should be an important part of human resource activities in hotels and developed on an ongoing basis. In the hotel industry training programs should be oriented both to managers and employees because, through their expertise, they contribute to a more intensive innovation process and thus, to higher level of performance.

3. Research methodology

This empirical analysis focuses on hotel establishments in Braşov County known as an attractive touristic area in Romania. In order to achieve our research goals, all classified hotels from Braşov County were included (122 hotels). A questionnaire was specifically designed and administered to hotel managers through a self-assisted Web method. There were validated 70 questionnaires, resulting in the response rate of 57.4%.

The questionnaire was designed to ask hotel managers for their opinions on the following

dependent variables: Innovation decision and Innovation level.

Innovation decision was defined as innovative activities carried out during the previous year in four key functional hotel areas (core departments): accommodation (7 items), food & beverage (7 items), business (5 items) and leisure services (5 items), respectively. The managers rated each area in one of the three following categories: (1) first time innovated; (2) improved, expanded or renovated area; (3) no efforts for innovation. The variable Innovation Decision equals "1" when at least one area was ranked in categories (1) or (2) and equals "0" in the other case.

The variable *Innovation Level* measures the number of areas each hotel innovated and ranges from zero to four, based on the analyzed core departments.

The *explanatory variables* used in our research are: Training, Constant training, Occasionally training, Manager's experience and Manager's education. All these variables are binary; variable *Training* equals "1" when there is an employee training plan in the hotel and equals "0" otherwise; the variable *Constant training* equals "1" when the training plan is on an ongoing basis and equals "0" otherwise; the variable *Occasional training* equals "1" when the training plan consists of sporadic training activities.

As we considered before, manager's expertise may influence the decision to innovate. Therefore, their experience and education are important factors. The variable *Manager's experience* is measured by the number of years the hotel manager has been working in the tourism sector, including the current position. The variable *Manager's education* equals "1" when a hotel manager has a relevant bachelor or master degree and equals "0" in other cases.

The last part of the questionnaire contains factual questions that capture respondents' demographic characteristics as well as their organizational characteristics.

4. Results and discussions

On average, the sample hotels have 81 employees and offer for sale 91 rooms, 189 restaurant seats and 172 conference seats. These characteristics are reflected by the main market segments targeted by hotel establishments (Figure 1): leisure tourists (39.3%), business tourists (18.4%) and sport tourists (17.1%).
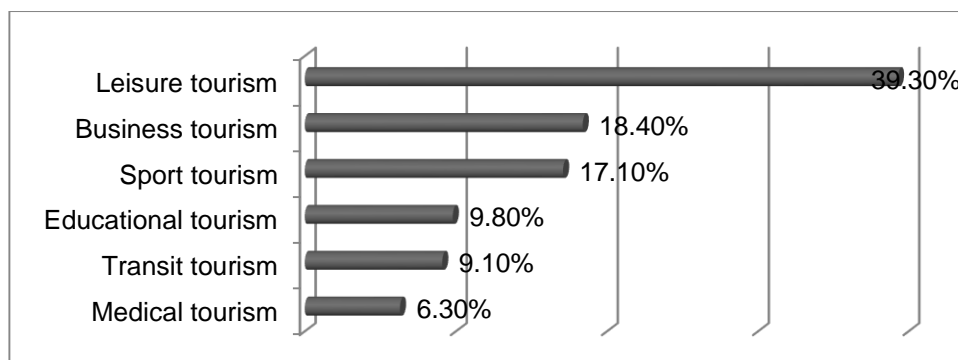
Figure 1: Market segments targeted by hotels
Source: Authors' calculations

On average, the hotel manager has been working in the accommodation sector for almost eight years and has a relevant bachelor or master degree (97%). Not many hotels (32%) have training plans and only 28% of them are constant.

In Table 1 we observe positive correlation coefficients between studied variables, suggesting that the relationships are in the same direction for all considered variables.

The lowest correlation coefficient is between Training and Occasional training (0.02), while the highest correlation coefficient is between Innovation level and Manager's experience (0.84).

Table1: Correlation matrix

Variable	Freq. or mean	SD	1	2	3	4	5	6	7
1.Innovation Decision	0.62	-	1.00						
2.Innovation level	2.54	1.2	0.45	1.00					
3.Training	0.32	-	0.52	0.57	1.00				
4.Constant training	0.26	-	0.42	0.67	0.05	1.00			
5.Occasional Training	0.68	-	0.07	0.05	0.02	0.06	1.00		
6.Manager's experience	8.2	7.5	0.79	0.84	0.62	0.53	0.46	1.00	
7.Manager's education	0.92	-	0.48	0.67	0.38	0.27	0.26	0.42	1.00

$p < 0.05$; Freq.-frequency; SD-standard deviation is calculated only for those variable that are not binary

Table 1 leads us to expected result and demonstrate the role of an articulated training process in the hotel industry with a stronger emphasis on managers' experience. Meanwhile the distribution of the coefficients demonstrates the role of managers in developing and sustaining the innovation processes.

As we observe in Table 1 and 2, findings for training programs clearly support H1, H2 and H3.
Having a training plan in hotels determines a positive effect on innovation decision and innovation level, with more significant contribution for innovation level.
When we distinguish between different plans of training, we observe what we expected, that constant training has a greater effect on innovation decision and innovation level.

Table 2: Hypothesis testing: marginal effects of innovation decision and innovation level

Variables	Innovation decision	Innovation Level
Training	0.078	1.027
Constant training	0.096	1.258
Occasionally training	0.036	0.562
Manager's experience	1.354	0.826
Manager's education	0.954	0.357

$p < 0.01$
Source: Authors' calculations

Table 2 completes and sustains our previous findings. Analyzing the figures the role of managers is still the most important – 1,354 is the highest marginal effect generating by manager's experience on innovation decision while their education has a significant contribution, also (0,954). Experience is slightly more important that education but they both have the most influence on innovation decision and level if we compare with other

variables. Higher values are coming out for the first dependent variable which is explained by the coordinating role of managers rather than their direct involvement in taking the action and implementing innovation. The training programs are mainly important from the perspective of innovation level which sustains the role of employees in sustaining innovation through the implementation in the four different areas included in the study. For the employees the results are lower than for managers while the results for the two dependent variables are reversed demonstrating that employees have a more active role in the process itself rather than in planning it.

5. Conclusions

Hotel innovation is one of the important elements which enable companies in the hotel industry to achieve certain level of performance. Trying to analyze the role of human resource in developing and sustaining innovation, the study emphasizes the importance of both managers and employees for this objective.

Several findings should be considered to come out from the study:

- The innovation decision making process is very important in the tourism sector and thus, the role of managers has become more important during the years. Experience is more important than education but both of the aspects have a significant contribution to innovation, ultimately.
- Because of the large variety of instruments being used in innovation processes the hotel has a wide range of resources to support them. Among them, human resource is considered to be very important
- The role of core customer-contact employees is very important in the sector because of the direct and derived consequences on the customer satisfaction. No matter what type of innovation we consider- new services, products, processes or ideas, organizational or technological it is highly important to develop and increase the empowerment of employees to cope better with the dynamic environment of the tourism sector. Therefore, in order to achieve this goal an articulated training policy is needed.
- Due to the strategic character of innovation process there is a need of an ongoing process of training as it comes out from the study. When the continuous element does not exist the results are accidental and the positive long term effects could be distorted.

6. Limits of the study and future directions

The study is limited from different perspectives which offer the future directions, also.

One first general limit is that innovation has many other sources in the human resources area and not only. Developing other variables except training for employees and managers' expertise will more contribute to other findings for hotel industry. There are other human resource practices to be considered like motivation or career development. Even more, considering the actual variables developed in other sub-variables could determine important other correlation between human resources and innovation processes in hotels- age, gender and position in the hotel company.

The geographic limitation is given by the chosen area- Braşov County. Although the general findings are expected to be similar, we appreciate that different areas could have different results and thus various policies in sustaining innovation. Also the intensity of the results could differ from one region to other, depending on different assumptions or circumstances.

The study does not study the correlations between the explanatory variables, innovation and hotel performance. Thus, an extension is possible to be developed in this direction, also.

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MOTIVATION AND SUCCESS OF ACADEMIC SPIN-OFFS: EVIDENCE FROM HUNGARY

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Abstract: Universities today are expected to play a major role in contributing to economic competitiveness and especially through the process of commercializing research results. There is much evidence that firms started by university researchers are effective channels of knowledge from the academic sphere to the private sector. To encourage the creation of university spin-offs, first we have to understand the goals and motivations of academic entrepreneurs. This paper includes the empirical study of 80 Hungarian spin-off owners, who run their own firm besides retaining their position at the university. The purpose is to explore the motives that drive academics to start their own business and to test the relationship between motivations and entrepreneurial success. Success is measured from both objective and subjective aspects. The former refers to quantitative indices related to business performance such as firm revenue, change of revenue, number of employees and firm age. The latter refers to the self-evaluation of one's success as an academic entrepreneur. Subjective success is measured on the one hand by the researcher's own entrepreneurial success criteria, while on the other hand by the perceived degree to which his or her knowledge has been commercialized on the market. The results show that the dissatisfaction with the university salary (necessity) is the most important motive for starting a venture in the academic sphere. The studied entrepreneurial motivations, except for necessity, have a significant relationship with subjective success, but a weaker or no relationship with objective success. The results also highlight the importance of research-related motives, which have a relatively strong link with subjective success (mainly with the subjective success of technology transfer), and are also related to some objective performance indicators of the venture such as revenue. Although the need for achievement and the need for independence are not key motivations for starting a spin-off venture, they have a relatively strong relationship with subjective entrepreneurial success.

