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CORPORATE ENVIRONMENTAL RESPONSIPLITY: ONLINE DISCOURSE PRACTICES IN THE JORDANIAN ENERGY SECTOR

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Abstract: *Over the recent years, and like many other countries in the world, Jordan interest in the concept of corporate environmental responsibility have been increased. And a lot of companies in the country are directly or indirectly involved in one or more environmental responsibility activities. This paper intends to examine the leading Jordanians energy companies' CSR practices focusing on the environmental dimension in order to determine to what extent they are fulfilling their reponsiplity toward the environment. A desk-based research conducted with the intention to use content analysis as a research tool to assess the web site, and the online CSR communication of the three biggest oil companies in Jordan, Total Jordan, Manaseer Oil&Gas and the Jordan petroleum refinery companies were licensed in 2016 and will each receive a third of the imported fuel and companies will sell fuel directly to consumers through fuel stations across the kingdom of Jordan. We found that the energy business organizations specifically the oil companies in Jordan are aware of their responsibilities towards the environment and committed to their environmental responsibility within their CSR framework as manifested in charitable and philanthropic work through the partnership with the official institutions, especially the municipalities, universities, schools, moreover, the Environmental aspect represented only a small part of their CSR activities compare to the other dimensions. Further, the impact of these CSR practices, including the environmental initiatives, ends with the end of the event or activity, what makes them take the character of advertising and propaganda, rather than environmental initiatives aimed at achieving long-term impact and create sustainable value. Also the three companies failed to introduce social reporting systems which measure not only Economic success but also environmental performance. In addition, the limited number of activities, incomparable with the message of commitment to the environment presented by the company's, the websites.*

Keywords: *corporate environmental reponsiplity; Jordan; energy companies; CSR.*

JEL classification: *Q01; Q56; Q49; Q53.*

1. Introduction

Over recent years there has been an increased interest in the concept of corporate environmental responsibility (CER) (Holtbrügge and Dögl, 2012) as a response to Pressure from shareholders and NGOs to local community groups, media, influencing companies decision makers to pay more attention to environmental impact of their working operations, and as (Hume and Olarn 2013) mentioned that problems are closely related to the energy industries, as an oil leak will threaten natural resources. Thus, as far as the energy business organizations are considered

to have high environmental impacts, it makes this sector particularly relevant for such a study.
In the Jordanian context, Hadadin. (2007 stated that "A rapidly expanding population, industrial pollution, Jordan's absorption of hundreds of thousands of people has resulted in the over-exploitation of many of its natural resources''. Also According to the country profile in Agenda 21 (Johannesburg Summit 2002); ''Jordan is highly dependent on its poor environment, ensuring that environmental resources-water, soil, plants and so on- are used in a sustainable manner is one of the most urgent obligation to the principles of sustainable development confirmed at the Earth Summit in Rio de Janeiro in 1992''.
In light of this situation the government implemented a legal framework to support its efforts to protect the environment, The Ministry of the Environment established in 2003 under the Environment Protection Law No. (1) Of 2003, a step forward to achieve environmental performance on a better scale and in confronting environmental problems. With the passage of time, it came up with a variety of specific environmental laws, policies, strategies, monitoring and enforcement and by mainstreaming environmental concepts into all national development plans. Now, it seems that Jordan is on the right track. Where Focusing on the environmental aspect of business organizations is becoming more important than ever, and there is an increasing trend by the private sector towards acquiring international environmental and quality control certificates, such as the ISO 1400, HACCP and OHSAH 18001 (Al-Dmour, 2011).
This paper focuses on CER activities of big oil companies in Jordan, The three companies analysed in this paper operate in the same sector, therefore are governed by the same sector specific regulations. One by One, they were licensed and will start importing fuel, The three companies will be engaged in improving services and competing in the market, The first one is Manseer Oil & Gas a local private sector owned company, the second one is the Jordan petroleum Refinery Company a state-owned Enterprise, and the last one is TOTAL-Jordan which is multinational company which operates in Jordan.
Through this paper, we will discuss theoretically the concepts of the environmental responsibility as one of the main dimensions of social responsibility, as well as reviewing the drivers that motivate companies to implement CER programs and finally will answer the main question of this paper which is: to what extent are the oil companies in Jordan committed to the environmental dimension of their social responsibility?

2. Methodology

The goal of this paper is to understand, the current status, of the environmental reponsiplity practices among Jordanian oil companies, a desk- based research conducted with the intention to use content analysis method of the CER communication, available online in the year 2016, the website content of the selected companies and other associated sites were explored and analysed. Other information has been collected from different articles published in different journals, periodicals, conference paper thus it's limited to the information provided through various online platforms.

3. Literature review

3.1. Defining Environmental Responsibility (CER)

Cunningham (2009) stated that "CER (a sub-category of the broader concept of corporate social responsibility), will be defined as practices that benefit the environment (or mitigate the adverse impact of business on the environment) that go beyond those companies that are legally obliged to carry out".

The corporate environmental responsibility. (CER) defined in different ways. According to Vogel (2005) is "complex and multi-dimensional". CER Vogel says CER deals with a company's relationship with the environment. ''Encompasses corporate practices ranging from natural resource management and use to waste generation and disposal, recycling, the marketing of environmentally friendly products, and pollution prevention, and control''.

3.2. Environmental and Ecological aspects of CSR

According to (Baker, 2010) "CSR means that "the company is taking responsibility for the effects of its operations on people, the Environment and business; it is about how companies manage the business processes to produce an overall positive impact on society". Also the European Commission green paper, define CSR as" a concept whereby companies integrate social and environmental concerns in their business operations and interaction with their stakeholders on a voluntary basis ". Thus, the Business's impact on the environment within the framework of the role of business in society, is what we called the environmental dimension of corporate social responsibility. In addition, Porter & Kramer (2006) argued that social and environmental responsibility of organizations has become an inevitable priority for business leaders in every country. The environment protection becomes one of the core elements of corporate social, responsibility, it is a high profile and important dimension of this concept. In the Jordanian context, According to. Al-Dmour (2011), "in terms of environmental practices he found that the foreign companies working in Jordan were more concerned with environmental stability and for solutions for a cleaner environment" also a study conducted by the vision institute for civil society in 2014 shows that a total of four hundred and forty four social activities was implemented by the business sectors in Jordan.

3.3. Drivers and Challenges of CER:

Literature revealed different factors drive an organization's effort to delivering its environmental obligations, the table below (table) presents some drivers behind implementing CER activities

Table 1: Drivers and Motives behind CER implementation

Driven by	Description	Literature
That climate change	That climate change is likely to become a major business driver over the next few years as organizations come under intense pressure to decarbonize their activities.	McKinnon *et al.,* (2010)
The media	Organizations whose managers perceived that environmental issues	Halkos & Evangelinos (2002

Driven by	Description	Literature
	could affect their organization's public image were more likely to implement an environmental management system	
Government polices &regulation	It is very clear that the dominant driver for CER is government legislative policies	KEL DUMMETT.2006
Competitive pressure	Develop the environmental technologies necessary to compete effectively in the global environmental market.	Gunningham2009
Pressure from customers	Customers have become more environmentally conscious about organization's activities, products and services	Robecosam, 2013;
Stakeholders and NGOs	Pressure from shareholders and NGOs is considered among those factors that drive organizations to initiate CER practices.	Porter & Kramer, 2006).
Voluntary agreement	Voluntary environmental programs (VEPs) are institutions for inducing firms to produce environmental goods beyond legal requirements	Potoski & Prakash (2005

Source: Authors" survey of literature on CER

While, Energy Companies in Jordan committed to their environmental responsibility within their CSR framework as presented in their website, a recent study of Elian (2014) which is based on a purposive sample of large companies out of 190 public shareholding companies registered at the Amman Stock Markets shows that CSR driving forces in Jordan included, in descending order; cultural ethics, company by law, customary rules, country law, Instructions by Associations political pressure, competitors, and NGO pressure, No companies consider customer pressure as a driving force, also stated that "SCR in Jordan is a mixture of ethical voluntary actions and legally binding through political and legislation pressure"

4. Energy Sector in Jordan

According to the ministry of energy and mineral resources, annual report, 2012, the energy sector is one of the most important sectors supporting the economy, contributing 21% of the GDP in 2012. While in 2011 97% of oil used in Jordan was imported and the country relies on oil imports for energy sources, efforts are being made to transform Jordan's energy mix to decrease reliance on oil from 82.2% to 40% by 2020. Oil shale, natural gas and renewable energy are projected to increase in percentages to make up much of the difference. The report of 2015 facts and figures issued by the ministry of energy and mineral resources showed the country production and consumption of petroleum products as presented in tables 2&3.

Table 2: Petroleum Products Consumption (Thousand ton)

Years / Oil products	2012	2013	2014
LPG	377	368	371
Gasoline	1147	1161	1187
Jet Fuel	379	357	339
Kerosene	81	63	49
Diesel	3103	2810	3274
Fuel Oil	1578	1679	2041

Source: Ministry of Energy and Mineral Resources (2015)

Table3: Local Production of oil& natural gas (Thousand ton)

Years / Oil Products	2012	2013	2014
Crude Oil (000 Toe)	1.1	1	1
N.Gas (Billion CF)	5.8	5.3	4.6
Total (000 Toe)	122	112	97

Source: Ministry of Energy and Mineral Resources (2015)

As a result, the country heavily depends on import to fulfil its domestic energy needs, and there is an almost complete reliance on foreign oil imports. In 2016 the Jordanian Petroleum and oil products, markets were opened up to competition an important move to develop the energy sector in Jordan and a major step towards more competition between the oil companies, ended the JPRC (Jordanian petroleum refinery company) decades of monopoly, and, according to the government officials reported by the Jordan times "The National Energy Strategy calls for competition to enhance the quality and quantity of oil derivatives and we believe it will be reflected in the prices,". The three fuel distribution companies operating in Jordan were licensed and will start importing fuel (www.jordantimes.com), however The Jordanian oil companies expected to accept their responsibility to do no harm to the environment and to seek ways of reducing the environmental impact to air, soil and water from their business operations in addition.

5. Analysis of the company's web sites

In the rest of this paper, we will analyse the online communication of the environmental responsibility practices of the selected companies. The websites, contents available on-line will be explored and checking the following elements: Company website includes a section for environment reponsiplity. The company produces a report for sustainability including the environmental aspect in download format; Company provides information about company-initiated environmental projects, Company web site actively communicates progress in Environmental responsibility activities, Company has a an environmental strategy and policy in download format, clarifies the company web site topics Visual elements and the narrative type with update information provided, identify the topic relevance to the company values, mission, vision, and if the Company provides contact information and framework for exchange ideas and conversation.

5.1. Manaseer Oil & Gas

A local private sector owned company established in 2012 which is the first company in Jordan to manage a chain of fuel stations with contemporary and impressive designs, The website of the company does have a CSR section, its visible and easy to navigate, where The corporate logos appear on every page as (news events, station location, fuel prices….etc.) and occupies the same space on the home page, the company introduced its identity through a slide show for its vision, mission, social values, expertise and its brand name. It's openly declared values of the company with internal policy document attached which refer to the alignment of the company to environmental standards. Narrative statements are most often used in the CSR page, accompanied with Visual elements, at the Below of the home page the section which is dedicated to environmental health and safety, plain abstract, and, business-like language stated that the company have HSE Policy, HSE management and HSE objective but all are not accessible, At the main CSR section, we can observe first the company declaration of its commitment to corporate responsibility and to the highest standard of performance, also, its include The core values of the Manaseer Group and its believe in behaving ethically with sensitivity toward social, cultural, economic and environmental issues and stated that their focus for over the past years will be on education and fighting poverty. Where the environment issue is not on the top of the list, In Addition the Company provides information about company-initiated CR projects through its both recent comments and the site archives sections. Regarding the main indicators in implementing CR practices it shows that the company web site doesn't have a team dedicated for CR with contact information for CR inquiries. Also No Presence for a sustainability report or a clear policy or strategy toward environment in a download format also without a recognized framework for collaboration with NGOs in CR initiatives. The company agenda of environmental responsiplity, includes an Initiative called" dread for homeland" use its own vehicles to open the roads that were closed due to snow accumulation.it sheds light on the role of the company as part of the development team of the community, the company initiatives implemented within a limited circle of partnership and not goes beyond the government bodies to the whole civic society institutions, however the limited number of activities is incomparable with the massage of commitment to environment presented at the website the web site also provide information about awards and certificates obtained in the field of CSR and certificate's related to environmental initiatives. Like ISO14001 and OHSAS 18001 also granted a certificate by the Jordanian Environment Society as the best supporter of the environment in 2015. which present its continues efforts and its commitment to the environment, in addition, it shows the company contribution to the community development through financial donations and voluntary efforts also express its willing for a partnership with local institutions in a way or another to present itself as members of a society team, Furthermore the company implemented some projects with new technology to reduce the effect of its operation on the environment with support from government bodies with intention to gain customer loyalty.

5.2. Jordan petroleum Refinery Company

The second one is a state-owned Enterprise located in the Jordanian market for more than sixty years, since 1958, and considered to be the country's oldest company in the oil market with its commercial arm the Jordan Petroleum Products Marketing Company handles the marketing and distribution of oil in the country; it owns and operates several gas stations.

The homepage of the company declared its values, and introduced the company identity through a slide show for its vision, mission, key figures and its brand. The website of the company doesn't have a CER section. Only the term of sustainable development is used at the homepage and announces 4 main topics (environment, community, health and safety and Technology & Development), The environmental section is visible and easy to access as other sections and mostly without Visual elements, Opens with a narrative statement which is a plain abstract, and, business-like language, a general description of the company's commitment toward environment, and contained the company policy toward environment where, it seems as more a matter of legal constraints and compliant with laws and regulations rather than a commitment towards responsible environmental behaviour. Also, there is a lack of updated information on company sustainable activities, for instance, all the financial numbers mentioned in the community topic for supporting of educational institutions and charitable, religious and municipalities in the kingdom, are out dated and belongs to the year 2013 and The budget allocated for these projects amounted to 327.600 $ for 2013.without a full detailed description of the implemented activities, in addition, it shows the company contribution to the community development through financial donations within a frame of a partnership with government bodies, the company willing's for a partnership with local institutions' aims to represent itself as members of a community team,

The company uses the text Description to deliver information about its environmental responsibly without a relative balance between the image and the text,, it shows its commitment to its environmental policy by using key words like, Comply with, Constant pursuit, to ensure, reduce pollution, as well as it presents the cost of a project called sulphur recovery unit which is 17 million Euro without any further details.

All the information has been provided by the web site considered to be a uni-direction and without a detailed presentation of all implemented CR activities, the web site also with no information about awards and certificates obtained in the field of CSR and certificate's related to environmental initiatives as well as no ads for environmental campaigns targeting the audience for participate in the company activities. The webpage declared values of the company and stated that The Company is aware of its responsibilities towards the environment. With no contact information for CR inquiries or a team dedicated for CR initiatives. Also, there are no sustainability reports available online, as well as No clear policy or strategy toward environment in download format and the web site don't have a recognized Framework for collaboration with NGOs in CR. Furthermore the Company doesn't provides updated information about company-initiated CR projects., the company declared, it is seeking to launch independent programs and projects contribute to the environment through donation, as part of its corporate philanthropy framework, and for charitable causes therefore, after they make their profits, fulfil their tax duty, and then they will donate a certain share of their profits to charitable causes.