1. Introduction

Although higher education institutions (henceforth: universities) accommodate 42% of the researchers in Hungary (HCSO, 2012), universities are not transferring their research results to the business sphere with sufficient intensity (Papanek and Borsi, 2001). The moderate market-sensitivity of university research is mainly due to historical reasons. After the Second World War, the Hungarian research and development (R&D) sector was tailored to the Soviet model: the autonomy of universities practically disappeared, research institutions were placed outside the academic sphere and universities' industrial relations weakened. After the regime change, state-owned corporations were liquidated or privatized, and innovation fell out of the priorities of the government and the business sphere. Informal technology transfer (journals articles, conferences, informal discussions)

was the dominant form of university-industry co-operation throughout the 1990s, while firms did not consider universities as an important source of marketable knowledge (Inzelt, 2004). In the first years of the new millennium the ratio of innovative firms indicating cooperation with universities was even smaller than a few years before: 21.6% and 13.7% in the period of 1999-2001 and 2002-2004 respectively (Havas and Nyiri, 2007).

Supporting the objectives of the Lisbon Strategy, the government initiated the reform of the national innovation system in 2003. Similar to several other OECD countries, Hungary has changed its research policy and related legislation according to the US technology transfer model (Novotny, 2008; Novotny 2010). The Research and Technological Innovation Act (effective as of 2005), which is indeed a Bayh-Dole-type legislation, breaks away from the 'open science model' and urges universities to retain title to inventions rising from research pursued within the framework of the university. The Act requires universities to implement an intellectual property (IP) management policy and allows them to set up so-called 'technology utilizing firms' (spin-off firms) with the participation of academics.

The 'spin-off movement' is not new to the Hungarian university sector, however, the university participates in very few of the academic ventures. A nationwide survey focusing on almost 1,600 academics from engineering, medical, natural, and agricultural faculties of 14 Hungarian institutions revealed that the university had a share in less than one out of 10 ventures run by university researchers (Novotny, 2013). Spin-off firms hence rather serve individual interests than that of the whole institution.

Despite a broad consensus concerning the necessity of intensified technology transfer between the university and the industrial sector, the realization of such goals are hindered by several factors including the following (Novotny, 2013; Novotny and Papanek, 2012):

- The intra-role conflict caused by the various aspects of academic work (education, research and entrepreneurship) and the lack of specialization of academics tasks. Academics find it increasingly hard to comply with the growing number of responsibilities at the same time.
- The one dimensional motivation system ('publish or perish') and the conflict between the rules of promotion and those of government research policies.
- The inflexible, bureaucratic university organizational structure that prevents timely decision making required for the cooperation with the business sector, along with a distrust of university support organizations such as the technology transfer office.
- The lack of explicit income distribution policies that satisfy both the university and academics, and the absence of shared decision making practices.

Consequently, policies regulating the cooperation between the researcher and the university should focus on academic entrepreneurs, in order to utilize their valuable experience in technology commercializing and also to promote mutual confidence between the institution and the researcher. The first step in this process is to understand academic entrepreneurs' goals and motivations. While most scientists are primarily motivated to pursue technology transfer by the extra income it provides (Novotny, 2013), international findings point to its indirect advantages, such as increased prestige and reputation, the positive effect on research and education, or the acquisition of research infrastructure (Slaughter and Leslie, 1997). The aim of this paper is to examine why Hungarian university researchers spin out a firm and how their personal motivations relate to their success as an entrepreneur. Analyzing the success and motivations of spin-off firms would help government officials, university managers and university technology transfer staff to refine university IP management policies and to make the academic career more attractive and rewarding for prospective and present scientists respectively.

2. Spin-off motivations

Economists regard profit maximization as the ultimate goal or motivation of businesses. The spin-off literature also emphasizes the prospect of higher income as an important motivation of starting a firm (Franklin, Wright and Lockett, 2001; Egeln et al, 2003; Shane 2004). On the other hand, not all empirical findings support the priority of financial benefits. In academic settings the application and expansion of knowledge and gaining ideas for new discoveries are also regarded as key drivers of firm creation (Morales-Gualdrón, Gutiérrez-Gracia and Roig Dobón, 2009). The role of academic career related benefits such as obtaining research funds, laboratory equipment and research grants, as well as higher prestige and status are highlighted by Italian studies (*Baldini*, *Grimaldi and Sobrero,* 2007). There are two opposing approaches in literature (D'Este, 2010): one believes that academic entrepreneurs are primarily motivated by commercialization, while the other suggests that academics collaborate with industry to support their research. Motives can also vary by fields of science. In life sciences for example, where patenting is more common, financial incentives are more important in firm creation than in natural sciences, where the positive effect of entrepreneurship on research is more dominant (Owen-Smith and Powell, 2001).

In addition to utility-maximization and science related objectives, other personal motivations, such as the need for achievement and the desire for independence can also incentivize spin-off formation (Morales-Gualdrón et al, 2009). Despite the fact that most R&D projects are team-based today, the propensity to act autonomously can be a key motivation of spin-off creation (see for example Roberts, 1991). To spin-out of the university and contact market actors independently may even be a stronger motive in countries where universities are highly bureaucratic.

On the basis of McClelland (1961) many authors suggest that entrepreneurs are 'high achievers', i.e. they seek challenges, want to do a job better, accomplish results, and find solutions to problems. The achievement motivation can be important in academic settings, where entrepreneurs have to perform in multiple domains at the same time including education, research and research commercialization. As university organizational culture is usually weak, academics' innovation performance can be higher outside than inside of the university (Szabó, 2013). There is evidence that both the need for achievement and the desire for independence are positively related to spin-off formation and success (Roberts, 1991).

Authors who examine entrepreneurial motivations tend to group them. One of the most widely used dichotomies is between 'push' and 'pull' motivations (Pirnay, Surlemont and Nlemvo, 2003). Concerning spin-off ventures, the need for independence, market opportunity, building one's career and status are among the pull factors, while job-related dissatisfaction or the pressure to engage in academic entrepreneurship is on the push side (Weatherston, 1995; Chiesa and Piccaluga 2000; de Silva, 2013).

The study of entrepreneurial motivation is important concerning both spin-off creation and success. In academic context entrepreneurial success can be approached by three different ways at least. First, in technology transfer terms (e.g. delivered technologies, economic impact) (Choi and Lee, 2000), second, by market indicators such as revenue, profit, number of employees and firm age (Helm and Mauroner, 2007) and third, in a subjective way, i.e. based on personal feelings. The importance of measuring subjective success is that not all entrepreneurs are motivated by wealth and growth in the first place. Motivations are probably more closely related to subjective success than to objective success or business performance. As motivation is a desire to do something based on one's needs and wants, when the underlying needs are satisfied one feels successful. For example, academic entrepreneurs motivated by the research-related benefits of

technology commercialization may feel successful if they can gain new ideas, equipment or relationships for further research.

Although this study borrows some theories and motivations from the general entrepreneurship literature, it aims at contributing to the spin-off literature in the first place. In general university spin-offs refer to the formation of new firms or organizations in order to exploit the results of the university research. There is no widely used definition in literature of spin-off firms, but there are several classifications. For example Nicolaou and Birley (2003) differentiate among orthodox, hybrid and technology spin-offs, and also between academic exodus and academic stasis, but none of these categories capture the approach of this paper. In our perspective, spin-off founders retain their place in the university, but simultaneously participate in the running of their own company. Therefore we exclude firms in which the university researcher maintains no connection with the spin-off, or leaves the university to be able to work full time in the firm.

3. Method

The main entrepreneurial motivations identified in the spin-off literature were examined empirically among Hungarian academic entrepreneurs. The studied motivations are as follows:

- the prospect of higher income,
- the need for achievement,
- the need for independence and
- research-related benefits.

The survey population consisted of academics working at university faculties of engineering, medical science, natural sciences and agrarian science. The survey was based on a database of more than 1,500 university academics created in 2009 by the author (see Novotny, 2013). The sample of this study is 80 academic entrepreneurs from 10 Hungarian universities.[18] The data on entrepreneurial motivations and success was collected online in March and April 2014.

A seven-point Likert-scale was used to measure motivations. The scale contained 20 items that were elaborated based on literature analysis. The final model was formulated with the help of factor analysis (Principal Axis Factoring) as the data was significantly non-normal. Success was measured with both objective and subjective indicators (Table 1).

Table 1: Indicators of entrepreneurial success used in this study

Objective success	revenue
	change in revenue
	number of employees
	firm age
Subjective success	Based on your own success criteria, do you regard yourself as a successful academic entrepreneur? (1= absolutely unsuccessful; 7= absolutely successful)
	How satisfied are you with the degree to which your knowledge was commercialized / utilized in the market? (1= absolutely dissatisfied; 7= absolutely satisfied)

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[18] Budapesti University of Technology and Economics (26 participating academics), University of Debrecen (14), Szent István University (13), University of Pécs (10), University of West Hungary (5), University of Szeged (4), Eötvös Loránd University (3), University of Miskolc (3), Universirty of Kaposvár (1) and Semmelweis University (1).

After performing factor analysis to the data to clear the structure of motivation dimensions, the indicators of motivation and success were correlated. Both Pearson's and Spearman's correlation coefficients were applied depending on the measurement level of the variables.

4. Results

In order to evaluate the relationship of entrepreneurial motivations and spin-off success, first motivations have to be identified and then the link between motivations and success has to be verified. The proposed model of motivations was assessed and adjusted by exploratory factor analysis. The results are as follows.

According to the measures of sampling adequacy the data were suitable for factor analysis, KMO =0.803, λ^2 (120, n=80)= 636.3, p= 0.000. In the final model, presented in Table 2, all factors with eigenvalues greater than 1.0 were retained, which solution was also supported by the scree test. Although the fourth factor (Necessity) contained only two items, it carried important information about respondents. On the basis of the subject to item ratio (5:1), the communalities (0.4-0.82) and the factor loadings (0.5-0.85) the results were accepted. The total variance explained by the four factors is 58%. The standardized alpha for the 16 item scale was 0.89, indicating a high degree of reliability regarding internal consistency. The Achievement subscale consisted of 6 items (α= 0.83), the Independence subscale consisted of 4 items (α= 0.84), the Research subscale included 4 items (α= 0.80), while the Necessity subscale included 2 items (α= 0.79).

Table 2: The Pattern Matrix of spin-off motivations (Principal Axis Factoring, Promax with Kaiser Normalization)

Factors	Items	Factor loadings	Item means
Achievement	to identify and exploit new market opportunities	0.795	4.06
	to exploit my knowledge for financial gain (Pull)	0.661	5.04
	to get rich (Pull)	0.616	2.54
	to have higher prestige and reputation	0.616	3.29
	to build my own business	0.574	3.76
	to have more challenge at work	0.498	3.90
Independence	I could best make use of my skills by working independently	0.821	4.19
	to work and make decisions on my own	0.757	4.51
	to be my own boss	0.628	4.13
	to solve scientific problems myself	0.623	3.94
Research	to further develop research results towards application	0.818	4.84
	to complement my research activities	0.709	5.09
	to put my ideas into practice	0.587	4.84
	to have more funds and better equipment for my research	0.549	3.60
Necessity	I needed extra income to provide for an acceptable quality of life (Push)	0.853	5.33
	I could not make ends meet from my university salary (Push)	0.760	5.44

The items related to the prospect of higher income were split up by the factor analysis. 'Push' items loaded on the fourth factor called Necessity, while 'pull' items loaded on

Achievement. Achievement thus has been complemented by the 'desire to get rich' and 'exploit knowledge for financial gain', which makes sense as high achievers are presumably pulled by the potential reward of getting rich (rather than being pushed into entrepreneurship).

The mean value of the factor variables shows that Necessity is the strongest motivation in starting a spin-off, followed by the research-related benefits, the desire for independence and the need for achievement. A paired samples t-test revealed that differences between the four motivation dimensions were significant (Table 3).

Table 3: Means of factor variables (based on a scale of 1-7).

Motivation	Mean
Necessity	5.38
Research	4.59
Independence	4.19
Achievement	3.77

Note: All differences are statistically significant at the 99% level of confidence, except for the difference between Research and Independence, which is significant at the 95% level of confidence.

After indentifying spin-off motivations the relationship between motivations and success was assessed. Correlation coefficients show that except for Necessity all studied motivations have a significant and positive relationship with subjective success (Table 4). In addition, research-related benefits have a relatively strong (but still moderate) connection to two of the objective success indicators as well: spin-off owners with stronger research and development motives have higher revenues and growth rates than those with weaker research-related motivation. Motivations on the other hand have not been found to be related with the number of employees and firm age.

Table 4: The relationship between entrepreneurial motivations and success

Motivation	Spearman's rho				Pearson's r	
	SUBJECTIVE SUCCESS		OBJECTIVE SUCCESS			
	Entrepreneurial success	Technology transfer success	Revenue	Revenue change	Number of employees	Firm age
Necessity	0.029	0.078	-0.093	-0.073	-0.050	0.183
Research	0.398**	0.421**	0.363**	0.312**	0.152	-0.030
Independence	0.422**	0.222*	0.249*	0.175	0.055	0.095
Achievement	0.462**	0.353**	0.222*	0.216	0.138	0.049

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

5. Conclusion

This paper studied the relationship between the motivations and success of 80 Hungarian academic entrepreneurs. The entrepreneurial motivations evaluated included the prospect of higher income, the need for achievement, the need for independence and research-related benefits. Success was measured by objective business performance indicators and also subjectively, spin-off owners were asked to evaluate themselves as academic entrepreneurs and also to rate the level to which their research results has been transferred to the market.

The results show that Necessity (dissatisfaction with university remuneration) is the strongest motivation in starting a firm, while the need for achievement is the weakest one of the four. Motivations, except for Necessity, are significantly associated with subjective success. Their relationship with objective success however is weaker or non significant. Research-related benefits are exceptions as they have a relatively strong positive relationship with the amount of spin-off revenue and also with revenue growth.

In sum, the prospects of higher income play an important role in spinning out a company, but it is not the possibility of getting rich (pull), but rather the necessity to complement university salary and to achieve and maintain an acceptable quality of life (push). The results also highlighted the importance of research-related motives, which have a relatively strong role in firm creation, and are also related to both objective and subjective success. The need for achievement and the desire for independence are not particularly important when starting a firm, their relationship with the subjective entrepreneurial success is stronger than that of other motives.

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INNOVATION: A STRATEGIC OPTION FOR FUTURE ECONOMIC GROWTH

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Abstract: *The purpose of the current article is that of highlighting the importance and actuality of innovation in spurring economic growth. This empirical study analyses the concept of innovation and suggests it as a viable strategic option for increasing productivity and performance and for fostering a sustainable economic growth, especially in the current context, in which even the more developed countries took a big hit from the global economic crisis (manifested through an array of negative effects, the most noticeable one being the contraction of the gross domestic product through negative growth rates of the GDP). The results show that any worldwide economy could strongly benefit from boosting economic growth through innovation, and that this subject needs to be treated, not only as a solid solution for overcoming the effects of the economic crisis, but also as a prevention instrument, to make sure that the recession never reaches the degree it has in the past. The global economic crisis, which officially started in 2008, according to many specialists, was mainly caused by the crisis which started in the United States of America, which created a domino effect worldwide. The effects of this crisis created the greatest recession since the Second World War, causing: credit freezes, job loss, bankruptcy, low liquidities, increased unemployment, political and social strains and many other issues in the society. In this situation, in order to "re-launch" the national economies of the affected countries, the best solution is to foster economic growth through innovation, regardless of the type of innovation (managerial/technological/radical/incremental). The central point is to use innovation as a tool/instrument that will hopefully prevent another global economic crisis. That being said, companies, economies and societies need to transform into more knowledge-based ones, thus fostering innovation and providing new ways/methods of acting in a more viable and sustainable manner.*

Keywords: economic growth, innovation, innovation management, strategy, technological innovation.

JEL classification: L10, L26, O32, O40.

1. Background

In the past years, the concept of innovation has become a subject which is receiving more and more interest from experts and specialists worldwide. This term is related to a variety of other concepts/indicators that are known to cause among others, overall increased productivity for companies and other entities, regional development and economic growth.

Innovation, whether it is managerial or technological, is without a doubt a source for competitiveness, which in turn creates a series of advantages for its "holder", giving him an advantageous edge in regards to the competitors. Since, in the current context, organizations (which are a vector for growth, for the countries which they are part of) are faced with a multitude of overwhelming changes and challenges, the issue of performance is becoming a matter of knowing how to be creative in dealing with problems and of knowing in what to invest. For example, investments in R&D (research and development), even though it's not a "fits all" solution, can be the way to go for companies focused on increasing their competitive advantage in a sustainable manner. In the cases in which this does not apply, regardless of the reason (i.e. insufficient funds, few specialists, the domain of activity), the way to go is to use managerial innovation as a strategic option which can guide the company towards a better future, without changing the company's core values and activities, but through adapting its outlook on how things should be done.

2. Theoretical framework

In order to have a better knowledge on the concept of innovation and its linkage to economic growth, as well as on the relationship between these two terms and others that have a direct influence over them, we believe that a literature review is necessary. This section of the article is comprised of several definitions and opinions of different authors and specialists from this field of expertise, which will allow us to further investigate the dynamics between innovation and economic growth.

According to Schumpeter, innovation is an activity that creates economic growth (Schumpter, 1934). The subject of innovation is one discussed and studied by a multitude of experts, the vast majority of them, considering that innovation has, without a doubt, positive effects that cannot be neglected and that are obvious, if it is handled and managed in an appropriate manner.

Innovation consists of the generation of a new idea and its implementation into a new product, process or service, leading to the dynamic growth of the national economy and the increase of employment as well as to a creation of pure profit for the innovative business enterprise (Urabe, 1988).

"One criticism of Schumpter's innovation definition is that it is rather diffuse. There are no exact boundaries for the phenomenon. Schumpter was more concerned with economic development than with accuracy of definition…The core of Schumpeter's definition is that innovation is an effort made by one or more people which produces an economic gain, either by reducing costs or by creating extra income. The economic gain is in this case not created – as in traditional economic models…A qualitative change is necessary before it can be called innovation"(Sundbo, 1998).

"Innovations are not to be considered as transformation of new (scientific) knowledge into new processes, products and services, but as a largely endogenous process of creating new combinations from existing technologies" (Frenken, 2006).

In terms of the way in which innovations occur and happen, there are two types of innovations, namely: radical and incremental. "Effectively, incremental innovation deals with incorporating new knowledge into existing products and services. It is used to solve emerging problems with the aim of increasing the efficiency and effectiveness of existing products or processes. In contrast, radical innovation involves a whole set of new knowledge and its advent is like a tidal wave sweeping across the industry landscape" (Liyanage, et. al., 2006).