5.3. Total - Jordan

Total Jordan, is part of the global company, "Total" that is present in 130 countries around the world- Total Jordan has a network of more than 170 service stations across the country

The company's website devoted visible section for CSR including the environmental topic with a clear message on the page stated that" In all our operations, Total Jordan considers respect for the environment as one of its top priorities". As well as, introduced the company identity through a slide show for its vision, mission, its products and brand name. In line with the vision and objectives of the Global total which does not separate community service and responsibility in the development of any of its business and orientations. It seems that much of the practice only applies to the larger company rather than operations in Jordan, In its CER agenda, a Narrative statements are most often used in the page, accompanied with Visual elements, also provide information about awards and certificates obtained in the field of CSR and certificate's related to environmental initiatives it shows its commitment to the road safety as one of its top priorities through traffic awareness campaigns and Road Transport Improvement program, where its mentioned the number of beneficiaries and the cities its covered with no time schedule or budget presented for implementation, In addition, the CER agenda includes cleaning the city and planting trees through campaigns implemented with a partnership with government bodies like, the campaign (Amman is our mother) launched in partnership with the Greater Amman Municipality, which aims to raising awareness against dumping with no budget presented for implementation as well as using words like successful to describe its work with no evidence of real evaluation process and use a sentences like (You are in charge,) (Amman is our mother) "(Your Safety is Important to Us,) as a heading names for its campaign which related to its values and sheds light on the role of the company as part of the development team of the community, the whole agenda seems to some points like a public relation campaigns or a marketing tool for the company own interest, so it ends with the end of the event or activity furthermore all these initiatives implemented within a limited circle of partnership and not goes beyond the government bodies to the whole civic society institutions, however the limited number of activities is incomparable with the massage of commitment to environment presented at the website. The company web site doesn't have contact information for CR inquiries or a team dedicated for CR initiatives, and the web site don't have a recognized Framework for collaboration with NGOs in CR activities, where it has been noticed that none of the activities instituted by the company launched by the dedicated team of total, Also the Company shows its interest in the public safety and environmental conservation rules by treating vapors with multilayer flexible pipes designed for oil and cisterns designed to pump oil derivatives, including environmental protection techniques, it seems as more a matter of legal constraints and compliant with international standards regulations as a global company rather than a commitment towards responsible environmental behavior.

The Total Company operating in Jordan practices its responsibility toward the environment within a semi strategic approach as an international company with no efforts to incorporate strategic CR practices into the organization's daily operations. There is a difference in the company's organization culture based on the lack of similarity in in their childhood and their development process. But if we compare their

website we will see that they are almost similar form our mission, vision, values, and to behave ethically toward the environment, also there is a visible similarity in the web site nature of contents, topics, in addition the three companies adopted the partnership approach for implementing their environmental activities with different targeting groups.

Table 4: A comparative table

Environmental Performance indicators	Total	Jordan Petroleum Refinery	Manaseer for Oil & Gas
The Website includes a Section for Environmental reponsiplity	O	O	O
The website provide a Sustainability Report in Download format	●	●	●
The website has a an Environmental Policy in Download format	O	●	●
Company provides information about all company-initiated CER projects	Ø	●	Ø
Company has a CR Strategy in Download Format	●	●	●
Company has a team dedicated for CER activities with contact information On environment inquiries	●	●	●
The environmental topic relevance to the company values, mission, vision,	O	O	O
The website updated and actively communicates progress in Environmental responsibility activities.	O	●	O

Legend:

O	Positive	**Ø**	Partial	●	Negative

Source: Based on Author Review of the company's web site

While CER agenda of total–Jordan consider the road safety as its top priority, the Almanseer company and the Jordan petroleum consider the good environmental performance is to comply with the laws, instructions and standards applicable at the international level, None of selected companies produces a Report for Sustainability or CSR Strategy or Environmental Policy in Download Format also none of the them have provided contact information for environment inquiries furthermore, with no updated information provided by Jordan petroleum company about-initiated environmental project since 2013, it has been noticed that the Web sites for the three selected companies do not cover all of their environmental activities, but may be found in other associated sites. Which may raise a case for future investigation.

6. Conclusion

This study focuses on the website content and the communications of the environmental aspect of the corporate social responsibility of leading petroleum companies in Jordan. The three company's websites have a section dedicated to social responsibility with the exception of Jordan Petroleum Refinery, which reveals it as a part of the sustainable development, CER concept expressed through a narrative type with minimum visual elements and it has been noticed that the Web

sites for the three companies do not cover all of their environmental activities, but may be found in other associated sites

The three companies are aware of their responsibilities towards the environment, but they are committed to their environmental responsibility within their CSR framework and CSR practices are highly dominant by the character of donations, through the partnership with the official institutions, especially the municipalities universities, Jordan, football association so they are falling into philanthropic approach, Further they stated that they are dealing with highest ethical standards with matters relating to the community, and the surrounding environment. The three companies failed to introduce social reporting systems which measures not only Economic success but also environmental and social performance. They mentioned that they have taken environmental issues seriously, but their sincerity may be questioned in the absence of the development of an appropriate long-term corporate environmental policy and quantitative indicators to measure performance against the policy. The ad hoc disclosures can, at best, be taken as a list of mere intentions without evidence of any appropriate action. the three companies were very active in the fields of fighting poverty and supporting health and education within their CSR framework with little concentration on the field of environmental issues, there is Similarity in actions toward the environment between the three companies despite the difference in their back ground, as Total is international company and Almanseer is Jordanian private sector company and the JPEC is a state owned company more ever, the impact of these CSR practices including the environmental initiatives, ends with the end of the event or activity, what makes them take the character of advertising and propaganda, rather than social initiatives aimed at achieving long-term impact and create sustainable value.

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REASONS AND EFFECTS OF THE ROMANIAN LABOUR FORCE MIGRATION STATISTICAL AND SOCIOLOGICAL REVIEW

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Abstract: *In this paper we presented a conceptual review of migration theories in the context of the European Union, such as recent statistical data taken from the official website of the National Institute of Statistics, National Bank Romanian Ministry of Labour and Eurostat. The paper empirically tests the neoclassical theory, used in the pre-enlargement research, on the actual data of after accession labor mobility from Romania to the European Union countries. The paper concludes with outlining suggestions for new analytical approach to studying migration processes, which needs to incorporate country specific institutional and structural variables, give greater emphasis to sending countries and analyze migration as part of broader global processes and socio- economic changes. In this paper we presented and summarized the negative effects and manifestations of contemporary economic and financial crisis on the labor market. The purpose of this paper is to study and analyze labor market developments Romanian between 2000 and the first quarter 2016 from the statistical point of view based on the results of a comparison of the period before the crisis and after. This paper aims to estimate some effects of migration flows on both the origin countries and the host countries in an enlarged Europe. Having in mind the enlargement, the Romanian out-migration represents a sensitive subject, adding to those of commercial and the capital flows, the main mechanism of European integration. The migration from and to Romania will have an effect on the Romanian economy on short and long term. Then we focus on presenting the main destination for external migration and we make an empirical analysis in order to find out why the "destination" countries are so attractive despite our country.*

Keywords: *Romanian labor market; crisis; unemployment rate; evolution; statistical analysis, migration effect.*

JEL classification: *E24; E23; E29; R22.*

1. Introduction

Movement of people to a new area or country in order to find work or better living conditions. *(Oxford dictionaries).* In time, migration has been an important factor influencing the historical and contemporary development of nations representing the world's diverse geographic regions, cultures, and socio- political systems. Romanian labor market has changed a lot during last fifteen years. Appeared new problems like external migration and unemployment. Following the Romanian accession to the EU, the Romanians fully enjoyed the right of free movement within the European Union and, gradually, the free movement of workers. The migration phenomenon was accelerated in the last 3- 4 years before Romania officially joined the European Union. The restrictions on the labour market, had been imposed by some older Member States of the European Union, were completely withdrawn on the 1st of

January 2014. The unemployment rate in our country is registering lower value during last years. This fact should be the equivalent of a high level of occupation, but unfortunately we have to consider also the emigrants who had left Romania searching a better job with a better salary.

2. Theoretical background

The unemployment influence entire society: the state lost income tax from the possible wage earners and has to pay for extra services such as: medical services, social services; the company lost the benefits they would have obtained if they had used entire personnel; a small national production due the smaller number of workers. On the other hand the unemployment growth increases the labor force supply, which may end with a general dropping of incomes. (Badulescu A., 2006)

In many cases, immigrants have been welcomed by state authorities and allowed, if they filled in an educational or economic break, to make full use of their abilities in order to enhance the economic development of the countries in question. On the one hand, governments and business interests generally welcome foreigners for the economic benefits they can generate. On the other hand, a large influx of foreigners can be highly disruptive, weakening a nation's sense of cohesiveness. (Chapman, 2000).

In the economic literature, the subject of migration is approached through the problems that this brings into economic, social and political context: relation between salary changes and immigration, impact of immigrant influx that increases the number of workers in a skill group, the restrictions on international labour mobility, occupational placement of immigrants, brain drains, job search behaviors, spatial mobility and competition for jobs. In 2007 and 2008, employment rate improved to some extent, emigration and informal work going down but the political and economic crisis that hit Romania during 2008- 2009 stopped healing Romanian labor market. By moving to work abroad, return in the home country and immigration into Romania, we can see how the major social and economic processes are being defined. Migration represents ‘a total social phenomenon’ which offers the way ‘to read’ the problems and opportunities, history, present and future that characterize the Romanian society. (Sandu, 2010)

According to Stănculescu (2011) the main reasons for which Romanians migrate are: *finding a better-paid job (59%), lack of employment (16%) or just the pursuit of a better life (9%).* However, migration is not exclusively determined by economic factors. Another push factor is linked to Romanians’ distrust in the institutional system and in the political parties. (Stănculescu and Stoiciu, 2012)

There are two distinct stages to be found regarding the evolutions on the labour market in Romania after 1989. The first stage, which includes the period 1990 –2003, is defined as a period of deep reorganization of the Romanian economy. It is characterized as a period of relatively high unemployment and the undertaken actions were directed mainly at limiting the unemployment and its harmful effects on the society. We consider that after 2005 the employment evolution heads towards a new crisis on the labour market, but its cause is not a high unemployment, but rather an offer dropping on the labour market (Cindrea, 2007, pp. 25- 28). According to the study studied by *Dustman and Glitz (2006),* fears that immigrants would take jobs away from native workers are „widespread”, at least in Europe. The consequences for native’s employment and unemployment have also been dealt with in numerous

studies and researches. According to Lee, such forces are found in metropolitan areas of a country. Pull factors are present in such areas. Lee also refers to cost of movements, ethnic barriers and personal factors as intervening barriers. Having in mind the enlargement, the Romanian out- migration represents a sensitive subject, adding to those of commercial and the capital flows, the main mechanism of European integration. *Everett Lee* in his work *A Theory of Migration* divides the factors that determine the decision to migrate and the process of migration into four categories (Table1):

Table 1 Factors that determine the decision to migrate and the process of migration

Factors associated with the Area of Origin	Factors associated with the Area of Destination	Personal Factors	Intervening Obstacles
-Factors which motivate people to leave their place of origin to outside area. They are push factors.	-Very attractive forces at the area of destination to which the proportion of "selectivity" migrants is high.	-Factors like age, sex, race and education which along with the pull-push factors and intervening obstacles that determine migration. There are sequential migrants such as children and wives of migrants who have little role in the decision to migrate.	-Intervening obstacles like distance and transportation which increase migrant selectivity of the area of destination. These obstacles have been lessened in modern times with technological advances.

Source:http://www.sociologydiscussion.com/demography/migrationdemography/top-3-theories-of-migration/3148

In Romanian literature Anghelache (2016) presents the most important factors that characterize the economic environment of Romania. Anghelache, Manole, Anghel and Popovici (2016) - analyzing the human resources and their position, dynamics in the Romanian economy. Anghelache and Anghelache (2012) analyse the correlation between labour force, labour market and the population of Romania.
The global economic crisis has affected the labor market in all EU States the economies have suffered good heavens also had influence on labor migration by sectors activity migrate to predominantly occupied like construction or servicing.
The migration phenomenon has had a series of positive effects, such as reduction of unemployment, poverty and social problems, especially in the rural environment and at the level of the domains which were strongly affected by the economic changes in the last years of transition. (Table 2)
The former have vices of economic crisis hit, causing loss of job version increased and unemployment among migrant workers. The crisis on the labor market shall limit Romania's economic growth by reducing the annual rhythm of economic growth and shall seriously affect the achievement of the objective of Romania's medium and long term lasting development.

Table 2 Positive and negative effects of migration

Positive effects of migration	Negative effects of migration
For the origin country	
reducing the unemployment rate and a decrease in pressure on workforce market and social spending from the budget;	losing the investments made in education and training for migration and emigration;
money transfers of migrants. It is an important external source for financing the budget – the money transfers are used in the origin country for households spending, for construction of new houses and for consumption. These transfers have an impact both on a micro and macroeconomic level, affecting the macroeconomic management, workforce involvement, education and health, income distribution;	losing the state contribution represented by taxes that these categories must pay;
keeping the link between diaspora and the origin country. Communities outside the origin country can represent an important source and a facilitating factor for research and innovation, for technology transfer and growth. To involve the diasporas in the economic growth of origin countries can be done by some agreements in order to allow technology transfer and new knowledge and knowhow between firms owned or managed by the diaspora in the host countries and firms from the origin countries, by direct investments, the creation of scientific or professional receipt to transmit the new results of researches from the host countries to the origin countries, mainly through a definitive return of workers in the origin countries.	a decrease in the highly trained personnel, as a result, the increase in the medium and low trained personal, which is not leading to a strong base for a country's growth.

Source: Nicolae M, Radu Brindusa M (2007), [online] Social economic effects of the labour force migration in an enlarged Europe, http://mail.ipe.ro/rjef/rjef2_07_4/rjef2_07_4.pdf;

According to Duncan, whatever effects are created by changes in structural factors of the country, the same effects are caused by migration. For achieving many structural aims, migration is the functional alternative to social change. Generally, the following factors are responsible for migration:

Table 3. Causes and characteristics of migration

Causes	Characteristics
Economic and Technical Causes	They relate to the changes occurring in the technique of production, in methods and structure of agricultural operations, in market structure, in price situation, in specialisation, in production, and in relative changes in the wage level, etc.

Causes	Characteristics
Social Causes	The social causes are development of institutional structure, policies regarding public land and production, development of transport and communication systems, population growth, increase in knowledge and its expansion, class-conflicts and competition, disarrangement coming in social degradation and structure of administration, changing needs of maintenance of family, etc.
Personal Causes	In personal causes are included unsatisfied needs, increase in the intelligence of persons and expanding horizon of knowledge, health, emotions of alienation, views regarding neighbours, imagination power, nature, emotions, etc.
Natural Causes	pertain to environment and atmosphere, frequent existence of diseases, floods, earthquake, droughts, malaria, hookworm, seasonal changes, land erosion, etc.
Other Causes	There are some miscellaneous causes which affect migration. They are labour problems, strikes, riots, increase in real wealth, search of new means or ending up of the supply of old resources, etc. Out of the above mentioned causes two or more causes probably influence migration

Source: Divisha S, Top 3 Theories of migration, [online]: http://www.sociologydiscussion.com/demography/migration-demography/top-3-theories-of-migration/3148;

3. Migration trend in Romania between 2000 – 2015

In Romania, international migration has produced in last years significant impact on the economic, social, cultural and political life. Romania's migration pattern is mainly characterised by emigration, especially following accession to the European Union on 1 January 2007. The number of Romanians working abroad in 2010 is estimated to be around 3 million persons. Romanian labor market has changed dramatically during the economic transition, decreased the number of employed population. The enterprises restructuring has led to job losses uncompensated by new job creation. Furthermore, Romania has registered a significant emigration rate (including temporary emigration), which led to a shortage of workers.

The migration from and to Romania had an effect on the Romanian economy on short and long term. In the European Union countries and neighbouring regions, the expansion will produce a redistribution of the labour force between industries and countries. After the Romania's adhesion to the EU, the need for an increased productivity, the lack of capital, the competition on the EU market and the low salaries have concurred to the intensification of the migration process of the labour force, principally to the West European countries. For example, from over two

millions of Romanians working abroad (10 % from total population), 40% have chosen to work in Italy, 18% in Spain, 5% in Germany. (Figure 1)

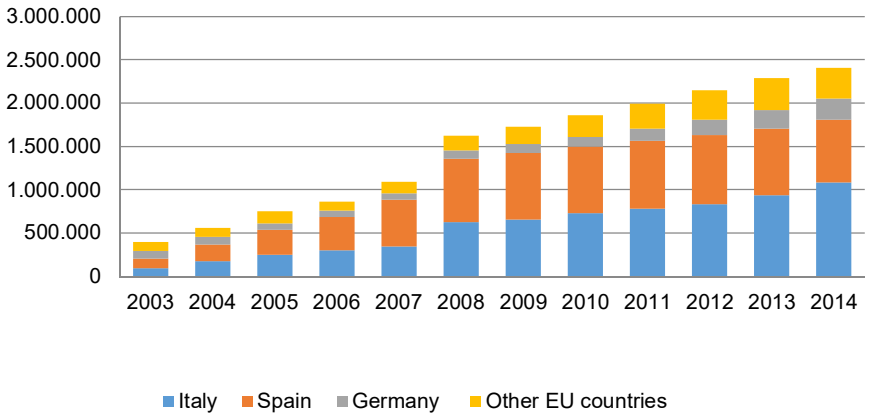

Figure 1. Stock of Romanians residing in another EU Member State
Source: Eurostat

Emigration wave has hidden two phenomena: the departure of quite young and highly skilled workers (brain drain has increased significantly during the crisis, for professions such as doctors or IT specialists) and at the same time, low skilled workers who have preferred to earn more abroad.
Migration was and still is one of the major vulnerabilities of the Romanian labor market due to lack of skilled labor force. A result of economic transition in Romania was the translation from formal to informal labour market of the workforce without jobs. Despite the sustained economic growth of recent years, informal work in Romania has continued to exist and even to grow up in some periods. Informal work exists mainly in agriculture (subsistence agriculture) but also in sectors: *construction, retail, home services, transportation, health and education.*

4. Statistical review of the Romanian labor market between 2000 – 2015

The labour market is one of the important factors, especially for longer distance moves. Economic theory provides a characteristic for the migration decision that emphasizes the way that labour market considerations can influence migration decisions. In the simplest version of such a model, each person chooses to locate in the area where they will be most well-off. Zaman (2004) analyses the dynamics of restructuring on the labour market by *The Index of Employment Restructuring, The Rate of Unemployment Absorption* and *The Net Rate of Private Sector Expansion.* He considers that the capacity of Romanian economy to absorb the unemployment is very low because the private activities are insufficiently developed due to a major delay in market reforms aimed to effectively stimulate the private initiative. Romania's EU accession in 2007 had a positive impact on the attractiveness and competitiveness of local enterprises. (Table 4 and Table 5).
In 2014, Romania represents the main source country for migrants within the European Union with an estimated number of more than three million Romanians

left to work or to study abroad. Over the last fifteen years, the population in Romania registered a continuous decrease from 23 million in 1990, to 21.4 million in 2008, respectively around 20 million inhabitants in 2011 and it is forecast that by 2050 it will reach only 16 million persons. The population decrease is also greatly caused by the Romanian emigration, characterized by emigration of youth and active people, leading to labour market shortages and putting pressure on social services and insurance market. In this sense, immigration to Romania should be understood in direct correlation with the Romanian labour emigration in terms of migrants' profiles, skills and employment opportunities available on the national labour market (Alexe, 2010).

Table 4. Evolution of the balance labor between 2000 – 2008

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Population (millions)	22455	22430	21833	21627	21521	21382	21257	21130	20635
Active Population (millions)	11283	11151	10079	9915	9957	9851	10041	9994	9944
Unemployed population (thousand)	775	711	845	701	799	704	728	641	575
Unemployment rate (%)	11,17	10,98	10,18	7,59	6,78	5,83	5,43	4,34	4

Table 5. Evolution of the balance labor between 2008 – 2016

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Population (millions)	20635	20440	20294	20199	20095	20095	20020	19947	19861
Active Population (millions)	9944	9924	9965	9868	9964	9977	9243	8910	8776
Unemployed population (thousand)	575	681	725	730	845	692	799	436	-
Unemployment rate (%)	4	6,29	7,61	5,4	5,59	5,65	5,84	5	4,8

The share of immigrants in total population of Romania accounts for 0.5%. (Total population of Romania in June 2014 was of 19,473,488 persons according to the National Statistics Institute). It is generally expected that the proportion of immigrants will continue to rise in the coming decades in Romania because of the labour needs related to population ageing.

Net migration rate- This entry includes the figure for the difference between the number of persons entering and leaving a country during the year per 1,000 persons (based on midyear population). An excess of persons entering the country is referred to as net immigration (for example: 3.56 migrants/1,000 population); an excess of persons leaving the country as net emigration (for example:-9.26 migrants/1,000 population). The net migration rate indicates the contribution of migration to the overall level of population change. High levels of migration can cause problems such as increasing unemployment and potential ethnic strife (if people are coming in) or a

reduction in the labor force, perhaps in certain key sectors (if people are leaving). (Table 7 and Table 8 *Index Mundi*)

Table 6. Net migration rate in Romania between 2000- 2008

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Romania	0.6	-0.6	-0.6	-0.6	-0.13	-0.13	-0.13	-0.13	-0.13

Table 7. Net migration rate in Romania between 2008- 2015

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Romania	-0.13	-0.27	-0.26	-0.26	-0.25	-0.24	-0.24	-2,1	-0,2

While a big part of the labour force is already migrated, mostly to the SE Europe (2,5 million workers moved abroad, with both legal and illegal/irregular status, even before the EU enlargement), the Romanian companies could not find local workers to use them in order to benefit from the money inflow targeting Romania in the light of its new membership to the European Union (foreign investments and European post accession funds). Instead of increasing the salaries, the local employers rather prefer to 'import' workers from poorer countries like Moldavians, Chinese, Ukrainians and others who still accept a lower salaries as compared to the medium wage in Romania. The Eurostat predicts that, from 2008 to 2060, Romania would register a net migration ratio of 1.8 %. Data provided by the Romanian General Inspectorate for Immigration highlights that during 2011- 2014 the migration inflows in Romania have had a stable evolution reaching every year an average of 100.000 persons, with an annual rate of +/- 2 %. In 2014, as in the previous years the migrants who arrived through family reunion together with those who are family members of a Romanian citizen stand for the majority of Romania's migrant population. More than half of the migrants are young, in the age group less than 35 years old and around 60 % are men. The occupied population, according to the SEC methodology, is the sole indicator that indicates the human potential of the occupied labor force that can be used to determine the social productivity of labor as a ratio between the GDP and the occupied population.

Romania has conducted its employment policies rather inconsistently and therefore the capacity of the economy to absorb the unemployment is very modest; furthermore, the economy has destroyed more jobs than it created. This is the consequence of insufficient reforms aimed to stimulate growth: in 2003, the real GDP is still below its level recorded in 1990. (Table 8 and Table 9).

If before joining the EU the GDP per capita in Romania represented 38% of the EU-28 average, seven years later, the GDP per capita has reached only 54% of the EU-28 average. As a result, the private sector loses continuously its efficiency because the privatization of public enterprises induced the phenomenon of sharing the inefficiency: the speed of restructuring the privatized firms is lower than the speed of privatization. Each year the public firms gain productivity by reducing the employment, but they lose efficiency over time, since the output produced by the remaining labour force is below its potential. In parallel, the private sector loses efficiency because of privatization, which brings excessive employment with the newly privatized firms. Over time, the output produced by an employee in the private sector is higher than the one produced by a state employee, which leads to an improvement of efficiency in case of private companies (Zaman, 2004, p.8).

Table 8. Evolution of GDP growth and the unemployment rates between 2000- 2008

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP growth variation	102,4	105,7	105,1	105,5	108,3	104,2	107,9	106,3	107,3
Unemployment dynamics (%)	11,17	10,98	10,18	7,59	6,78	5,83	5,43	4,34	4

Table 9. Evolution of GDP growth and the unemployment rates between 2000- 2016

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
GDP growth variation	107,3	106,6	101,1	102,3	100,6	102,6	103	103,5	104,8
Unemployment rate (%)	4	6,29	7,61	5,4	5,59	5,65	5,84	5	4,8

5. Conclusion

The flow of the international migration influenced all the member states of the European Union, especially the new members. The standard of living of the Romanian population, the policies adopted on migration by our country and the European Union, the evolution of the economy and of the unemployment rate in current's crisis context will influence the decision made by the Romanian citizens to migrate or not. Immigration can successfully supply the decrease of population in European Union's member states and can balance the supply and the demand of jobs. To that effect the European Union needs to keep an eye on the development and the expansion of the Community policies on emigration and immigration at a European level to better manage the emigrational flows, considering not only the demographic context of the countries, but also the economic and social context of those. Negative impact that migration has on the size and quality of the workforce in Romania is manifested in several ways: departure abroad for a significant proportion of highly qualified labour force, aging workforce in some sectors of the population in certain areas and in certain geographical areas.

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MEASURING EFFICIENCY OF MONGOLIAN COMPANIES BY SFA AND DEA METHODS

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Abstract: *Efficiency measurement usually adopts one of the following analysis, DEA (Data Envelopment Analysis) or SFA (Stochastic Frontier Analysis), but it is not common to use and compare both models in one research. Especially, there is not any research about performance measurement which used Mongolian companies' financial data. The aim of this research is to examine the consistency of efficiency scores from DEA and SFA methods on Mongolian public companies. The financial statements of 100 public companies were obtained from the Mongolian Stock Exchange (MSE) website, from 2012 until 2015. Financial statements were chosen which met the requirements of consistency and accuracy, out of 227 public companies. From initially selected 9 output variables, revenue was chosen as an output variable, while cost of goods sold, operating expenses, and cash are used as input variables based on the stepwise regression result. SPSS (Statistical Package for the Social Sciences) software was used for linear regression to choose the variables; Pearson correlation to examine the correlation between variables and the correlation between efficiency scores of DEA, SFA, and COLS (Corrected Ordinary Least Squares); one-way ANOVA was used to determine statistically significant difference among the methods; and unrelated T-test was used for every pair models. In contrary, Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA) were performed in R- Excel statistical program. The average efficiency results indicated that the SFA model exhibited the highest score of 0.75 (TeMode), followed by DEA-VRS (Variable Return to Scale) 49.1 and DEA-CRS (Constant Return to Scale) 33.8. Due to the low-efficiency score, scale efficiency was adopted, and the result showed only 3 companies work in an optimal efficient scale, while 42 companies work below an efficient scale, and 55 companies work above an efficient scale. Unrelated T-test result showed that there was not statistically significant difference among Tej, TeBC, and COLS; TeMode and CRS; CRS and output efficiency.*

Keywords: *Data Envelopment Analysis (DEA); Stochastic Frontier Analysis (SFA); input efficiency; output efficiency; Variable Return to Scale (VRS); Constant Return to Scale (CRS); Corrected Ordinary Least Squares (COLS).*

JEL classification: *C14; C300; L250.*

1. Introduction

Performance evaluation indices are in fact an action guide from what it is towards what it should be (Tehrani et al., 2012). As for corporate performance, it is the measurement for what had been achieved by a company, which is measured by either DEA or SFA, mostly. DEA is a nonparametric method, which has the origin in

production theory as a tool to evaluate production efficiency (Yu, 1994), while SFA is a parametric method which requires production function to evaluate efficiency.
There are a great number of papers which used the DEA method. For example, Fenyves et al., (2015) analyzed applicability of Data Envelopment Analysis (DEA) in the performance measurement, which covered the 5 year period from 2009 to 2014. Tehrani et al., (2012) analyzed the financial performance of 36 companies, and 9 companies were efficient. Zohdi et al., (2012) measured the efficiency of Iranian 12 investment companies' financial statements by CCR and BCC. The empirical results demonstrated that BCC form of DEA was not able to distinguish between efficient and inefficient units. Nikoomaram et al., (2010) researched six-years of data from 24 companies and with the title of "Efficiency Measurement of Enterprises Using the Financial Variables of Performance Assessment and Data Envelopment Analysis".
Similar to the DEA method, the SFA method is also commonly used for measuring efficiency. For instance, Crisci et al., (2016) Technical efficiency with several stochastic frontier analysis models using panel data, Lensink and Meesters (2014) did research about Institutions and Bank Performance: A Stochastic Frontier Analysis, and Price et al., (2017) Production Costs, Inefficiency, and Source Water Quality: A Stochastic Cost Frontier Analysis of Canadian Water Utilities etc.
However, there have been a significant number of studies that performed efficiency measurement on either DEA or SFA, the number of researches which compared both methods is not many. For instance, Ueasin et al., (2015) the technical efficiency of Rice Husk Power Generation in Thailand: Comparing Data Envelopment Analysis and Stochastic Frontier Analysis; Lie-Chien-Lin et al., (2005) application of DEA and SFA on the measurement of operating efficiencies for 27 international container ports; Erkoc (2012) estimation methodology of economic efficiency: Stochastic Frontier Analysis versus Data Envelopment Analysis etc.
As for now, there is not any published research of performance measurement applied DEA and SFA specifically targeted at Mongolian companies.
The objectives of the study were:

- To determine corporate efficiency based on the DEA and SFA.
- To examine the correlation between the efficiency measurement methods.
- To explain the results.

The remainder of this paper is organized as follows: Section two reviews the literature about data envelopment analysis (DEA) and stochastic frontier analysis (SFA). Section three provides data and variables, and the methodology of this study. Section four consists of empirical results and discussion. Finally, conclusions are drawn in section five.

2. Literature Review

For every company, monitoring efficiency is one of the key activities. Efficiency measurement methods can be divided into three main categories: ratio indicators, parametric and nonparametric methods (Vincová, 2005).
A major difference between the parametric and the non-parametric approaches is the estimation method. Whereas the DEA methods rely on the idea of minimal extrapolation, the parametric approaches use classical statistical principles, most notably the *maximum likelihood principle* (Bogetoft and Otto, 2011).

2.1 Data Envelopment Analysis (DEA)

Efficiency is an operation level that produces the greatest amount of output with the lowest amounts of input (Ueasin et al., 2015). DEA is a nonparametric efficiency measuring method which can be determined by either output efficiency or input efficiency. Both input and output efficiency receive a score of 1 for efficient companies. Although input can be the number of hours, the amount of money, financial ratios, time, natural resources, etc. to produce any given output. This study utilizes the following financial data: cost of goods sold, operating expenses and cash for input variables, while revenue is an output variable. There are three different efficiency measures in DEA: technical efficiency *TE*, cost efficiency *CE* and, allocative efficiency *AE*. The relationship between them is easy to derive:

CE = AE * TE (Bogetoft and Otto 2011).

DEA differs by its model supporting scale assumptions: constant return to scale (CRS) and variable return to scale (VRS) (Fenyves et al. 2015). The VRS and CRS models are treated in input oriented forms while the multiplicative model is treated in output oriented form (Banker et al., 2004).