According to authors Margaret White and Garry Bruton in their book: "The Management of Technology and Innovation: A Strategic Approach", the management of innovation is "a comprehensive approach to managerial problem solving and action based on an integrative problem-solving framework, and an understanding of the linkages among innovation streams, organizational teams, and organization evolution" (White & Bruton, 2011).

Not all innovations end up producing benefits, and some in fact destroy value, but we would argue that by innovating, a firm at least tries to produce some private rents, that is, competitive advantage for the firm (Pitsis, Simpson, & Dehlin, 2012).

"The era of the innovation economy is already transforming the leading companies in each industry worldwide, and forcing them to compete in entirely new ways that take advantage of this vast array of changes. Simultaneously it is causing entrepreneurial firms to arise, and together this is causing major disruptions in all industries as we knew them in the 20th century" (Davenport, Leibold, & Voelpel, 2006).

3. Innovation: a viable strategy for future economic growth

Transition to knowledge-based economy – the most important process that takes place in these decades – has as a defining element the amplification of creativity and innovation, in dimensions never seen before, which generates strategic knowledge, ultimately decisive in achieving competitiveness (Popa, 2011).

In this new economy, the knowledge-based economy, the central "player" is the knowledge based organisation. This new type of organisation is a more efficient and performance oriented entity that focuses its activities on the creation of new knowledge and its most precious resource is the human one. This new type of management, knowledge management, is beneficial to organisations due to a number of benefits that it can create, among which is that the core employees of the company are highly skilled specialists, that are more likely to create innovation and are more likely to be able to properly capitalize it. As a rule of thumb, the organisational culture of an intensive knowledge oriented organisation is based upon continuous learning, know-how transfer and creativity (that can ultimately lead to the creation of innovation). Due to the emphasis on knowledge transfer, the knowledge-based organisations are more flexible when confronted with change, and can implement more easily and effective its strategy thus resulting in the completion of its objectives.

Innovation management is paramount for strategic management and is manifested in the ability to outline bold new strategies, to set based on them effective policies of implementation and to quickly find corrective solutions when the adopted strategy does not give the expected results. In the company of the future, the emphasizing of managerial innovation is provided, given the fact that the changes in all areas of activity of the company are increasingly broader and more frequent. It is natural, in these circumstances, to expect the acceleration of the pace of obsolescence of innovation in management, which means, once again, that it should become increasingly dynamic, creative and flexible. It might even get to the situation where the introduction of managerial innovations precede those of a technological nature, in order to facilitate the achievement of the latter and significantly enhance their beneficial technical, technological and economic results (Popa, 2006).

Knowledge-based economy represents the newest form of economy, that focuses on specialized human capital and that is technology intensive. As mentioned above, these highly skilled and specialized employees are able to create innovation, but also, through their expertise and with a little bit of help from an adequate organizational culture, they are able to foster an environment that is supportive of learning, know-how transfer and creativity. This emphasis on the human resource, that knowledge-based economy has, is due to the fact that, the management of knowledge-based organizations understood the potential of skilled employees and managed to support them in creating innovations, thus enabling the organization to develop and expand. This expansion refers to, not only higher annual turnovers and profits, but also to the fact that the organization will have more resources to better train employees, to hire new ones and to keep funding R&D projects or even to start new ones.

It must be kept in mind that innovations does not refer only to technological innovations (i.e. a new way of organizing data, so that the access to it is greatly enhanced) but it can also refer to an managerial innovation (i.e. a new way of project management that lowers the risks and ensures that a certain project is going to be implemented correctly and by meeting the deadlines and milestones).

Seeing how many ways innovation can aid an organizations' growth, it is not hard to imagine what will happen to a region, from an economical and social point of view, if more and more companies from within would adopt this modern style of management. If we take a look at Silicon Valley from California, we can see that it has one of the highest innovation rates in the world. Other regions with high innovation rate are Central and Southern Germany (Munich and Stuttgart) where big automotive engineering companies reside and fund research and development projects, and the metropolitan region of Seoul, where we can find big multinational companies and smaller ones that have adopted knowledge-based management and increased their innovational potential and the regions overall innovational potential.

Table 1: Growth rate of GDP of the top 4 countries according to GDP

Country	Growth of GDP (%)								
	2005	2006	2007	2008	2009	2010	2011	2012	2013
United States	3.4	2.7	1.8	-0.3	-2.8	2.5	1.8	2.8	1.9
China	11.3	12.7	14.2	9.6	9.2	10.4	9.3	7.7	7.7
Japan	1.3	1.7	2.2	-1.0	-5.5	4.7	-0.5	1.4	1.5
Germany	0.7	3.7	3.3	1.1	-5.1	4.0	3.3	0.7	0.4

Source: made by author with data from The World Bank (**http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG**)

Table 2: Number of patents of the top 4 countries according to GDP

Country	Number of patents								
	2005	2006	2007	2008	2009	2010	2011	2012	2013

United States	82586	102267	93690	92001	95038	121178	121257	134194	147666
China	565	970	1235	1874	2270	3303	3786	5341	6597
Japan	31834	39411	35941	36679	38066	46977	48256	52773	54170
Germany	9575	10889	10012	10085	10352	13633	12967	15041	16605

Source: **http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_all.htm**

One way that we can measure a country's' innovational potential is by examining the number of patents from the given country. In Table 1, the situation regarding the growth of GDP (gross domestic product) of 4 most powerful economies from the year 2005 until 2013. In Table 2, given the same time span, the situation of the number of patents recorded in those countries. As we can see from the first table, in 2008 all 4 national economies suffered blows, in the sense that the growth was negative in the case of the United States of America and Japan, almost stagnant for Germany, and Chinas' growth dropped by almost 5%. In 2009 the downwards trend of the GDP growth rate continued for all 4 countries. When we take a look at the second table, with the number of patents, in 2008 the value decreased, when compared to values from 2006 and 2007. In the case of China, we can observe that the number of patents does not follow the trend of those from the other 3 analyzed countries. One of the reasons this is happening, may be because the Chinese economy is mainly based on massive factories that mass-produce items, which are mostly destined for export.

For countries to be able to grow in a sustainable way, it is imperative to invest in research and development. By doing this, and by encouraging the organizations, that reside within it, to adopt the new knowledge-based management system, they will foster innovation, that will lead to the development of the companies and, inevitably, to the sustainable economic growth of their national economies.

At European level, the European Council understood this very important and sustainable way of economic growth, and included in the 2020 Europe Strategy, performance indicators for each Member of the European Union, for the percentage of the gross domestic product that is invested in research and development activities. Also, to increase the European Union's innovation potential, a project called Horizon 2020 was started, with the main objective being to fund R&D projects that firms or other entities want to undertake.

4. In conclusion

In conclusion, we believe innovation to be a relevant and current concept in the context in which the contemporary society exists. Its positive effects and benefits should not be taken lightly, even more, now, when worldwide economies are struggling to prevent another major global economic crisis. The obvious linkage between innovation and economic growth underlines the fact that further research should be taken into account in order to find new ways and approaches by which the advantages caused by innovation can become increasingly more visible and so that both companies and other entities could profit on this behalf, and in turn create added value for the overall economies.

The reason why innovation should be seen as a strategic option for future economic growth is that in order to reach a level of productivity and performance that is sustainable, the vision of the companies/economies/societies needs to be a long-term one and needs to focus on the main objective which is increased economic growth.

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OPPORTUNITIES OF EXERCISING THE ROLE OF AN ACTIVE STUDENT AS A PREMISE OF STUDENT-CENTERED EDUCATION IN THE ECONOMIC SCIENCES FACULTY OF THE UNIVERSITY OF ORADEA

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Abstract: This paper presents the opportunities offered by the Economic Sciences Faculty from Oradea regarding the taking of the role of an active student as a condition of the student-centered education. It also includes a quantitative research on the availability of the first-year students to take the role of active students by involving themselves into the curricular and extracurricular activities. The research method was a survey based on a questionnaire on a 92- student sample. We have also developed a qualitative research based on the focus group method in which seven students of the faculty participated. Starting from the research results we have suggested a series of extremely important projects to implement the student-centered education within the Economic Sciences Faculty from Oradea, the most important being: Excelsior - the involved student community, the professional portofolio of the students and the student magazine Excelsior.
 The ideas presented in this paper are to represent a part of a good practice guide on implementing student-centered education within a high educational institution. The concern for this concept is determined by the current context of the high educational system in Romania characterized by: the intensification of the competitive environment; increasing employers' demands; increasing high school graduates and students' demands towards the quality offered by a high educational institution; the performance indicators used by ARACIS in the evaluation of the universities, a very relevant example being the graduates' professional route in the labour field. We are convinced that the ideas presented in this paper are important to the decision factors from the academic environment, factors that should initiate and facilitate the implementation of the student-centered education concept.

Keywords: active student, student-centered education, good practice guide on implementing student-centered education.

JEL classification: A23

1. The analysis of the current situation on the opportunities to assume the role of an active student as a premise to the student-centered education within the Economic Sciences Faculty from Oradea.

"*I never teach my students, I only attempt to provide the conditions in which they can learn.[19]*". The statement of the great scientist Albert Einstein demonstrates the fact that he practised a student-centered education even more than half a century ago. In the nowadays context, the high educational institutions in Romania strive to implement this paradigm of the student-centered education at the level of current everyday practice. The

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[19] Student-centered education – guide for students, teachers and universities – The European students Union, pag. 26 - http://www.anosr.ro/wp-content/uploads/2012/07/2012-Toolkit-ICS-cadre-didactice1.pdf - 20.03.2014

specific conditions of this context that put more and more pressure on universities to implement SCE are:
- ✓ The intensification of the competitive environment due to the emergence of private universities in the Romanian academic environment but also of foreign universities providing more and more advantageous facilities to high school graduates in Romania while their number is reduced. In these conditions high school graduates have many options of choosing the university they want to attend.
- ✓ Increasing the employers' demands, a greater and greater part of job offers coming from the corporations.
- ✓ Increasing the high school graduates and students' demands toward the quality offered by a high educational institution.
- ✓ The performance indicators used by ARACIS in the evaluation of the universities, a very relevant example being the graduates' professional route in the labour field. The performances recorded by these significantly determine the financial resources allocated from the state budget.