2.2 Stochastic Frontier Analysis (SFA)

SFA is a parametric approach and is suited to measure efficiencies of the stochastic industry for input/output information (Lin and Tseng 2005). Like DEA method, SFA method also receives a score of 1 for efficient companies, although it does not require any efficient company for every observation unless possible inefficiency (u) is equal to zero. In the parametric approach, three main processes have been suggested.

To consider any deviation as noise corresponding to an ordinary regression model.

To consider any deviation as an expression of inefficiency, so-called the deterministic frontier.

Deviations are the results of both noise and inefficiency. This is the stochastic frontier approach (Bogetoft and Otto 2011).

3. Data, variables and research methodology

Financial statements of 100 Mongolian public companies from 2012 until 2015 were downloaded from MSE's website. As for public companies, yearly financial reports are required to be audited, which increases the data reliability. 7 output variables and 13 input variables are initially selected for the research. According to linear regression result (stepwise model), revenue is chosen as an output variable and operating expenses, cost of goods sold and cash were utilized as input variables, which explained the output best (adjusted R square 0.978). Variables which had VIF score above 3 were excluded from research due to multi co-linearity.

As we can see from Table 1, cost of goods sold and revenue are highly correlated (94.9%), while the amount of cash and the amount of operating expenses are loosely correlated (44.4%) with each other.

The descriptive statistics of the inputs and output are shown in Table 2. From the result, we can observe considerable high values of standard deviations among the companies, which indicate that relatively big and small companies are chosen as data.

Table 1: Correlation matrix of the chosen variables

Variables	Revenue	Operating expenses	Cost of goods sold
Revenue	1.000		
Operating expenses	0.822**	1.000	
Cost of goods sold	0.949**	0.654**	1.000
Cash	0.600**	0.444**	0.523**

** Correlation is significant at the 0.01 level (2-tailed).
Source: based on author's own calculation

4. Analysis and results

In the scope of this research, Mongolian 100 public companies' performance measurement was evaluated by DEA and SFA in R- Excel Statistical Program based on their 4 years financial reports from the Mongolian Stock Exchange website.

Table 2: Descriptive statistics of input and output variables

	Minimum	Maximum	Mean	Std. Deviation
Revenue	0.0	255 895 259.8	14 083 072.9	38 462 770.7
Operating expenses	0.0	64 519 117.9	2 635 235.3	7 941 265.8
Cost of goods sold	0.0	191 124 097.6	9 459 880.4	25 434 959.9
Cash	4.0	50 114 496.6	1 091 603.9	4 055 529.7

Source: based on author's own calculation

When the parameter is 0, there is no effect from differences in efficiency, and if it is very large, differences are almost only due to differences in efficiency and not to other kind of uncertainty (Bogetoft and Otto 2011). In table 3, it is seen that the estimated parameter is 1.389, which means that the total error variance is mainly due to inefficiency, whereas the random errors are less significant.

Table 3: Estimation of Cobb-Douglas production frontier using OLS (lm) and SFA

Variables	Coefficient	Std.error	t-value	Pr(>|t|)
(Intercept)	2.591	0.529	4.893	0.000
Cost of goods sold	0.253	0.080	3.140	0.002
Operating expenses	-0.114	0.061	-1.862	0.065
Cash	0.822	0.078	10.456	0.000
Lambda	1.389	0.838	1.656	0.100

Source: based on author's own calculation

From table 4, we see that the percentage of total variation due to variation in efficiency is 65.88%. The estimated variance for the variation in efficiency (u) is

0.314, and is considerably larger than the variation due to random errors (v) 0.162. 65.88% of the total variation is due to inefficiency and the remaining 34.12% is the random variation. The variance for efficiency is larger than the variance of random errors.

Table 4: Estimation variation in SFA

Variance for inefficiency	U	0.314
Variance for random errors	V	0.162
Percentage of inefficiency variation to total variation	100*lambdaˆ2/(1+lambdaˆ2)	65.88%

Source: based on author's own calculation

Table 5 shows the correlation of 3 different models in SFA, which are highly correlated with each other. TeJ and TeBC are the most highly correlated models (99.9%), while other models have also high correlation between 98.2-98.4%. The average efficiency of TeMode model has the highest score of 0.75; however, TeJ model has the lowest score of 0.657 at average efficiency.

Table 5: Correlation among SFA methods and its mean efficiency scores

	TeBC	**TeMode**	**TeJ**
TeBC	1.000		
TeMode	0.982	1.000	
TeJ	0.999	0.984	1.000
Mean efficiency	0.672	0.750	0.653

Source: based on author's own calculation

Figure 1 presents the relationship between revenue and efficiency based on SFA calculation. It is seen that most of the companies' efficiency score is between 0.7-0.8, and the efficiency score collapsed after the score exceeded 0.8.

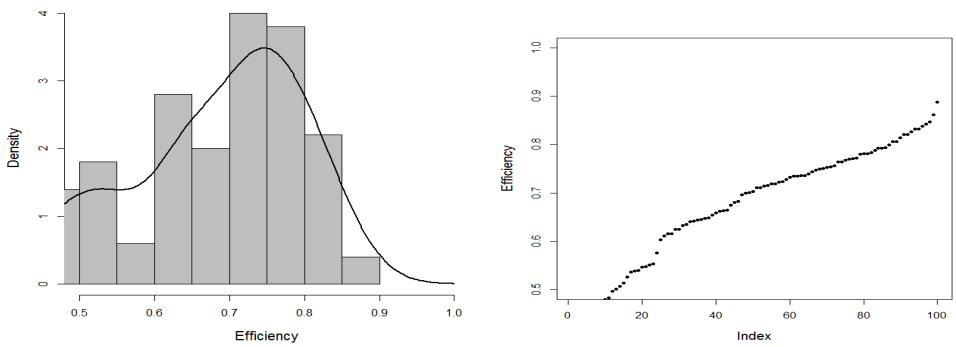

Figure 1: Efficiencies: Histogram, density, and order
Source: based on author's own calculation

Table 6 explains the efficiency results for each method for DEA, SFA, and COLS. The mean efficiency score of SFA is comparatively higher than that of other methods.

As for DEA method, only 12 companies out of 100 are efficient for DEA-VRS, which has the average efficiency score of 49.1%. The number of efficient companies additionally falls in CRS method (average efficiency 33.8%), which shows only 4 companies are efficient, while 70 companies are working between the efficiency score range 0.1-0.4. The number of efficient companies is the highest for DEA-output efficiency (15 companies out of 100); however, average efficiency score is 2.863. It means to get 1 unit of output we have to consume 2.863 units of input in general. In contrary, we can conclude that SFA method, particularly, TeMode gives the highest average efficiency score (75%). TeMode model also has 18 efficient companies, which is the highest number compared with other models. It is noteworthy to mention that SFA method is used to estimate the best technical efficiencies of company, rather than average technical efficiencies of a firm (Lin and Tseng 2005), so that it does not require an efficient company from observation. In contrary, DEA method always has an efficient company for every observation. On the other hand, average efficiency score is the lowest for COLS (28.2%) and under this model, there is only one firm that performed efficiently. In contrast, 99 companies were found in the range of 0.0-0.8.

Table 6: Comparison of DEA, SFA and COLS efficiencies

Efficiency ranges	Stochastic frontier analysis			Data envelopment analysis			COLS
	TeJ	TeBC	TeMode	DEA-VRS	DEA-CRS	DEA-Output	TeCols
0.0-0.3	-	-	-	32	54	21	62
0.3-0.4	4	4	3	14	20	16	21
0.4-0.5	11	8	11	13	8	21	9
0.5-0.6	13	11	9	10	8	14	5
0.6-0.7	27	24	19	9	3	2	1
0.7-0.8	34	39	12	5	1	3	1
0.8-0.9	11	13	16	3	1	6	-
0.9-1.0	-	-	12	2	1	2	-
1.0	-	-	18	12	4	15	1
Minimum	*0.305*	*0.322*	*0.305*	*0.108*	*0,069*	*1.000*	*0.064*
1st quartile	*0.585*	*0.609*	*0.613*	*0.258*	*0,189*	*1.443*	*0.184*
Median	*0.686*	*0.706*	*0.778*	*0.431*	*0,284*	*2.206*	*0.263*
Mean	*0.653*	*0.672*	*0.750*	*0.491*	*0,338*	*2.863*	*0.282*
3rd quartile	*0.752*	*0.767*	*0.940*	*0.636*	*0,416*	*3.374*	*0.352*
Maximum	*0.881*	*0.887*	*1.000*	*1.000*	*1.000*	*14.430*	*1.000*

Source: based on author's own calculation

In Table 7, we see correlation between the efficiency scores of models which are tested by Pearson correlation. Among the methods, SFA models have the highest

correlation with one another between 88.4-100 %. Correlation between SFA (TeMode) model and DEA (output) model has the lowest correlation score (65.2%).

Table 7: Correlation between DEA, SFA and COLS efficiencies

Models	Stochastic frontier analysis			Data envelopment analysis			COLS
	Tej	TeBC	TeMode	VRS	CRS	Output	TeCOLS
Tej	1						
TeBC	1.000	1					
TeMode	0.889	0.884	1				
VRS	0.686	0.678	0.664	1			
CRS	0.748	0.738	0.706	0.793	1		
Output	0.700	0.693	0.652	0.847	0.724	1	
TeCOLS	0.873	0.862	0.791	0.713	0.838	0.689	1

Correlation is significant at the 0.01 level (2-tailed).
Source: based on author's own calculation

From figure 2, it is clear that there are several firms with a DEA efficiency score of 1, which have much lower COLS efficiency. There is even a firm with a DEA—Input efficiency-VRS, CRS and output efficiency of 1.0 which has COLS efficiency score of 0.3. Moreover, there are efficient companies for DEA and COLS, but not for the SFA method. It can be explained that DEA method always has at least 1 efficient DMU (Decision Making Unit), while SFA does not require any fully efficient DMU unless variance of inefficiency is equal to 0.

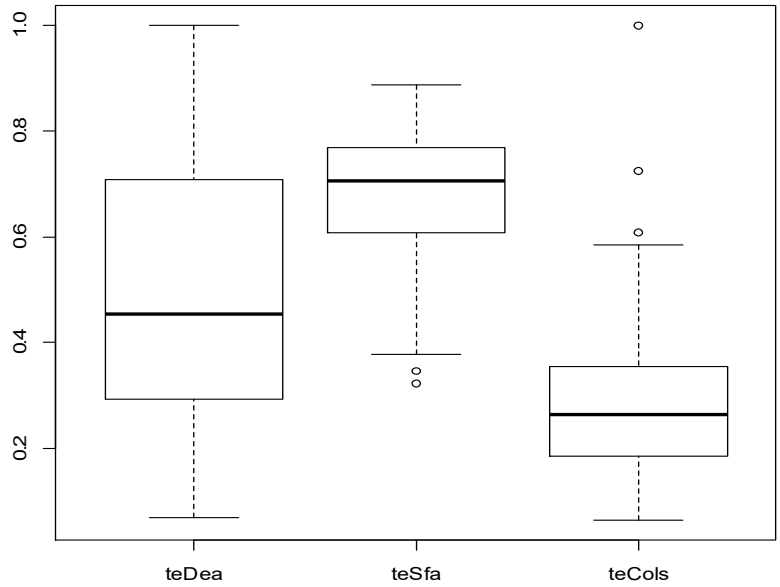

Figure 2: Comparison DEA (teDea) and SFA (teSFA) efficiencies, and COLS (teCols)
Source: based on author's own calculation

Scale efficiency in DEA: To measure the loss from not operating at optimal scale size, we use *scale efficiency SE*, which is determined by the ratio of input efficiency in a CRS model to that in a VRS model, i.e.
SE=E(CRS)/E(VRS) (Bogetoft and Otto 2011).
As we can see from Figure 3, only 3 companies (3%) are working in an efficient scale, while 97% of the companies are working either above (55%) or below (42%) the efficient scale.

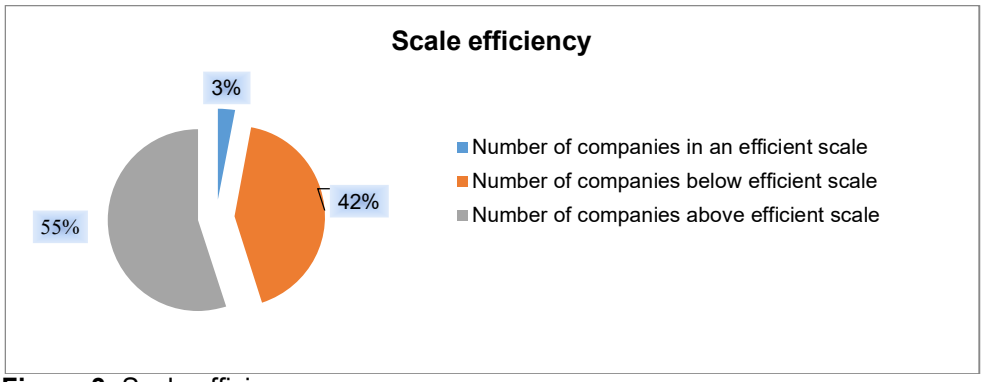

Figure 3: Scale efficiency
Source: based on author's own calculation

According to table 8, it is seen that three different models of SFA have similar efficiency results such as: minimum efficiency scores are between 0.305-0.322; however, only TeMode method results an efficient company with the efficiency score of 1. Maximum efficiency score of Tej and TeBC are 0.881 and 0.887, respectively. DEA efficiency score shows the super efficiency for input and output efficiency which is not restricted to either above or below one. Maximum efficiency score of VRS is 5.175, which means if we use 1 unit of input, we can produce 5.175 units of output. Efficiency score for DEA-output efficiency is opposite of the other models which prefers the lowest score. To clarify, the highest efficiency boundary of DEA-output is 14.434 shows to get 1 unit output 14.434 units of inputs are required, while the lowest efficiency boundary is 1 which explains the efficient company.

Table 8: Descriptive statistics of efficiencies by DEA (super efficiency), SFA and COLS

Methods	Models	Minimum	Maximum	Mean	Std. Deviation
SFA	Tej	0.305	0.881	0.653	0.130
	TeBC	0.322	0.887	0.673	0.126
	TeMode	0.305	1.000	0.757	0.197
DEA	VRS	0.000	5.175	0.582	0.716
	CRS	0.069	2.793	0.369	0.357
	Output	1.000	14.434	1.915	3.610
COLS	TeCols	0.064	1.000	0.282	0.151

Source: based on author's own calculation

Table 9 details companies which are efficient in scale efficiency have the highest efficiency scores for every model.

Table 9: Comparison of the most efficient companies by DEA, SFA, and COLS

Stochastic frontier analysis			Data envelopment analysis			COLS	Scale efficiency
teJ	teBC	Temode	Input-VRS	Input CRS	Output		
0,756	0,771	0,953	4,842	1,805	0,445	0,363	Yes
0,881*	0,887*	1,000*	1,011	2,793*	0,357*	1,000*	Yes
0,716	0,734	0,844	5,175*	1,461	Inf	0,300	Yes

**The most efficient companies*

Source: based on author's own calculation

Table 10 highlights if there is a statistical significant difference between the models. From the result, it is seen that there is not statistically significant difference among Tej, TeBC, and COLS; TeMode and CRS; CRS and output efficiency.

Table 10: Statistical significance in efficiency among the methods

	Tej	TeBC	TeMode	VRS	CRS	Output	COLS
Tej	1						
TeBC	equal	1					
TeMode	unequal	unequal	1				
VRS	unequal	unequal	unequal	1			
CRS	unequal	unequal	Equal	unequal	1		
Output	unequal	unequal	unequal	unequal	equal	1	
COLS	equal	Equal	unequal	unequal	unequal	unequal	1

Source: based on author's own calculation

5. Conclusion

This paper aimed to measure the efficiencies of Mongolian 100 public companies from 2012 until 2015, by DEA, SFA, and COLS. Moreover, I tried to compare the results of the models and find out if any statistically significant difference exists. The paper uses linear regression to choose the variables, the benchmarking package of R statistical program to evaluate the efficiencies, one-way ANOVA, and unrelated T-test to check the statistically significant difference among the models. Revenue is chosen as an output variable, while cost of goods sold, operating expenses and cash are used as input variables, according to stepwise regression result.