In this context, in the past years, The Economic Sciences Faculty from Oradea (ESF) made a constant and sustained effort to implement the student-centered education (SCE). Next we inventory and present only some of the projects undertaken by the ESF in order to give students the possibility to assume an active role in their institution, this being an underlying condition of SCE.

A. Student circles and associations are extremely important organizational structures for providing our students extracurricular experiences. There are nine student circles in The ESF[20]. All of them offer the ESF students many opportunities for learning and experimentation which can significantly contribute to their professional and human development. For example Excelsior's plan of activities for the academic year 2013-2014 is entitled "Entrepreneurship and voluntariate". Within it they carry out a series of activities that encourage entrepreneurship and voluntariate idea, we develop necessary skills for this, we provide models and opportunities to let them express themselves effectively in both directions. Regarding student associations, the ESF students have the opportunity to become members and/or to work in one of the largest global young people association , AISEC[21].

B. The encouragement and support of the student participation in competitions like student Olympiad, scientific communications for students, Talent Scholarship. Relevant in this respect are the places of our students in these events : first place in 2012 at the national stage of the Management Olympiad, and the grand prize won in the 2013 at the national stage of the Marketing Olympiad.

C. Partnerships Development with NGOs and representative companies in Oradea and Bihor county where they organize: work visits to companies, internships, practice stages, inviting business representatives to lectures, seminars and other events organized by the ESF. There are relevant partnerships with: Celestica located in the top five largest companies in Bihor county; Oradea Community Foundation, one of the most active NGOs from Bihor and which hosts numerous programmes for young people. To highlight the importance of these partnerships, we will present some of the activities with Celestica:

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[20] *** http://studentocratia.com/informatii-utile/cercuri-stiintifice-studentesti/facultatea-de-stiinte-economice/31.03.2014

[21] *** http://aiesecoradea.ro/ - 31.03.2014

- ✓ Work visits to the company, with the students. One of these took place on 4.04.2014. The visit called „**Quality in action. Good practice – Celestica_SRL-Oradea facility"** was meant to present the students what quality culture is and the quality instruments used by the company.
- ✓ The development of our students' practice stages in the company. Regarding this, Celestica company contribution in the Practeam project by the ESF has been significant.
- ✓ Annual internship offer for the ESF students
- ✓ Company giving a scholarship to a student after a strict evaluation process.
- ✓ A free course developed by the employees of Celestica company inside the ESF, called Supply Chain Excellence. Here, the participant students are trained to have a job in a certain department of the company.
- ✓ The participation of the company representatives in a series of events organised by the students and the ESF.

This bringing together of the universitary environment and the socio-economical one represents a priority for the ESF. Thus, the chances for our students to be according to the demands and, consequently, to find a suitable job, are considerably higher.

D. The elaboration of some subject records focused on the students' practice, on the development of some skills coming from the concept – learning by doing. The simulations and management projects subject from the management study programme as well as the simulations and marketing projects subject from the marketing study programme are relevant examples. These school subjects encourage and support the students to think and act as managers, marketers, respectively. Not only do they have to elaborate a project on a certain topic but they also have to implement it. Their evaluation is according to the level of their project objectives and also according to the efficiency of their accomplishment.

E. The constitution and the good working of the Consultativ Council at the level of the study programmes managed by the ESF. This is an opportunity for the managers and the teachers of the ESF to be familiar with the employers' requirements towards the graduates and also towards the students, through the students members of the council. In the same time it is a chance to mobilize resources outside the ESF in order to develop some value adding projects for our students and teachers.

F. The encouragement of the students' voluntariate through the procedure of The University of Oradea regarding the granting of the transferable credits for this kind of activitiy[22] and through some partnerships with the NGOs in Oradea, where the students can be actually involved in the voluntariate. The students' revaluation of these voluntariate opportunities considerably enlarges their experience portofolio so necessary to the human and professional development.

G. Mentor actions of the ESF students. These actions were initiated at both Management and Marketing Excelsior Circle and ESF levels. In this programme the students in the third yesr of study were to become the mentors of the students in the first year of study. The purpose is to improve the ESF student experience for those in the first year and to develop the feeling of involvement and belonging to the ESF of those in the third year. These represent only a part of the ESF projects which offer the students very interesting opportunities to assume the role of active students, students involved in the life of the university in which they study.

2. Study concerning the availability of the students in the first year of study to agree with SCE in The ESF

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[22] *** https://www.uoradea.ro/tiki-searchresults.php?highlight=voluntariat&boolean=on&search=Ok – 31.03.2014

The role of this study is to measure and analyse the availability of the first year ESF students to assume the role of active students, involved students. The purpose of the research is the substantiation of the decisions concerning the projection of the curricular and extracurricular ESF activities to successfully implement the student-centered education concept.

The research method is a survey based on a questionnaire. The research was done between 17- 21.03.2014, the statistical population being represented by 92 first-year students of the ESF from Oradea. We will present below the results of this research.

For a start we wanted to find out about the first-year students' current degree of involvement in all the activities of the second semester in the faculty in which they study. On a scale from 1 to 5 we got a result of 3,62 for the involvement in the curricular activities and 2,05 in the extracurricular ones. From our point of view, the involvement in the extracurricular activities is pretty reduced whereas the other one is moderate, both being likely to be significantly improved.
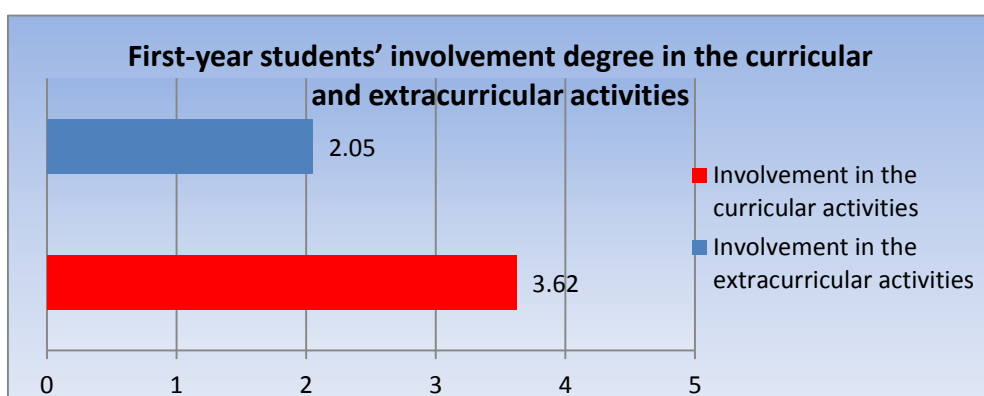

Figure 1: First-year students' involvement degree in the curricular and extracurricular activities

The results regarding the students' availability to get involved in the curricular activities in the next two years of study are presented in the chart of figure 2. What can be noticed here is that the greatest availability is related to the actual participation in lectures by asking the teachers questions and giving them the feedback, as well as by creating and presenting essays, projects, reviews and practical works. The lowest availability is related to the study of the expert bibliography.
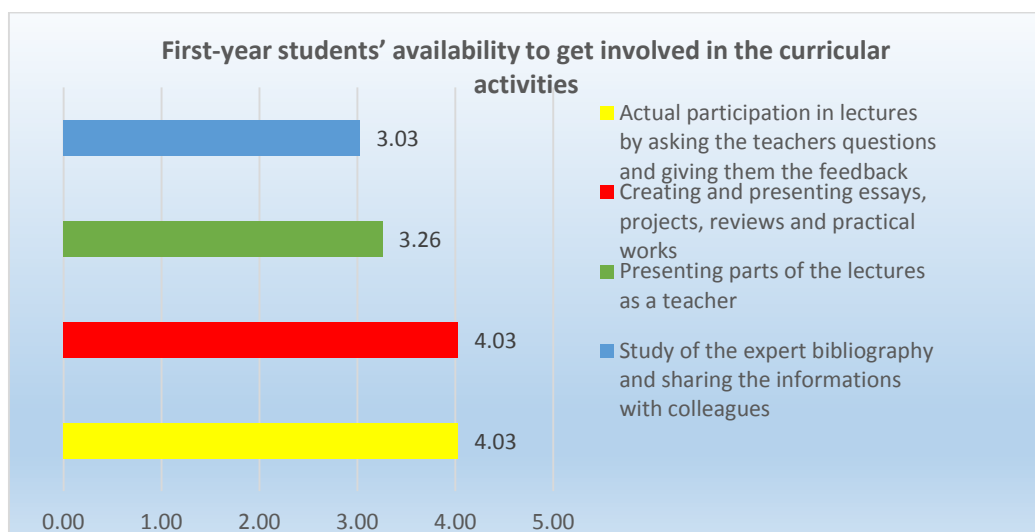
Figure 2: First-year students' availability to get involved in the curricular activities

The results regarding the students' availability to get involved in the extrcurricular activities in the next two years of study are presented in the chart of Figure 3. What can be noticed here is that the greatest availability is related to the participation in work visits to companies and to the participation in internships in companies. These are excellent opportunities to gain practical experience. The lowest availability is related to assuming the mentor role for the younger colleagues and to the participation in scientific communication sessions dedicated to students and/or student olympiad. An average level of availability was shown regarding the involvement in student circles and/or associations and taking the volunteer role.
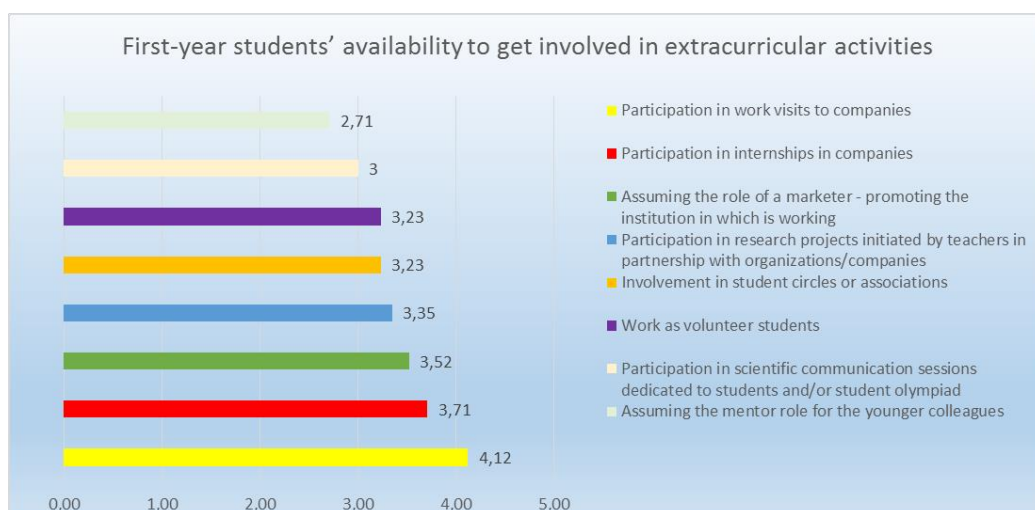

Figure 3: First-year students' availability to get involved in extracurricular activities

3. Future projects concerning the student-centered education at the Faculty of Economic Sciences in Oradea

These future projects regarding CSE at the ESF started from the results of the research presented above, from the focus group organized with the students and from the discussions with the teachers of the Management Marketing Department of the ESF. We will present a part of these projects.

3.1 Excelsior – the community of the students with initiative. Through this project, the current student circle Excelsior, coordinated by teachers is to become the exclusive or almost exclusive property of the students. The management team will be exclusively formed by students who will benefit from the support of teachers. Excelsior will develop its activity as legal entity/person as a non-government organization.

The role of this structure and project is to offer the students a series of extracurricular opportunities which allow them the human and professional development. Excelsior will manage a portofolio of multiannual activities but it will also organize activities specific to a certain topic during the university school year. For example, the topic of the university school year 2013-2014 for Excelsior was entrepreneurship and voluntariate and for 2014-2015 is the financial education of the students. What they would like for the continuous activities of Excelsior community are the following:

a. The management of some partnership with business and non-profit environment for:
    ➢ organizing work visits with the students to high reputation Romanian companies
    ➢ the management of an internship portofolio which can be accessed by students;
    ➢ the access to job offers for which the ESF students can apply too;
    ➢ the development of practice stages of the students in the second year of study;
    ➢ inviting the business environment and non-profit field representatives to lectures, seminars and different organized events;
    ➢ the participation in training and events organized by the business environment and non-profit field;
    ➢ getting some sponsorship necessary for the development of some projects and activities;
    ➢ the performance of some services for the small and medium firms (creating the visual identity, naming, creating sites and facebook pages, on-line promoting, mistery shopper services, etc).
b. The support of the educational process of the ESF in close cooperation with the teachers.
c. Partnerships with other student associations for the experience exchange and for developing together some activities and projects.
d. Access some financing sources dedicated to the non-profit field through the development of projects and their implementation after. This way important resources can be obtained in order to create the necessary conditions for an activity and also to motivate the students to get involved.

3.2 Students' professional portofolio is a project at the first stage of implementation, as the students in the first year of study are asked to create their site where to develop their professional portofolio. This project should be continued with the following:
    ✓ Informing and educating all ESF students about the professional portofolio development necessity and opportunity
    ✓ The development by the students of our faculty of a good practice guide about the creation and the management of the professional portofolio.

✓ Providing students opportunities to enrich the professional portofolio (this aspect is also presented in 3.2).

The purpose of students' professional portofolio is to give them higher chances to become integrated in the labour market, on the one hand due to their high education, on the other hand due to the superior way of behaving at an interview or job exam.

3.3 Excelsior is a student magazine in which:
✓ the students in the economic field can publish expert articles to share their knowledge with their colleagues;
✓ they present interesting information about different opportunities students can access: Erasmus scholarships, jobs, internships, activities of the initiative students' Community , etc.
✓ students write about their own experiences with: Erasmus scholarships, Work & Travel, student camps, voluntariate, trips, entrepreneurship, working in a company, etc.

4. In conclusion
We believe that the three projects we have presented will significantly improve the experience of the ESF students with positive aspects for all the stakeholders: the students through satisfaction and three years of human and professional development; the faculty through a pleasant work environment for the teachers and consequently high work satisfaction due to the content of their customers who will become the most important promoters of the ESF; business environment and non-profit department which will benefit from well trained workforce, with a value system focused on involvement and work performance; community through responsible and educated citizens.

Under the circumstances, the continuous effort to implement the SCE at the ESF is a priority. The success of this process is conditioned by the constant effort of all the stakeholders: students, teachers, the management team of the ESF, business environment and non-profit department.

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THE EXISTING BARRIERS IN IMPLEMENTING TOTAL QUALITY MANAGEMENT

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Abstract: *In the current market economy, companies are constantly struggling to achieve a sustained competitive advantage that will enable them to improve performance, which results in increased competitiveness, and of course, profit. Among the few competitive advantages that can become sustainable competitive advantages, quality plays a crucial role. Recent research shows that about 90% of buyers in the international market, consider quality as having at least equal importance with price in making the decision to purchase. In the opinion of some specialists in economic theory and practice, total quality refers to the holistic approach of quality, which actually means, addressing all aspects of economic and social development and technical of quality. Thus, the holistic approach of quality at organisation-wide involves procedural approach of quality, in this respect, the study focuses on this type of quality approach, i.e. the procedural approach, taking into account the strategic aspects of the continuous improvement of quality, which means in fact, the quality management. Total Quality Management is seen as a way to transform the economies of some countries to be more competitive than others. However, Total Quality Management brings not and will not produce results overnight, it is not a panacea for all the problems facing the organization. Total Quality Management requires a change in organizational culture, which must focus on meeting customer expectations and increasing the involvement of all employees to meet this objective, as an expression of the ethics of continuous improvement. In general, research on quality aiming identify why an organization should adopt the principles of total quality management, but attempts to identify the failing companies' attempts to implement total quality management principles are not so visible. Concerns companies to introduce quality management systems are becoming more pronounced, therefore, in this study we try to identify and present the main reasons that prevent achieving quality and implementation of total quality management system, in other words, we are interested in identify barriers to implementation and development of a quality management system.*

Keywords: Quality; total quality; TQM; TQM implementation barrier.

JEL classification: M1; M10; M19.

1. Introduction

The literature distinguish between quality management and Total Quality Management (TQM).

Quality assurance procedures for goods and services have evolved continuously In line with the socio-cultural and technological changes that have marked the rapid evolution of society. Since the 1980s, are implemented integrated quality assurance concepts whose starting point was the "new philosophy" of Feigenbaum, namely, Total Quality Control. Arouses particular interest both in literature and in economic practice, the concept of Total Quality Management (TQM) used in parallel or complementary relationship with the concept of Total Quality (TQ) (Olaru, 1999). Feigenbaum show that obtaining quality performance has the effect of increasing the competitiveness instantaneous or in short time (Whalen, 1994).

Thus, an important step in the implementation of TQM is the organization to identify the level of her quality provide through its products and services. In this respect, Sandholm (1996), identifies very suggestive, five phases of quality in organizations:

- The first phase, called "*sleepy phase*" in which companies do not feel threatened in the market, competition is weak or non-existent, and the company obtained an acceptable profit. In this situation, the quality does not receive attention from the company.
- During the second phase, referred to as "*wake-up stage*", company situation completely changes to the previous phase. Starts to lose market position, which decreases profit. At this stage the company is aware that it is in the midst of a crisis.
- "*Phase hesitation*", the company realizes that something must change. It's a phase of testing, probing tools of quality management in the idea of changing something.
- "*Action phase*" in which the company can be seen that the instruments used results, or try to make significant changes. Is the phase where there is a change in the organizational culture and improving products / services
- "*Maturity phase*" where total customer satisfaction is achieved through the perfection of each level of the organization. Quality does not only apply to products / services, but all activities of the organization. Applied total quality approach, the company naturally the quality.

2. Key aspects of TQM implementation

In a recent attempt to define the concept of TQM, Mosadeghrad (2014) states that TQM aims to enhance customer satisfaction and organizational performance by providing high quality products and services through participation and collaboration of all stakeholders, teamwork, a customer orientation, continuous improvement and process performance by applying the techniques and tools of quality management.

The literature mentions that TQM implementation is a complex, difficult, lengthy, involving huge efforts from organizations. While the TQM has been suggested, in principle, to improve the performance of the practical application involves several difficulties. The same author (Mosadeghrad, 2014) states that several studies have reported an improvement in productivity of only 20-30% due to the implementation of TQM programs (Eskildson, 1994).