The analysis shows the mean efficiency score of SFA (TeMode) model is the highest (0.757), followed by SFA (TeBC-0.673), SFA (TeJ-0.653), DEA (VRS-0.582), and DEA (CRS-0.369), while the lowest score is COLS 0.282. In SFA (TeMode) model, 18 companies are efficient which is the highest number; in contrary, COLS shows only 1 company works efficiently, and SFA (TeJ) and SFA (TeBC) do not reveal any efficient companies. Unrelated T-test results show that efficiencies are not significantly different among Tej, TeBC, and COLS; TeMode and CRS; CRS and output efficiency. However, other models significantly differ by their efficiency results from one another.

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URBAN TOURISM. FACTS AND FIGURES IN EUROPEAN FRAMEWORK

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Abstract: *The motivation of this paper was given by the importance of urban tourism, which is a growing touristic phenomenon worldwide and especially at European level. Urban tourism plays an important role in the European cities, for many of them it represent the engine for the development of several sectors of the economy. From this point of view, we consider the importance of study of the concept of urban tourism. As a first step in this direction, the article presents a review of the specialized literature in order to define the concept. Through this paper we propose to highlight various perspectives about urban tourism, analysed as a particular form of tourism. Thus, the paper presents, in the theoretical section, the interferences among urban tourism and other forms of tourism. The paper continues with the analysis of statistical data regarding urban tourism, registered in the main European cities, including Romania. As a result of the research, we conclude about the significant differences between the analyzed countries.*

Keywords: *cities; forms of tourism; tourist motivations; culture; development.*

JEL classification: *L83; Z32.*

1. Introduction

Considered as one of the most dynamic forms of tourism in the contemporary period (Badulescu, 2004), urban tourism has remained, since 1980s, a consistent topic in the development of tourism research. Edwards et al. (2008, cited in Ashworth and Page, 2010, p.1) discuss about „the manifestly complex nature of urban tourism, and the limited scope of research". Research on urban tourism is characterized by a series of paradoxes, that can be „stated succinctly as contrasting propositions that characterise urban tourism and provide a focus for scientific investigation" (Ashworth and Page, 2010, p.1), even though in many cases the development of urban tourism is considered as a reference point, o standard of "convergence", for other forms of tourism (e.g. rural tourism) (Badulescu et al., 2015). According to G. Ashworth and S.J. Page (2010, p.2) these paradoxes are:

- World-wide urban tourism represent an extremely important form of tourism. Despite its significance, urban tourism has remained an area neglected by researchers, with an imprecise definition, so that in the specialty literature there is no unanimous definition for the term;
- Tourists visit cities for many purpose. The cities that accommodate most tourists are large multifunctional entities into which tourists can be effortlessly absorbed and thus become to a large extent economically and physically invisible.
- Tourists make an intensive use of many urban facilities and services but little of the city has been created specifically for tourist use;

- Tourism can contribute substantial economic benefits to cities but the cities whose economies are the most dependent upon tourism are likely to benefit the least. It is the cities with a large and varied economic base that gain the most from tourism but are the least dependent upon it;
- The tourism industry clearly needs the varied, flexible and accessible tourism products that cities provide. It is by no means so clear that cities need tourism.

Due to its complexity, urban tourism cannot be reduced to a single definition, because cities shows significant differences in terms of their size and other existing features to achieve a similar model of interpretation (Law, 1996). „The term urban tourism simply denotes tourism in urban areas" (Law, 2002, p.4).
Fainstein and Judd (1999, cited in Craggs, 2008, p.30) state that there are three elements without which we cannot talk about urban tourism:

- Tourist;
- The tourism industry;
- Cities.

On the other hand urban tourism is distinguishable from other forms of tourism by a number of features which does not applicable to all urban destinations (Edwards et al., 2008, p.1033). A significant number of tourists visit urban areas having as main purpose conferences, business, shopping, visiting friends and relatives. Another feature is that local residents are also users of attractions and infrastructure that have been developed for non-tourism purposes. One of the most important distinctions of urban tourism over other forms of tourism is that in the city are other industries or services (Badulescu and Badulescu, 2014) with which it must compete for resources such as labor and land. Urban tourism is facing many constraints in terms of development, cultural heritage is the most important factor to be taken into account than in other forms of tourism. Urban tourism is a reason, but also an engine of regional or even cross-border cooperation (Badulescu and Badulescu, 2012) or (Feier and Badulescu, 2016).
The present paper focuses on the different types of urban tourism, analyzed in the European context. In this sense, 10 European countries (Spain, France, Germany, Italy, Poland, Croatia, Hungary, Romania, Bulgaria, and Slovakia) were selected to illustrate a series of relevant statistical data when it comes to urban tourism.

2. Urban tourism interference with other forms of tourism

Urban tourism is seen as a place of interference between multiple forms of tourism. Regarding travel motivations, the largest share is held by cultural tourism and leisure areas (about 40%), followed by meetings with family and friends (30%), business and professional reasons (10-15%) to which is added gastronomic visits, shopping, attending events, etc. (Edwards et al., 2008)
Given these motivations, an analysis of visitor behavior in cities leads to the identification of features of the demand and, on this basis, to shape forms of urban tourism.

2.1. Cultural tourism

Cultural tourism represents those journeys that concerns: visiting historical heritage (archaeological remains, historical monuments, castles, religious buildings, parks and gardens), museums (archaeology, history, natural sciences, botanical gardens,

parks zoo), participation in cultural events (opera, ballet, theatre, music festivals, dance, film, traditional celebrations), tourism and industrial equipment (visits to economic construction specific assemblies urban architectural). Since historical attractions are predominantly located in cities, cultural tourism is naturally associated with urban tourism.
Thorburn (1986, cited in Richards, 2005, p.10) state that the cultural heritage of Europe is „one of the oldest and most important generators of tourism" and meets so far an important role in tourism industry until de present. According to G. Richards (2005, p.11) „there is no doubt that culture is an important tourism resource in Europe, and maintaining the competitiveness of the European tourism product is vital".

2.2. Leisure tourism

Leisure tourism also holds a significant share in movements to urban areas, a special category of entertainment media, especially popular among tourists, is occupied by amusement parks. In terms of defining leisure tourism, the specialized literature started by defining the term "leisure".
According to Veal (2004, p.2) "leisure is a state of mind which ordinarily is characterized by un-obligated time and willing optimism. It can involve extensive activity or no activity. The key ingredient is an attitude which fosters a peaceful and productive co-existence with the elements in one's environment".
Tourism is by definition only partly for leisure purposes, as business activity can be a major component. Warn (2001) state that tourists are categorised statistically by the purpose of visit:

- Leisure and recreation - holiday, sports, cultural tourism, visiting friends;
- Other tourism purposes - study and health tourism;
- Business and professional - meetings, conferences, missions and incentive.

Europeans prefer to spend more and more of their free time in leisure complexes, amusement parks, carnivals, traditional events, religious celebrations.

2.3. Business tourism and professional activities

Davidson (1994, cited in Swarbrooke and Horner, 2001, p.3) in his ground-breaking book on business tourism in 1994, attempted to define business tourism as follows: „business tourism is concerned with people travelling for purposes which are related to their work. As such it represents one of the oldest forms of tourism, man having travelled for this purpose of trade since very early times".
Business tourism and professional activities refers to congresses, symposia, seminars, fairs, conferences, exhibitions, meetings, meetings with business partners, training courses, etc. In general, the preferences of business men are turning to high quality services, visit shopping centres and traditional animation. Unlike them, participants in congresses and meetings show interest by walking in the historical centres, museums, exhibitions, generally concerns the intellectual nature.
Currently, business tourism has become an important component with significant results in the economies of many countries. In this context, tourism development will have to consider the possibilities and limits of countries hosting and organizing various types of meetings given that the increasing number of business men is obvious and has many political implications, economic and social consequences for

overall development of host destinations. According to international statistics, most conventions and meetings are taking place in Europe.

2.4. Sports tourism

Sports tourism is a growing sector in recent decades, even a social phenomenon (Mester, 2008) and the voyages of tourists interested in sports, sporting events or simply spending leisure time in sports contexts offer host cities and regions many benefits. Gibson (1998) defines sport tourism as a leisure-based travel where an individual travels away from their home community to either play or watch sporting activities. The definition is comprehensive and unusual (Rinaldi, 2011) as long as it relates to related activities such as visiting sports museums, famous sports arenas, halls of fame, etc. (Gibson, 1998).

Sports tourism also represents an important motivation of urban tourist movement for events such Olympiads, tennis tournaments, world championships. Besides cultural and educational purpose it generates significant financial flows, representing a strong impulse to the development of the economies of cities where such activities take place.

2.5. Shopping tourism

According to UNWTO (2014, p.13) „shopping tourism is a contemporary form of tourism fostered by individuals for whom purchasing goods outside of their usual environment is a determining factor in their decision to travel". G. Mascardo (2004, cited in UNWTO, 2014, p.13) suggested that „traditionally, the consumption of tourists focused on specific goods and services (hotels, restaurants, cultural or entertainment offers), modern tourists, who often enjoy a high purchasing power, nowadays are consumers of wider goods, such as fashion, crafts or design".

Making shopping is considered by some experts as an important source of generating financial income and it is performed, usually in large shopping centres, located either in the centre or at its periphery. Including shopping in the domain of urban tourism is accepted with reserve by most specialists, the controversy is related to the difficulty of separating flows of tourists to the city residents, without the possibility of quantifying the volume of commercial services and goods purchased by tourists.

2.6. Gastronomic tourism

According to Hall and Sharples (2003, cited in UNWTO, 2012, p.6) „food tourism is an experiential trip to a gastronomic region, for recreational or entertainment purposes, which includes visits to primary and secondary producers of food, gastronomic festivals, food fairs, events, farmers' markets, cooking shows and demonstrations, tastings of quality food products or any tourism activity related to food". On the other Quan and Wang (2004, cited in Gajić, 2012) state that „gastronomic tourism is an emerging phenomenon that is being developed as a new tourism product, due to the fact that over a third of tourist spending is devoted to food".

Gourmet holidays have as objective the participation in certain events, tasting dishes, spices, wine, beer, bakery products, cooking, baking, visiting chefs and famous restaurants, visiting wine cellars, visiting tourist fairs or competitions. The main objective of gastronomic tourism is to encourage tourists to explore the local

environment and learn about local food, beverages, and methods of preparing food and not least to learn the history of food in a specific environment.
Delimitation of these components of urban tourism, travel related motivations to the city was made possible as a result of economic and social context favourable on improving transport and, on this basis, accessibility in urban space, diversification of tourism products and services, scale cultural events, sports and business.

3. European statistics regarding urban tourism

The main purpose of this research is to identify the differences that occur between the European countries in terms of urban tourism. The research covers recent years (2015) and presents comparisons for several indicators (e.g.: nights spent at tourist accommodation establishments, number of bed-places by degree of urbanisation, Number of trips by purpose). For the statistical research, we have used as data sources, official information published on the webpage of Eurostat - European statistics.
Since its appearance, urban tourism was facing a number of obstacles related to the high cost of transportation, uncertainty and time travel, lack of comfort stays drawbacks that limited the potential development of tourist movement for most categories of the population. Gradually, urban tourism has developed as a result of economic progress, the development of science and technology, increasing living standards, become, now, a real dynamic factor of urban economies.

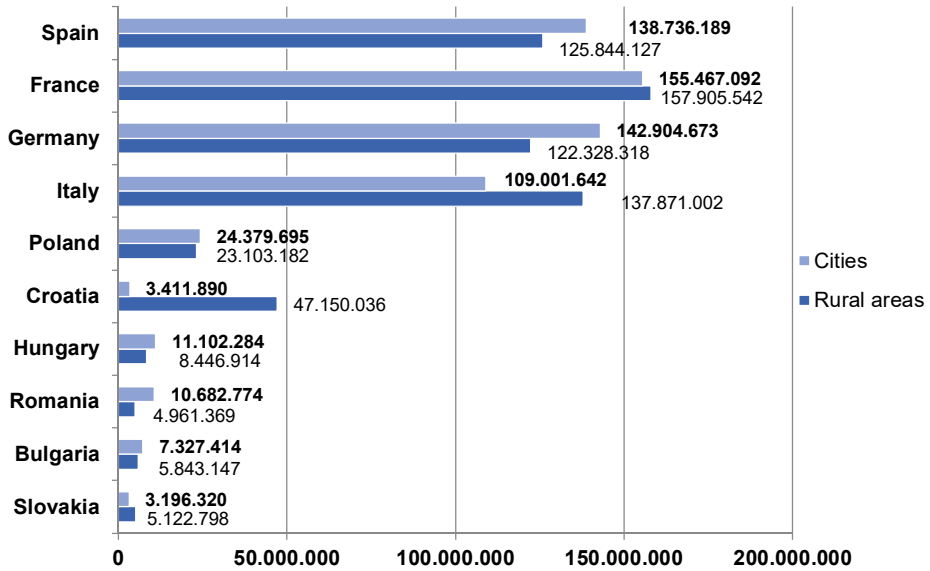

Figure 1: Nights spent at tourist accommodation establishments by degree of urbanisation, 2015
Source: author representation using Eurostat data, http://ec.europa.eu/eurostat/web/tourism/data/database, 2017

Urban tourism is a developing tourist phenomenon with the highest impact and importance for the European touristic system. Tourism generates significant economic effects on European cities but also tourists engage in an intensive use of the facilities and urban services.
In Europe, urban tourism represents about 30 % of all trips and approximately 20 % of the total overnight stays. In figure 1 we represented nights spent at tourist accommodation establishments by degree of urbanisation.
In the data presented in the figure we can observe that in the majority countries analysed (Spain, Germany, Poland, Hungary, Romania, Bulgaria) the nights spent at tourist accommodation establishments of cities have seen a number higher than those spent in tourist accommodation in rural areas, excepting the following countries: France, Italy, Croatia and Slovakia.
Through figure 2 we made a comparison between the number of bed-places in the cities and rural areas.