To achieve TQM implementation desire, it is necessary to be aware the following issues (Ilies, 2011):

- Involvement of management in the improvement process of continuous quality basic strategic objective
- Changes in organizational culture: implementing a philosophy that confirms this focus, encourages the involvement of all staff, as well as internal customers, continuous improvement
- Introducing the change through instruction, communication recognition performance; managers' behavior; teamwork; program to meet customer expectations
- Attitude of the managers who have to use quality tools and encourage communication and feedback to ensure an enabling environment for improved quality
- Developing quality strategy by defining the mission and quality policy formulation to achieve the strategic objectives of quality
- Stimulation, education and development of staff
- Determining quality costs as a measure of poor quality that means not to meet the needs and desires of customers.

3. Stages of TQM implementation

In the specialty literature there are several steps veneers implementation of quality management system. We present some of these approaches:

An approach to the steps to be taken in order to implement a TQM system, proposes the following steps (Stegerean, 2009:281):

- *Training*: during training management decides whether or not to pursue a TQM program.
- *Planning*: developing a vision and define objectives, developing organizational policies, preparing resources, and communicate throughout the organization detailed implementation plan (including budget and programming time), infrastructure and resources.
- *Evaluation*: this stage provides a thorough self-assessment based on the information received from the customer organization, characteristics of employees and the organization as a whole;
- *Implementation*: during this stage, are trained both staff and managers of the organization. Training involves inform each employee of the organization about what it means and implies TQM respectively be explained based society is its role in the organization and what is expected of him.
- Diversification: at this stage, managers will use experiences to integrate groups outside the organization (suppliers, distributors, and other companies that have a significant impact on business) in the quality.

Another model that we present, proposes a different approach to the stages of implementation of TQM, in the sense that the author (Dale, 1994) suggests that the implementation stage is the stages of evolution of the concept of quality: from quality inspection to TQM (Abdullah, 2010):

- *Inspection* - in this phase, the organization is concerned with activities such as examination, measurement, test and evaluation and ensure that the product or service conforms to specified requirements.
- *Quality Control (QC)* - methods and systems are used as part of the self-inspection.
- *Quality Assurance (QA)* - focus on continuous improvement through a systematic planning and preventing errors occurring from the source case.

- ■ *TQM* - involves the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with key business processes.

4. The existing barriers in implementing total quality management

Understanding the factors that are likely to impede the implementation of the TQM allows managers to develop more effective strategies for improving the chances of successfully deploy TQM and thereby to achieve excellence in the business (Jacobsen, 2008).

In the literature there are a multitude of studies that address very different ways for the identification of the factors that hinder the successful implementation of TQM. We will emphasize some of the approaches which describe barriers (and the causes which they determine) which prevents the application of the system of quality management.

Whalen (1994) identified the following barriers that hinder the implementation and development of a programme of TQM:

- ■ Poor planning
- ■ Lack of management commitment
- ■ The strength of the labour
- ■ Lack of appropriate training
- ■ Complacency team
- ■ Use of an invalid program (outside of shelf-life/moral)
- ■ The inability to change the organizational philosophy (culture)
- ■ Insufficiency of resources
- ■ The lack of improvement of the quality of the measurement.

Other authors, Sebastianelli and Tamimi (2003), have identified five barriers in the implementation of TQM:

- ■ Poor planning
- ■ Practice management and development of human resources insufficient and inadequate
- ■ Lack of quality planning
- ■ The lack of leadership in the development of a quality culture
- ■ Inadequate resources for TQM
- ■ Lack of customer orientation.

Johnson (2013) argues that the main barriers were found to be the lack of benchmarking and employee resistance to change. Organizations must understand that benchmarking is a tool used to identify strengths and weaknesses in comparison with the best companies in their industry. Employee resistance can be overcome by appropriate training and involving them in the planning and implementation phases of TQM. It was also found that insufficient resources were an obstacle to the implementation of TQM.

Another author, Mosadeghrad (2014) addresses the barriers to deployment TQM in a more complex way, in the sense that its research was carried out in 23 countries, of which 28 studies were conducted in developed countries, and 26 studies in developing countries.

It states that the research conducted since the 1990s (Mosadeghrad, 2014) have shown very high rates of failure in the implementation of the TQM, authors like Schonberger, (1992); Eskildson, (1994); Elmuti et al., (1996); Tata and Prasad, (1998) reported increases of only 20-30% performance improvement organizations after implementation of the TQM, while Burrows in 1992 reported a failure TQM rate of 95% (Sebastianelli, 2003).

While the TQM was ranked first among all the techniques for quality improvement in 1993, it reached 15% in 2007, according to Rigby and Bilodeau (Mosadeghrad, 1986).

These statistics have made Mosadeghrad (2014) to wonder whether the TQM has gotten just a "fad" of management. It is important first of all to understand the reasons for the failure of the TQM. In this respect the author summarizes the reasons responsible for the failure of the TQM addressed in the literature, and that have been classified into three groups (Mosadeghrad, 2014: 162):

■ *Ineffective or inappropriate TQM models*: TQM does not provide an explicit theory. There is little agreement on what is and what its essential characteristics are. Basically, a TQM model consists of two components: values and principles (e.g. the top management implication, customer focus, employee involvement, teamwork, etc.), and techniques and instruments (for example, statistical control tools process). As a result, different models TQM may lead to different results.

■ *Ineffective or inappropriate methods for the implementation of the TQM*: many of the failures are attributed to TQM deployment methods according to Claver et al., 2003; Hansson and Klefsjo, 2003; Seetharaman et al., 2006. Although many quality management gurus have contributed to the development of the TQM, have offered relatively few practical frameworks and methods for TQM implementation principles. Cooney and Sackey (2003) believe that TQM offers a vision of organizational change. However, it does not provide the tools to implement such a change. Similarly, Zairi and Matthew (1995) conclude that TQM, 'heads' have been defined but not "means". As a result, there is no standard method for implementing the values and principles of the TQM in an organization.

■ *The wrong environment for the implementation of the TQM*: it requires an environment of support (supporting leadership, culture and infrastructure) to implement the TQM.

In this context, the author grouped the barriers that are preventing the implementation of TQM in five categories:

■ *Strategic barriers*: strategic issues are significant barriers for implementation of TQM and have the greatest negative impact on its success. These barriers are mainly related to the management and leadership of the organisation.

■ *Structural barriers*: are related to the structure, systems and physical resources necessary to implement the TQM

■ *Human resources barriers*: are those obstacles are related to human factors, such as lack of employee engagement and resistance to change in TQM

■ *Contextual barriers*: are those difficulties that arise when there are developed a context and a culture appropriate to achieve the highest potential of the deploying of the TQM

■ *Procedural barriers*: mainly are generated by the complexity of the processes, the lack of focus on the client, the lack of partnership with suppliers, the bureaucracy and the lack of a system of evaluation and self-assessment.

Strategic barriers:

■ inappropriate TQM program
■ barriers to the adoption of TQM
■ unrealistic expectations
■ deficient leadership
■ poor management
■ the lack of top management support
■ poor involvement of managers
■ the strength of the middle management
■ inadequate planning
■ the lack of consistency of objectives

- lack of long term vision
- the lack of a vision and a clear directions
- conflicting objectives and priorities
- the lack of priority of improving the quality
- the previous failures in terms of initiatives of change
- the lack of Government support
- political uncertainty

Structural barriers:
- organisational structure inappropriate
- lack of organizational flexibility
- lack of physical resources
- lack of information systems
- lack of financial support, the cost of implementation
- lack of time

Human resources barriers:
- the lack of interest of employees
- the lack of commitment and involvement of employees
- employee resistance to change
- a deficient human resources management
- poor delegation at all hierarchical levels
- few employees work tasks and increasingly higher
- lack of training and education of employees
- lack of motivation and satisfaction of employees
- the lack of recognition and rewarding for success

Contextual barriers:
- inadequate organizational culture
- difficulties in changing organizational culture
- lack of guidance teams
- poor communication and ineffective
- poor coordination
- the lack of confidence of employees in the management
- cultural issues resolution
- lack of innovation
- political behaviour
- the diversity of the workforce
- barriers mentality

Procedural barriers:
- lack of focus
- the lack of an adequate process management
- lack of concentration on the client
- the lack of involvement of suppliers
- bureaucracy
- lack of evaluation and self-evaluation
- the change agent or counsel incompetence in implementing quality
- ineffective corrective action
- efforts to improve quality are time consuming

It can be seen that strategic barriers are the most common types of barriers that hinder the successful implementation of TQM system. Also, the human resources barriers have a very large impact on the success of TQM implementation.

We can affirm that, within both the strategic-level barriers and the barriers related to human resources, leadership is a key factor in managing change necessary to implement the TQM.

5. In conclusion

TQM is seen as a way to transform the economies of some countries to be more competitive than others. However TQM brings 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 must focus on meeting customer expectations and increasing the involvement of all employees to meet this objective, as an expression of the ethics of continuous improvement.

TQM implementation is a complex, difficult, lengthy, involving huge efforts from organizations. While the TQM has been suggested, in principle, to improve the performance of the practical application involves several difficulties.

TQM implementation stages are: training, planning, evaluation, implementation, and diversification.

Main reasons for the failure of TQM are: ineffective or inappropriate TQM models, ineffective or inappropriate methods for the TQM implementation, wrong environment for TQM implementation.

Implementation barriers can be divided into the following categories: strategic barriers, human resources barriers, structural barriers, contextual barriers, and procedural barriers.

Implementation of TQM is a process of transformational change within the organization and to cope with this change it is necessary that the top management of the organization (leadership) to be able to motivate, maintain enthusiasm through organization and to identify effective ways to overcome barriers they face in order to successfully complete the implementation of TQM system.

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SOCIAL RESPONSIBILITY OF ORGANIZATIONS. AN EXTENDED LITERATURE REVIEW

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Abstract: In our paper we review the general topic of social involvement of organizations, in the light of business-society relationship. For this aim we analyze the extensive international literature of corporate social responsibility, corporate citizenship, social philanthropy, sustainable corporation and other related concepts. In this endeavor we categorize the main body of knowledge in three broad areas: (1) papers investigating the definitions and measures of these concepts, including practitioners' opinions, (2) predictors of such involvement and actions, (3) effects of social responsibility manifested by organizations. The second section of our paper focuses on the Romanian literature on this topic, as it is less systematized so far. In this section we focus on the main findings of studies conducted on Romanian companies regarding CSR or related concepts. In the final, concluding section we propose a research methodology for CSR in Romania meant to clarify the impact of the most frequently considered predictors.

General context

The role of business in society, generally the relations between the economic sector and society are themes of economic though especially after the industrial development. One can discuss these topics mostly in the context of the three pillars of sustainable development: economic, social and environment. At the foundation of sustainable development lies the idea formulated in the Brundtland Commission's Report (1987) "the satisfaction of present needs wthout compromising the possibility of future generations to satisfy their own needs" (apud. Serageldin & Grootaert, 2000). In this view the need to preserve the natural resources is the core element. The environmental movements had an important contribution to rise awareness regarding the perils of exhaustion of natural resources as well as their destruction due to pollution.

Also the context of business ethics frames debates of social responsibilities of business. Classic management theorists, such as Drucker, Simon, Barnard, Freeman, referred in their work to aspects of business ethics which can be directly linked to social involvement (Joyner & Prayne, 2002).

Social involvement of enterprises is a relatively new topic, which rose both in academic environment as well as on behalf of practitioners. Concepts such as corporate social responsibility (CSR), corporate citizenship, sustainable organization or corporation, are some of the most frequently used in this field. We preferred for this review to keep the generic concept of social involvement in order to be able to retain all these concepts and forms. More, social involvement reflects better the action dimension and less the value one regarding these concepts.

What do we mean by social involvement of organizations?

CSR definitions picture a phenomenon due to which corporations act beyond their economic and legal constraints to the achievement of social and environmental goals, associated to sustainable development (Dahlsrud, 2008). However, numerous theoreticians noticed the inconsistency of usage of the concepts (Garriga & Mele, 2004), as well as the poor indication of the actions which should be considered (Matten & Moon, 2008).

A historical overview of the definitions of CSR (Carroll, 1999), reveal that most of the theories are prescriptive indicating what "must" or "should" be the companies' attitude towards society. The positive social impact of such activities derives from several sources varying from "duty to society" to the implications of a "social contract" – society sanctions the undesirable activities (Moir, 2001). Probably the most comprehensive theory explaining the need for CSR is stakeholder management developed by Freeman in 1984, which states that companies need to respond to the needs of all stakeholder primary and secondary groups (Williams & Aquilera, 2006).

Critics of these theories consider that the main concern of business is to acquire profit for their shareholders, their main responsibility resuming to this (Friedmann, 1962 apud Garriga & Mele, 2004). More, social actions and investments are pure ideology, the main purpose of these actions remain creation of profit with positive outcomes mainly for the company (Banerjee, 2007). Recent accounts also show that the effect on sustainable development is falling behind (Barth et al, 2008).

One of the most important theoreticians in this area, Archie Carroll (1979, 1991), systematized the levels and forms of social responsibility. First, at the bottom level, we find the *economic responsibility* translated by profit making (for the company and its shareholders) as well as the satisfaction of clients' needs. Secondly, organizations have *legal responsibilities*, compliance to the norms and regulations present in a society at a certain point in time. *Ethical responsibilities* represent the third level in the social responsibility pyramid. It refers to the companies answers to social expectancies, such as norms and values which influence economic activity. The last level is represented by *discretionary responsibilities*, later defined by the author as social philanthropy, comprising all the actions conducted from the sole desire to help society. However, in practice motives and types of responsibility are often not as clear-cut as in theory (Joyner & Prayne, 2002).

We will be interested more in this last level, concretely the actions through which companies get involved in society beyond their legal obligations. Namely we will consider donations, strategic partnerships, and financial aid to social causes, adhesion and promotion of a social cause. The beneficiaries of such actions can be clients, employees, stakeholders and community at large (Bibu et. al, 2010).

Measuring CSR is a continuous and complex endeavor as it comprises in several aspects which need to be considered (Turker, 2008). More, the cultural variability of values and social expectancies are hard to comprise in a single representative measure (Hemingway & Maclagan, 2004).

One step forward in measuring CSR initiatives is the development of ISO standard 26000 Social responsibility (Castka & Balzarova 2008). The key components of this standard are: *Human rights; Workplace and employee issues including occupational health and safety; Unfair business practices including bribery corruption and anti-competitive practices; Organizational governance; Environmental aspects; Marketplace and consumer issues; Stakeholder involvement; Social development* (Miron et. al., 2011)*.*

It is worth noting that one of the main counterarguments for CSR is the scandal at Enron, a company which was considered a leader in CSR practices and strategies, yet all proved

to be a lie (Banerjee, 2007; Moir, 2001). The companies entered into crisis mainly because of fraud and misreporting of data. We would consider, along with Turker (2008) that measurement of CSR should be based on actual practices rather than on value references in strategic documents.

Predictors of CSR

The most common predictors of CSR considered in the literature are the soft components of values and culture, both of individual managers, companies, and nations (Joyner & Prayne, 2002; Hemingway & Maclagan, 2004; Aquilera et al 2007; Baumgartner, 2008; Ubius & Alas, 2009; Du, et.al., 2013). These analyses point out in most of the cases that it is hard to distinguish between different levels of these values and their impact. However we consider that it is not even so important whether individual values influence such actions or it is the organizational culture effect, as these are in most cases intertwined.

Barkemeyer (2007) includes these topics in the concept of legitimacy. The author considers that it may reflect better both the business case of CSR (having the best interest of the company as its primary drive) and the response to cultural drives.

Another set of factors can be found in the level of development of organizations and its tradition (Roberts, 1992). It is argued that large companies would be rather interested in social issues, and more, these would have the resources to invest in such actions (Aquilera et al 2007). Most analyses focus on large companies and such a conclusion must be based on a systematic comparison of large, medium, and small enterprises.

We must note also that the effects of policies are also investigated as influencing CSR practices. Regional and national legislations were formulated in order to promote social responsibilities of companies. Though these legislative initiatives vary quite significantly between countries (Albareda et al. 2007) their effect can be noted in many instances (Doh & Guay, 2006).

Effects of CSR

As stated in the second section of this paper, most theories on social responsibility are normative. Starting with Bowen (Carroll, 1991) most of the first theorists considered social responsibility an obligation for business. More, in this period, the negative effects of noncompliance with ethical correctness was discussed more than the positive effects of "doing socially good".

However, several positive effects were highlighted. First, costumer fidelity was demonstrated by the Walker Information survey in 1994 (quoted by Joyner & Prayne, 2002). Customers declared they would rather buy products form socially responsible companies. In the same manner, employers' fidelity was argued for by several studies (Joyner & Prayne, 2002; Bibu et. al., 2010). In this line of thought sustainable competitivity of corporations is a concept comprising of public trust and support as an effect of social responsibility actions (Porter & Kramer, 2006).

Social involvement of Romanian businesses

Romanian studies on corporate responsibility increased in the last years, however little systematic analyses on representative samples were conducted. Most of them focus on managers' opinions on CSR (Bibu et. al., 2010; Rosca, 2010, Obrad et.al. 2011). Also some investigation was dedicated to the analysis at the level of achievement of European standards by Romanian companies (Olaru et. al., 2011). Other analyses review practices of social responsibility as observable on companies' websites (Băleanu et al, 2011). Most of these analyses prove that Romanian companies are still at an incremental stage of social responsibility involvement (Olaru et. al., 2011), with actions visible at the surface yet with few strategic orientations (Băleanu et al, 2011).

Future research and final discussion

Based on this review and the limits previous research especially in Romania, we propose a brief methodology which would give important insight in these matters. We consider that the main questions such a study should address are the following: *(1) which are the actions of social involvement characteristic to Romanian companies; (2) how do companies choose the areas of social involvement of Romanian companies, and (3) which are the factors influencing the involvement of companies in social activities, in comparison to companies without such involvement.* Answering such questions contextualize the discussions regarding CSRin Romania and also complete the systematic analysis of the drivers of social involvement of organizations. Regression models would allow us to fill in the gap of a comparison of different drivers of CSR.

There should be two main phases in such an analysis, after the literature and policy level reviews. The first should permit the construction of a typology of social involvement of Romanian organizations. Such a typology can be elaborated by systematic analysis of data available on companies' websites, official reports and statistics. Second a survey of practices and opinions of managers is needed to assess the impact of different drivers both in involvement vs. non-involvement in social responsibility actions, as well as to explain the choice of a particular field of social investment. In this regard it is essential to construct a stratified sample, comprising of firms involved and not socially, and also firms involved in different CSR activities. Such a sample should reflect the general economic area, in terms of size, activity domains, age and other aspects.

The authors of this article wish to continue investigations in this area, by implementing the main directions of this methodological frame.

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