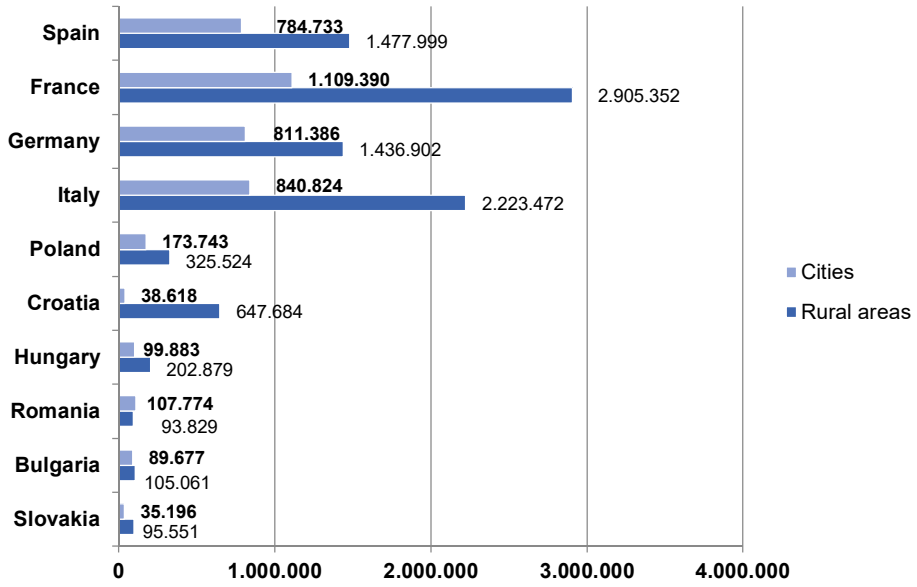

Figure 2: Number of bed-places by degree of urbanisation, 2015
Source: author representation using Eurostat data, http://ec.europa.eu/eurostat/web/tourism/data/database, 2017

As it can be seen in the Figure 2, in all countries analyzed the number of bed-places available in rural areas exceed the capacity of bed-places number of cities, excepting Romania, where the situation is reversed.
Many European cities have many possibilities for leisure, from cultural and historical sightseeing to shopping, sports and recreation, visiting relatives and friends, etc. In the data presented in the figure we can observe that in the majority countries analysed (Spain, Germany, Italy, Croatia, Hungary, Bulgaria, Slovakia) the main purpose for which tourists made the trips were holidays, leisure and recreation. On the other hand, in France, Poland and Romania most trips were made to visit friends

and relatives. In all 10 countries analysed, the number of trips made for professional and business purpose occupies the last place.

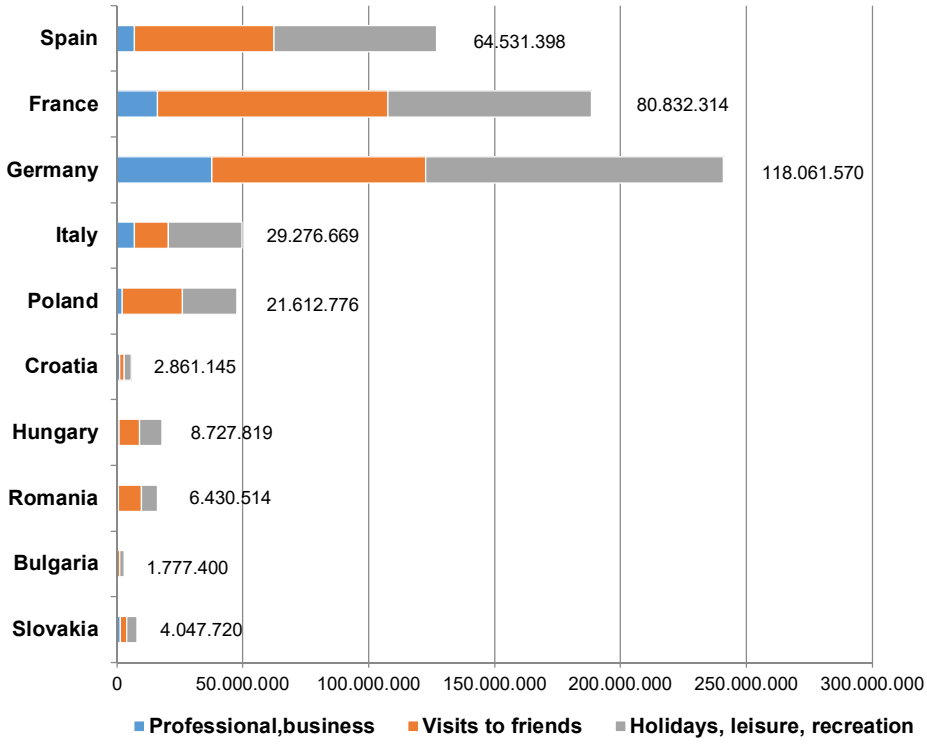

Figure 3: Number of trips by purpose, 2015
Source: author representation using Eurostat data, http://ec.europa.eu/eurostat/web/tourism/data/database, 2017

Main motivations for travel in countries like France, Italy, Spain and Germany are represented by the cultural and historical potential, business centres and conferences, leisure opportunities.

4. In conclusion

As a result of the research we can state that the main motivation of the tourists who are visiting the countries of Europe is represented by holidays, leisure and recreation. We can say that development and modernization of cities on the one hand and the variety of their offers on the other hand have led in time to outline a specific form of tourism - urban tourism.
Along with increased travel, this form of tourism has gained more and more consistent, benefiting today from the characteristics of a distinct form of travel with very different motivations. We conclude that travel motivations of tourists lead to the identification of several forms of tourism that takes place in urban areas.

It is obvious that cities concentrate most of the urban tourist movement and hold the largest share in the number of units and places of accommodation belongs to countries with a rich cultural and historical heritage, also representing important destinations for business tourism but also for leisure activities and entertainment. European cities which benefits from an exceptional cultural potential, transformed over time into true destinations that represent models for other cities that are growing.

Besides those mentioned in the paper there are a lot of other views regarding urban tourism and its forms. As we could see, urban tourism is a complex theme that includes many other forms of tourism, so it may be the subject of a broader research. The research could consist of an analysis of the statistics on these forms of tourism in the main cities of Europe and in the world.

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INNOVATION AND PERFORMANCE. AN ANALYSIS ON EUROPEAN AND ROMANIAN COMPANIES

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Abstract: *The challenges of the economy and of the modern society based on knowledge are closely related to the success of firms, their ability to generate new, innovative products and services, in a steady pace and in a large, diverse structure in order to ensure performance and long-term welfare. In a global world where countries compete to produce and promote the market for quality and convenient products for the consumers, the innovation capacity of a country and the innovative capabilities of companies acquire a special importance. Numerous studies have analyzed the determinants of innovation of the innovative activities in companies, focusing in particular on organizational and technological capabilities and associated strategies required for successful innovation. There are different types of measuring innovation at the firm level, and in this paper we chose four main groups inspired by the typology promoted by OECD and Eurostat: product innovation, process innovation, organizational innovation, and marketing innovation. To remain competitive in the long term, companies must consider all these areas, introduce new products to market, improve the quality of the existing products, upgrade or purchase new production technologies. Based on statistical reports of world and national organizations, our research highlights an extremely diverse and heterogeneous picture of the performance innovation indicators in Europe and the situation in Romania, by comparison both with the EU average, with countries in Central and Eastern Europe (CEE), but also with their own performance in prior periods.*

Keywords: *innovation; innovative firms; performance; EU; Romania.*

JEL classification: *O31; M21; L25.*

1. Introduction

Innovation is a widely debated issue tackled by both economists and various national and international organizations. Innovation is considered to be one of the key factors affecting the long-term success of a company in the context of competitive markets today. Therefore, there is a growing interest in studying innovation because most theories of innovation have as a starting point the company (Audretsch and Thurik, 2001) and the environment in which it operates. Innovation in a company is positively related to the performance and profitability of the company, contributing to the growth and development of the economy, based on knowledge. Information is key to monitoring the level of innovative activities, and refers to a set of indicators related to innovation introduced or implemented in enterprises based on the four types of

innovation: product innovation, process innovation, organizational innovation, innovation of marketing. Our research presented in this paper carries out a comparison of the main innovative indicator of companies in Europe, for selected top innovators countries and for several Central and Eastern European states, to better understand the gap of the Romanian place regarding a reasonable performance in innovation.
The paper is organized as follows: in the next (second) part we briefly present an overview of innovation and its link with the performance of a firm and several typologies of innovative firms, in the third part we present the research methodology, the main data and discuss the results; finally, we conclude and emphasize some further policy implications.

2. Innovation and performance. Types of companies and innovations

The performance of a company and its link with innovation is a complex and multidimensional concept (Murphy et al., 1996), often intuitively rather than rigorously demonstrated. Performance can refer to the structure components of a company (i.e. production performance, marketing, investment) to the output (of products) or to reaching general indicators such as sales volume, profit, return (Sohn et al., 2007), (Wolff and Pett, 2006), (de Jong et al., 2002), (Harris, 2001).
The positive relationship between firm-level innovation and its performance seems obvious: a new, innovative product has few competitors on the market and, as a result, a period of time, the company will be able to obtain higher profits. While, obsolescence of the product, competition with other products and imitation will diminish these advantages, but the company already has experience and behavior driven to introduce new innovative products and thus will maintain its position and performance (commercial, financial) for a period of time shorter or longer (Varis and Littunen, 2010), (OECD and Eurostat, 2005). Despite this deductive explanation, the profound relationship between innovative behavior and performance of the company is still a matter of debate.
J. Schumpeter was among the first economists to use the concept of innovation in his studies. He explained that the capitalist engine is kept in motion by new customers, new markets, new methods of production or transportation, new products or new forms of industrial organization created by capitalist enterprises (Bayarçelik and Taşel, 2012).
Empirical research on firms in the manufacturing sector found that the relationship between the number of innovations made (and promoted on the market) and the operating profit margin is positive and that innovative companies can keep their financial performance higher compared to the non-innovative ones for a certain period of time (Geroski et al., 1993), (Han et al., 1998) and that innovation provides a sustained higher profitability (Roberts, 1999), (Atalay et al., 2013), (Talmaciu and Cismas, 2017). Innovative entrepreneurs consider innovative potential is often constrained by their access to finance, a main restrictions that stand in front of their business growth. Most incipient entrepreneurial initiatives, as well as stable SMEs, face significant financial constraints, largely due to their inherent risks and weaknesses, but also due to the reluctance of lenders regarding the success of SMEs' proposed innovations (Badulescu, A., 2011, Badulescu and Petria, 2011). Calantone, et al. (2002) or Artz et al. (2010) shows that innovation in the company is positively related to the performance and profitability of the company and

innovation enhances sales growth as long as the company "presses" the rapid entry of new/innovative products on the market and ensures that the products retain a level of novelty higher to the competing products. Finally, Atalay et al. (2013) or EBRD Report (2014) show that innovation has an impact on performance when associated with the organization, marketing and product policies at the company level, "innovation strategy is an important year major driver of firm performance and should be developed and executed as an integral part of the business strategy" (Gunday et al., 2011). Operational performance therefore depends on the capacity of entrepreneurs and managers to recognize and use innovations within the company to generate a positive attitude towards attempts to discover new ideas and solutions for the productive traditional methods and processes (Badulescu and Dodescu, 2010), (Badulescu, 2010), Dodescu et al, 2011).

One of the early innovation ranking was made by Schumpeter, who identified five types of innovations: a) creating new products or improving product quality; b) new production methods based on new scientific discoveries; c) new sources of supply of raw materials and semi-finished products; d) creating new markets; e) the emergence of new forms of industrial organization that will lead to the creation of a monopolistic position (Schumpeter, 1934). According to the Oslo Manual, innovation can be represented by the implementation of a new or significantly improved product (good or service), or a process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations (OECD and Eurostat, 2005).

This definition covers a wide range of possible innovations that can be classified into four categories: 1) product innovation; 2) innovation of process; 3) marketing innovation; 4) organizational innovation. The minimum requirement for an innovation is that the product, process, marketing method or organizational method must be new (or significantly improved) to the firm. It should be stressed that innovation must be run successfully on the market (e.g. products) or implemented (i.e. processes) to obtain an economic impact (OECD and Eurostat, 2005).

Some definitions and methodological notes are necessary. Thus, product innovation refers to the marketing of a product or service new or significantly improved with respect for its traits, being user friendly formed as components or subsystems (e.g. Smartphone, software, insurance, transport, consultancy) and the innovation of process includes the implementation of a production process, distribution method or new or significantly improved ancillary activities (OECD and Eurostat, 2005). The organizational innovation refers to the implementation of a new organizational method in business practices of the company, in workplace organization or external relations that has not been used before by the enterprise. Marketing innovation refers to the implementation of a new marketing concept or strategy that differs significantly from the existing enterprise marketing methods and which has not been used before (OECD and Eurostat, 2005).

In the European statistical practice and research, successful innovators are defined as companies that have introduced or implemented at least one product, a process, a way of organizing or method of marketing new or significantly improved while innovative enterprises are enterprises which launched new or significantly improved products (goods or services) on the market, or introduced new or significantly improved processes, or new organizational or marketing methods (Dumitriu and Nunu, 2016), (OECD and Eurostat, 2005). Finally, we define non-innovative enterprises as those businesses that had no innovative activity in the period under

review (Dumitriu and Nunu, 2016), (European Bank for Reconstruction and Development (EBRD), 2014), (OECD and Eurostat, 2005).
There are, of course, other types of innovative companies. It is obvious that the diversity, structure, capital endowment or the size of the companies generate significant differences in terms of innovative behavior and performance. This can guide research to establish a typology of firms according to their degree of innovativeness, i.e. diversity of companies can be divided into innovative clusters, starting with their (innovative) inputs, outputs and processes. Through the cluster analysis, Kemp, et al., 2003 drawing on previous research under EIM Business and Policy Research (Netherlands), develop a typology of innovative firms by using 26 indicators of innovation. Their research summarizes four groups/types of innovative firms with homogeneous characteristics in the three directions mentioned (inputs, outputs and processes), with the high internal and external validity cohesion: output-oriented companies, all-round companies, process-oriented companies and lagging behind companies.

Table 1: Types of innovative firms

Output-oriented companies - focus on output innovations; - highly educated personnel; - many employees involved in innovative activities; - continuously innovating is often incorporated in the strategy; - below-average process innovations; - many new products/services; - high turnover from new products/services.	**All-round companies** - all-round innovators; - many company trainings; - high use of subsidies; - innovative in all parts of the organization; - dynamic organisation structure; - frequent co-operation and out-sourcing of innovative activities; - many patents; - considerable level of new products/services.
Process-oriented companies - focus on process innovations; - a low level of innovative activities; - many trainings; - below-average innovation outputs; - many different types of innovative activities.	**Companies lagging behind** - hardly innovative; - below-average scores on almost every indicator; - lowest level of automation; - hardly no use of subsidies; - hardly no process innovations; - below-average innovative outputs.

Source: de Jong, et al. (2002) and Kemp, et al. (2003)

3. Research

3.1. Innovative enterprises in Europe

According to Audretsch (2005) innovation is one of the most important factors in the activities of the companies, generating in turn, direct and indirect positive effects on the country, stimulating growth.
To gain an insight into innovation activities at the enterprise level, monitoring is required for innovative activities because innovation contributes to growth and development of the economy based on knowledge. Indicators on innovation are key elements in monitoring the level of innovative activities. Eurostat measures the innovation at the company level through a set of indicators related to innovation

introduced or implemented in enterprises based on the above mentioned four types of innovation (product innovation, process innovation, organizational innovation, innovation of marketing) and presented in the Oslo manual (OECD and Eurostat, 2005). Eurostat indicators measure innovative activities and present at the same time a picture of the innovative activities of innovative enterprises in the EU.
According to Eurostat data, between 2010-2012, among countries with values above the EU average in terms of the share of innovative enterprises in all enterprises, for all types of innovations, there are countries like Austria, Denmark, Finland, France, Germany, Italy, and Luxembourg. In contrast, with a share of innovative enterprises in all enterprises, below the EU average, there are countries like Romania, Bulgaria, Hungary, Slovakia, Latvia, Lithuania, and Poland (Table 2). For most countries in the latter category, individual indicators hardly exceed 50% of the EU average, although this group is not homogeneous, neither within the indicators in the same country nor among the countries.

Table 2: Innovative enterprises in EU (selected countries), between 2010-2012

Countries	Innovative enterprises of products and/or processes	Product innovators	Process innovators	Organizational and/or marketing innovative enterprises	Inno-vators for methods of organi-zation	Innovators for marketing processes
E.U. 28	**36.00**	**23.70**	**21.40**	**37.10**	**27.50**	**24.30**
Germany	55.00	35.80	25.50	47.60	32.20	34.40
Austria	39.30	26.60	28.70	46.10	36.40	29.50
Finland	44.60	31.00	29.30	38.40	29.70	26.50
Denmark	38.10	24.80	22.90	41.80	32.20	29.40
France	36.70	24.20	24.10	42.30	34.20	25.40
Luxembourg	48.50	30.30	32.80	53.50	46.80	32.40
Italy	41.50	29.10	30.40	45.30	33.50	31.00
Romania	6.30	3.40	4.60	18.80	14.10	13.80
Bulgaria	16.90	10.80	9.30	18.60	12.40	14.20
Hungary	16.40	10.60	8.30	26.50	16.50	19.70
Slovakia	19.70	14.40	1.50	27.70	18.60	19.30
Latvia	19.50	10.40	12.70	23.90	16.90	16.50
Lithuania	18.90	11.60	13.10	26.20	17.50	19.30
Poland	16.10	9.40	11.00	15.50	10.40	10.60

Source: Eurostat, Innovation statistics, [Online], Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Innovation_statistics

Using these indicators contribute to a better understanding of the innovation process and allow an analysis of the link between innovation and economic fields, aimed at monitoring the progress of innovative activity in Europe. For a better picture of the position of each country, in Annex 1 (final) European countries have introduced performance of all these indicators.

3.2. Analysis of innovative enterprises and sectors in Romania

We can get data on Romania either from the Eurostat database, either those of the National Institute of Statistics, which aligns to the community actions to collect data on innovation by conducting a statistical survey on innovation, research conducted with a frequency of two years, aiming to obtain a set of indicators for the

characterization of innovation and the measurement of the development of innovative activities in Romania.
According to the European regulations on innovation statistics, the scope of a statistical survey on innovation is the total population of enterprises operating in industry and services. In the statistical survey there are comprised the enterprises with the following main activity: mining and quarrying; manufacturing industry; production and supply of electric energy, gas, hot water and air conditioning; water supply, sewerage, waste management and remediation activities; wholesale trade except motor vehicles and motorcycles; transport and storage; information and communication; financial and insurance; professional, scientific and technical. The enterprises have been selected according to the size, the number of employees (Dumitriu and Nunu, 2016).
Between 2012-2014 the National Institute of Statistics of Romania paid an integrated statistical survey on research and development and innovation in business enterprises based on a community questionnaire "Community Innovation Survey", known as abbreviated CIS, provided by the European Commission through Eurostat, on a sample of 28 380 enterprises with activities in industry and services. Of the 28 380 enterprises, 3645 enterprises have developed innovative activities, of which 3334 are successful innovators, the remaining 311 enterprises with innovations being finalized and/or abandoned (NIS, 2016).
In the period 2012-2014 the share of innovative enterprises was 12.8% of all enterprises considered sampled and non-innovative enterprises by 87.2%. Of all innovative enterprises a rate of 3.5% introduced or implemented only products and/or new or significantly improved processes, while 6.3% of them have only implemented organizational innovations and/or new or significantly improved marketing. A share of 3.0% of innovative enterprises had innovation as product and/or process and organizational innovations and/or marketing.
Of all enterprises with innovative products and/or processes (6.5%), 1.1% had innovations only of products, 1.8% had innovations only of processes, and 2.5% had both innovations of products and processes, while 1.1% were enterprises with innovative products and or processes completed and/or abandoned. Of all enterprises with organizational innovations and/or marketing (9.4%), 2.8% were enterprises with organizational innovations only, and the enterprises with marketing innovations were only of 2.7%. Companies that had both innovation and marketing organization recorded a higher share or 3.9%, see also Annex 2 (Dumitriu and Nunu, 2016).
Figure 1 presents the share of innovative enterprises in Romania, in all enterprises by types of innovations, between 2012-2014.
If we classify innovative enterprises after each type of innovation (regardless of the other types of innovation), the innovative of organizational methods enterprises that used forms of organizing new business practices of the enterprise, in workplace organization and external relations enterprise, which were used by the enterprises, registered the highest share, i.e. 6.7%. The enterprises that have implemented a new concept, strategy or method of marketing that has not been used before had a share of 6.6%, while the enterprises innovative of processes have had a share of 4.3% and that of products of 3.6%. Service enterprises were innovative, accounting for 13.1% of all enterprises, while the industry has a lower score, 12.6% of all enterprises.

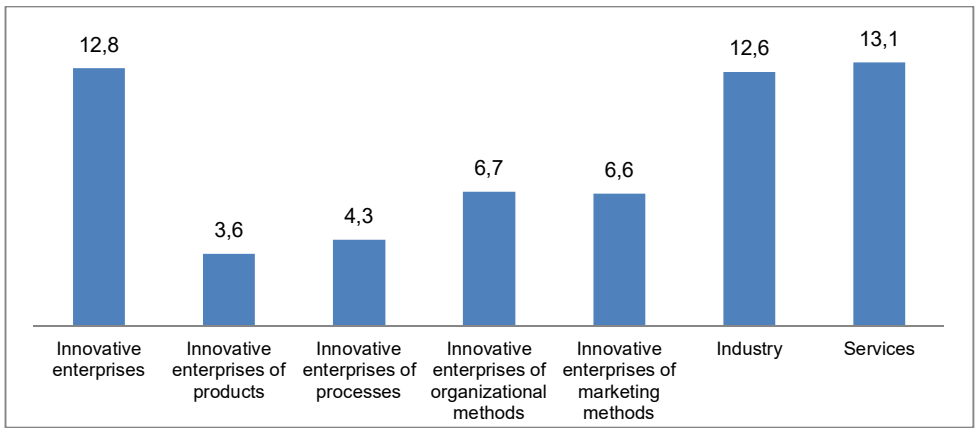

Figure 1: The share of innovative enterprises in Romania, in all enterprises, by type of innovation between 2012-2014
Source: Based on the National Institute of Statistics (NIS), (2016), Press Release No. 189/28 July 2016

INS survey results on innovation in enterprises show that the share of innovative enterprises in the period 2012-2014 (12.8%) was down 7.9 percentage points from the previous period 2010 to 2012 (Figure 2).

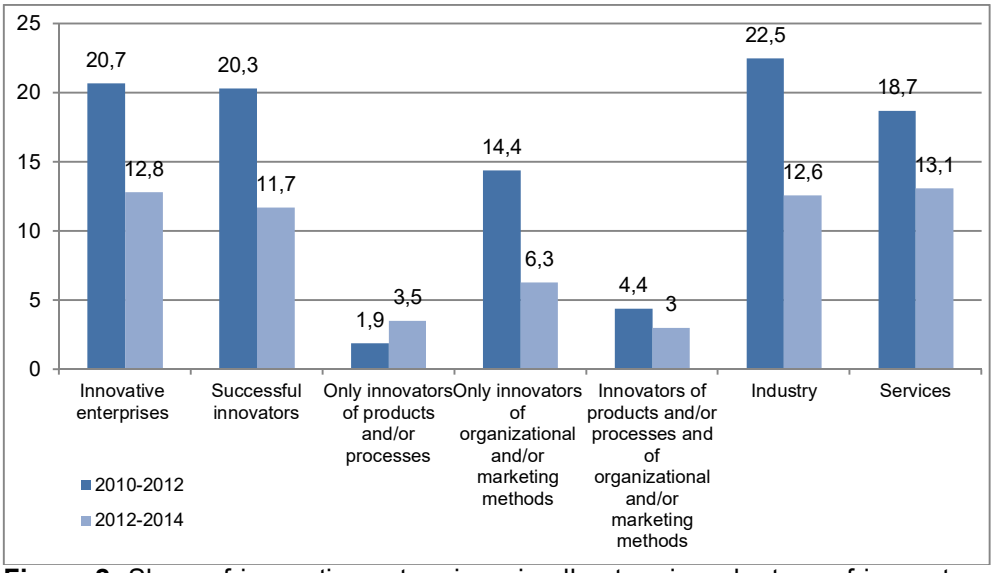

Figure 2: Share of innovative enterprises, in all enterprises, by type of innovators and economic activities in the period 2012-2014 compared to the period 2010-2012
Source: Based on the National Institute of Statistics (NIS), (2016), Press Release No. 189/28 July 2016,

In fact, Romania's innovation performance, expressed as the percentage of innovative enterprises (in various stages or guidelines) is about 30-50% lower in

2014 compared to 2012. The decrease is manifested in four of the five categories, while we notice an increase only for product/process innovators, an indicator which, however, had the worst performance, both in Romania and in all European countries. Romanian enterprises performance in this respect are worse about 6 times (!) the EU average and 8-10 times the performance of the highest ranked (Germany, Finland, Luxembourg, and Italy). In the group in which Romania was introduced (mostly countries of Central and Eastern Europe, Romania's performance in these indicators is 2 or 3 times weaker than a possible average of the group (Table 2).
According to the data provided by the NIS, within the economic activities in industry, the largest share is held by the manufacturing industry 95.2%, while the remaining sectors have weights much lower: water supply, sewerage, waste management and remediation activities 2.3%; production and supply of electricity, gas and air conditioning, hot water 1.4%; and mining and quarrying 1.1%.
In the service sector, the largest share of innovative enterprises, all enterprises owned by wholesale 39.2%, followed by information and communications 26.0%, the transportation and storage 16.8%, professional, scientific and technical 13.1% and brokerage financial and insurance by 4.9%.
In the period 2012-2014, the most innovative economic activities, industry and services, calculated according to their share in total enterprises in their sector they were those of: research and development 54.2%, manufacture of basic pharmaceutical products and pharmaceutical preparations 39.7% and information technology services activities 36.6%. Top 10 innovative activities (sectors) of Romania, between 2012-2014 can be seen in Table 3.

Table 3: Top 10 innovative activities (sectors) of Romania between 2012-2014

	Economic activity	**The share of innovative enterprises in total enterprises in their sector**
1.	Research-development	54.2
2.	Manufacture of basic pharmaceutical products and pharmaceutical preparations	39.7
3.	Information technology service activities	36.6
4.	Manufacture of coke and refined petroleum products	30.8
5.	Telecommunications	23.2
6.	Remediation activities and services	22.2
7.	Metallurgical industry	22.2
8.	Manufacture of other transport means	22.0
9.	Manufacture of chemical substances and products	21.8
10.	Publishing activities	21.3

Source: Dumitriu and Nunu, (2016), *Înovaţia în întreprinderile din mediul de afaceri perioada 2012-2014*, Institutul Național de Statistică, p. 23

Analysis of data in the above table suggests significant differences against a pattern associated with the developing countries, but it itself does not reveal the true performance (or, rather, under-performance) of Romania in comparative terms - EU or even of Central and Eastern Europe. It is obvious that sectors like R & D, pharmaceutical or ITC accumulate the highest number of innovative enterprises, but it is reasonable to ask why economic sectors that no longer have long "spearhead"

in innovation worldwide (products sector of coke and petroleum, metallurgy and publishing) are present in the top 10 innovative sectors in Romania? In other words, this information must be supplemented by analyzing the performance of these sectors, especially with comparable data from other European countries and worldwide.

4. Conclusions

Innovation is regarded as an essential source for sustaining economic growth and welfare. Numerous studies have analyzed the determinants of innovative activities in companies, focusing in particular on organizational and technological capabilities and associated strategies required for successful innovation. Based on OECD and Eurostat reports, our research highlights the extremely diverse and heterogeneous picture of innovation performance indicators, structured into four main groups (product innovation, process innovation, organizational innovation, marketing innovation).

In this context, Romania's situation regarding the main firm's innovation indicators is not at all encouraging. Compared to the EU average or even other selected ECE countries (Poland, Hungary, Bulgaria, Latvia) the level of some indicators like *innovation in organization and/or marketing* is of 40-60% of the CEE average in these sectors.

For innovative enterprises of products and/or processes, the situation in Romania is much lower. It is about 6 times lower than the EU average, 8-10 times the performance of the highest ranked (Germany, Finland, Luxembourg, Italy), 2 to 3 times that of countries in CEE (Poland, Hungary, Lithuania, Latvia, Slovakia). Moreover, Romania's innovation performance expressed as the percentage of innovative companies (in various stages or orientations) is falling, being about 30-50% lower in 2014 compared to 2012. Without a policy to improve the outcomes in the educational systems to provide access to advanced knowledge, to promote intrapreneurship and collaboration between companies and institutions, and especially without substantial investments (public and private) in R & D infrastructure (Badulescu and Cadar, 2016), the gap between Romania and the other countries in the region and especially to performers in the EU will not be reduced but, on the contrary, it will worsen.

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Annex 1: The share of innovative enterprises in all enterprises in the EU in 2010-2012

Countries	Innovators of products and/or processes	Innovators of products	Innovators of process	Innovators of organizational and/or marketing methods	Innovators of organizational methods	Innovators of marketing processes
U.E. 28	**36,00**	**23.70**	**21.40**	**37.10**	**27.50**	**24.30**
Austria	39.30	26.60	28.70	46.10	36.40	29.50
Belgium	46.50	31.50	31.10	37.90	29.30	21.90
Bulgaria	16.90	10.80	9.30	18.60	12.40	14.20
Czech	35.60	25.30	24.00	31.60	20.50	22.40
Cyprus	29.90	20.90	28.20	36.10	26.20	29.50
Denmark	38.10	24.80	22.90	41.80	32.20	29.40
Estonia	38.40	20.70	23.80	31.80	21.70	21.90
Finland	44.60	31.00	29.30	38.40	29.70	26.50
France	36.70	24.20	24.10	42.30	34.20	25.40
Croatia	25.00	16.40	19.00	31.80	22.90	23.50
Germany	55.00	35.80	25.50	47.60	32.20	34.40
Greece	34.30	19.50	25.60	45.40	30.20	36.80
Ireland	42.30	27.80	25.90	50.80	21.80	35.70
Italy	41.50	29.10	30.40	45.30	33.50	31.00
Latvia	19.50	10.40	12.70	23.90	16.90	16.50
Lithuania	18.90	11.60	13.10	26.20	17.50	19.30
Luxembourg	48.50	30.30	32.80	53.50	46.80	32.40
Malta	35.90	23.90	26.40	44.40	34.70	32.60
The Netherlands	44.50	31.90	25.90	35.70	27.30	23.20
Poland	16.10	9.40	11.00	15.50	10.40	10.60
Portugal	41.30	26.00	33.50	43.60	32.80	32.80
United Kingdom	34.00	24.00	14.10	39.10	34.20	16.80
Romania	6.30	3.40	4.60	18.80	14.10	13.80
Slovakia	19.70	14.40	1.50	27.70	18.60	19.30
Slovenia	32.70	23.60	22.50	37.60	26.30	28.50
Spain	23.20	10.50	15.10	23.40	19.40	13.20
Sweden	45.20	31.50	23.90	39.10	25.30	30.40
Hungary	16.40	10.60	8.30	26.50	16.50	19.70
Norway	31.20	19.10	11.90	33.00	21.70	23.20
Serbia	31.20	24.50	22.00	41.70	32.60	32.20
Turkey	27.00	17.70	20.40	43.70	31.70	34.70

Source: Eurostat, Innovation statistics, [Online], Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Innovation_statistics

Legend:

Values under European average
Values over European average

Annex 2: Types of innovative enterprises across Romania, between 2012-2014

Type of innovative enterprise	Number of enterprises	Share in the total of enterprises %
Total of enterprises	28380	100.0
Innovative enterprises	3645	12.8
Successful innovators	3334	11.7
Innovative enterprises of products and/or processes	988	3.5
Only innovative enterprises of organizational and/or marketing methods	1805	6.3
Innovative companies of products and/or processes and methods of organizing and /or marketing	852	3.0
Innovative enterprises of products and/or processes	1840	6.5
Only innovative enterprises of products	313	1.1
Only innovative enterprises of processes	511	1.8
Innovative enterprises of products and/or processes	705	2.5
Enterprises with innovations of unfinished or abandoned products and/or processes	311	1.1
Innovative enterprise of methods of organizing and/or marketing (regardless of the innovations of products and/or processes)	2657	9.4
Only innovative enterprises of organizational methods	782	2.8
Only innovative enterprises of marketing methods	759	2.7
innovative enterprises of organizational and marketing methods	1116	3.9
Innovative enterprises of products (regardless of other types of innovation)	1018	3.6
Innovative enterprises of processes (regardless of other types of innovation)	1216	4.3
Innovative enterprises of forms of organization (regardless of other types of innovation)	1898	6.7
Innovative enterprises of marketing methods (regardless of other types of innovation)	1875	6.6
Non-innovative enterprises	24735	87.2

Source: Dumitriu R., Nunu C., (2016) *Înovaţia în întreprinderile din mediul de afaceri perioada 2012-2014*, Institutul Național de Statistică

ROMANIA AND THE INTERNATIONAL MIGRATIONS FLOWS

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Abstract: *This article treats in the first stage the terminological aspects concerning Migrations, analyzing under report the theoretical factors generator of migrations. The objective of this papers is to make an overall assessment of the various aspects of Romanian emigration. The emigration of Romanians by years, depending on the country of destination, from the development regions and depending on age groups. The main reasons that Romanians go abroad are for economic reasons, searching for a service with a salary higher than in the country of residence. The largest number of emigrants, was in 2007 once with accession of the Romania to the European Union and the preferences depending on the country of destination were Italy, Spain, Israel, Germany and the United Kingdom. At first who emigrated were engineers, technicians, doctors in the US, Canada and France, computer scientists, economists and teachers. Lately, we are witnessing a migration from the unqualified persons or the less qualified. According to a report on migration in the world 3.4 million Romanians are living in another country. External migration of the Romanians from perspective of development regions, confirm an emigration of the population of the areas where the share of persons of other nationalities is greater or where there is a lower level of economic development. International migration (voluntary or forced) became an important part of global existence. The number of women who left the country is higher than that of the men who chose to emigrate. Migration has effects both in the country of origin how and in the country of destination. Romanian migration is characterized as follows: migration especially of the young, capable and able to work. This leads to a crisis in the labor market, in the direction where there is pressure on employment is higher than Romanian workforce potential and capabilities. Changes in population age and gender groups, corroborated with decreased fertility rates lead to a process of continued demographic aging.*

Keywords: *Mobility; qualified work force; economic and demographic factors; free movement; economic effects.*

JEL classification: *J61; J62.*

1. Introduction

Migration is a form of mobility of persons, involving the spatial differences (change of residence) and temporal differences as a rule the movement for extended periods of time than it is to be assumed in the case of daily mobility (Willis, 2010).
In the specialized literature the forms of migration are:

- Internal migration, this takes place inside of country and aims rural-urban migration.
- International migration, involves the movement of persons beyond the borders of their own country. International migration has two phenomenon: immigration when it has in view the entry of foreigners in the territory of a country and

emigration, when the flow is out of people from one country to another country (Ghetau, 2007).

International migration can be:

- temporary, when the residence of the person who emigrated does not change and expect that person which has moved from place of residence to another country to return to the country of domicile;
- finally, involves the change of residence of the emigrant;
- individual, when the decision of travel affects the individual or his family;
- mass migration, when migration flows has in view the large groups of people (Sandu, 2006).

The migration terminology is particularly complex and dynamic. Lately, there are attempts to replace terms associated with migration (emigration, immigration) with mobility and movement because of negative connotation and geopolitical changes of the last decades but also because of their associated policies.

It is the case of European Union to ensure the free movement of persons as a fundamental freedom of the single market even that until now, The European Union is a space characterized by the broad liberalization of the movement of goods, services, capital and less, the labor (Badulescu, 2007).

In the European Union for some time it is used to living in a country and work in another country, to change jobs between several countries, with or without changing home, to study in a country and then to work in another country, benefiting from the facilities offered by a single internal market.

But changing the terminology so instead of migration within EU borders with mobility, does not change the status of these people, the positive or negative effects on the economies of source or destination country, as it has not changed national or international statistics, which operates with the same terms. Migration, in its legal and organized forms, and especially in its dramatically crossing of the border, often illegal, is a costly act in economic, cultural and human terms (Iancu et al, 2017). According to Recchi (2015), even authors who talk about labor mobility in the EU defines mobile workers as "... migrants who are protagonists of migratory innovative projects, due to the complexity of the factors that motivate and the policy framework in which they organize their lives "(Cohen & Sirkeci, 2011).

According to the International Organization for Migration, categories of migrants are:

- international migrants for work (migrant workers, called in some studies as economic migrants), represents the majority of international migrants;
- highly qualified international migrants, people in management positions, specialists in international organizations or multinationals and changes his place in the internal market of transnational or international organizations; The current pattern of labor migration, known as "brain drain"- represent for countries of origin a loss of intellectual capital;
- illegal international migrants who enter in a country without legal documents necessary to access the country, these feed black market labor;
- refugees, those who leave their country of residence and cannot return because of fear that they will be persecuted because of religion, nationality, political or their opinion;
- asylum seekers, people who, for reasons of safety of life, leave their country of origin;

- forced migrants, people who are forced to leave their country because of natural disasters or industrial projects that destroy habitat;
- returnees, those who, after a while, they return to their home countries (OIM, 2014).

2. Romania and emigration

Migrations have effects on destination countries as well as on countries of origin.

For the country of destination

Economic effects: Immigrants cover the labor gaps, but they can also compete with the local population. In general, the effects are beneficial for all parts.

Demographic Effects: Immigrants contribute at population growth.

Social Effects: The cultural diversity of emigrants is observed in culinary art, shows, and sports competitions.

In the countries of origin

Economic effects: Emigrants send money to their families. These funds are equivalent to cash earned on exports.

Another positive effect is that when returning home, former migrants are qualified or have developed a certain skill.

Demographic effects: Specialists have found that the population of migrants is less significant in relation to the total population.

Social Effects: Migrations cause change of husband-wife, parent-child relationships.

Usually the returning member brings with him vices in the family.

Romania, like other less developed countries in the EU, is confronted with the phenomenon of international migration to the developed European countries, due to job mobility, in search of higher incomes and better working conditions, but also for the purpose of receiving higher education services than national ones.

Official data show that 3.4 million Romanian living and working abroad.

Unofficial data say they would be more than 4 million Romanian immigrants.

According to the National Institute of Statistics, the largest number of immigrants was recorded in 2007, when Romania joined the European Union, which marked the disappearance of more than 544,000 Romanian of the population.

In 2008 have left over 300,000 Romanian, while in 2009 there have been 250,000. In the coming years the number of migrants has declined significantly, but in 2014 increased again, reaching 184.603 people and 187.466 in 2015.

An explication of the increasing number of migrants in recent years is the liberalization of labor market in states such as Austria, Germany, Netherlands and the United Kingdom (INS, 2015).

According to a report by the United Nations on Global Migration, Romania ranks fourth in the rankings on the number of people working abroad, after the United Kingdom (4.9 million immigrants), Poland (4.4 million), Germany (4milioane) and ranks 20th worldwide (ONU, 2015).

At the beginning have emigrated the unemployed, those who did not have superior qualifications, and those who have become unemployed following the closure of factories. The restructuring of the Romanian economy (and especially the industrial sectors), which lasted for almost two decades, as well as the recent economic crisis, has led many unemployed people to abandon the search for a job close by their

qualification (Badulescu, 2006). They turned either to the rural area or to emigration, and therefore the official figures of unemployment are not as high as they seem at first glance. However, the specialists are cautious about considering emigration as a solution to temperate the short- or medium-term unemployment.

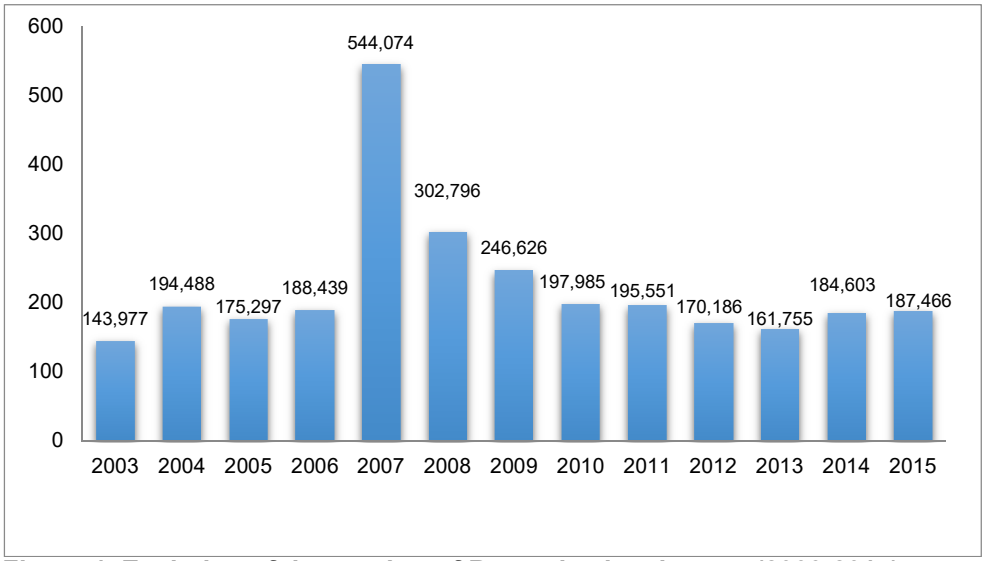

Figure 1. Evolution of the number of Romanian immigrants (2003-2015)
Source: author representation using National Statistics Institute statistici.insse.ro/shop/?page=tempo2&lang=ro&context=12

According to the International Organization for Migration, migrants with secondary education represented the largest share of Romanian migrants who have gone to Spain and Italy.
Lately, there has been an increase in the segment of migrants with higher education and skills, which opt for the Nordic countries or destinations such as Germany Britain and Switzerland.
In these countries has increased the migration of highly qualified people, highly educated, well-informed (OIM, 2016).
The causes of migration are many:

- Looking for a better paid job;
- Hunger and living conditions;
- Political and religious persecution;
- Ethnic discrimination;
- Unfavourable climatic conditions, natural calamities.

3. Romanian immigration by country of destination

In 2015, the Romanians' preferences regarding the country of destination have been Italy (55,000 Romanians), United Kingdom (32,500 Romanians), Spain (29.600 Romanians), Germany (23,700 Romanians), Belgium (8,400 Romanians) Austria (8,000 Romanians), Denmark (3,500 Romanians), France (2,800 Romanians),

Sweden (1,800 Romanians) and the Netherlands 1500 Romanians according to the Eurostat.

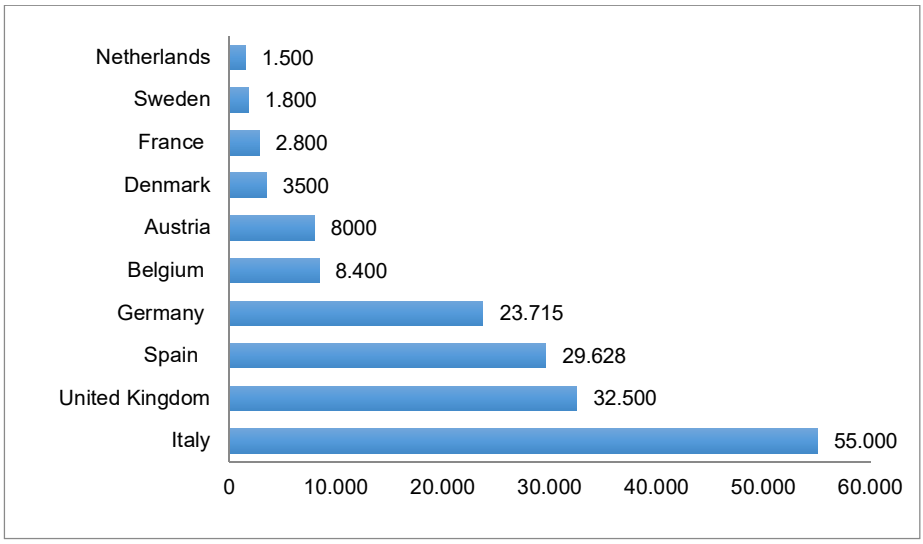

Figure 2. Top 10 Romanians' preferences on European Union countries in 2015
Source: author representation using Eurostat data http://ec.europa.eu/eurostat/statisticsexplained/index.php/Migration_and_migrant_population_statistics/ro

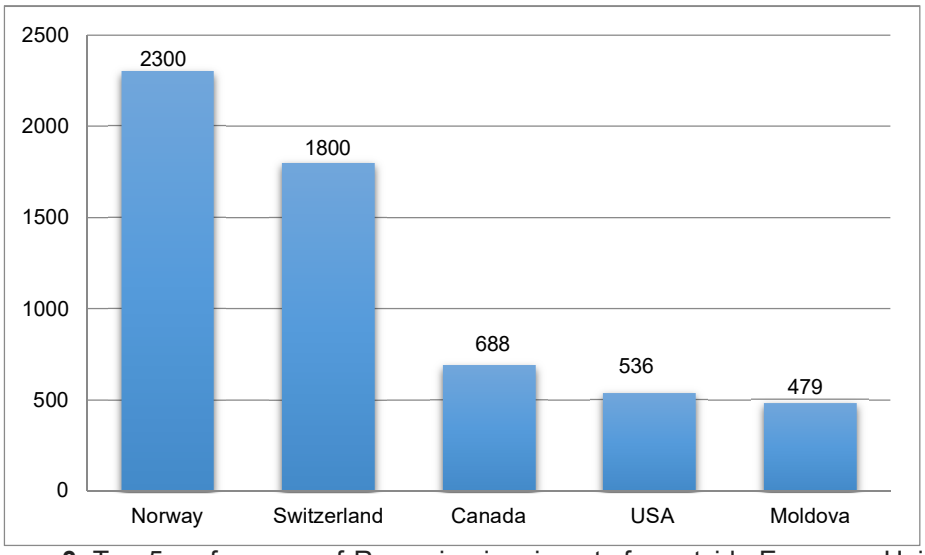

Figure 3. Top 5 preferences of Romanian immigrants for outside European Union countries (2016)
Source: author representation using Eurostat data, http://ec.europa.eu/eurostat/statisticsexplained/index.php/Migration_and_migrant..ro

The preferences of Romanian emigrants about countries outside the European Union are: Norway (with 2,300 Romanian immigrants), Switzerland (with 1,800 Romanian immigrants), Canada (nearly 700 Romanian immigrants), USA (nearly 540 Romanian immigrants) and Moldova (almost 500 Romanian immigrants) (EUROSTAT, 2016).

4. Emigration of the Romanians concerning the development regions

From the perspective of development regions, emigration of the population had been confirmed in areas where the share of people of other nationalities is higher or where is a lower or higher degree of economic development respectively.

The main areas are:

- Center and West- regions where the weight of Hungarian and German population is higher;
- Bucharest-Ilfov- the region with the highest degree of development offers important opportunities on the labor market abroad;
- North-East- the poorest region of Romania where people chose in large proportion to go abroad to seek work;

According to the National Institute of Statistics in the period 1990- 2014, 27.5% and 22.6% of emigrants have gone of the Central and the West regions.

In Bucharest-Ilfov region 16.4% and in the North West Region 14.3% of the population had left the country (INS, 2014).

Migration in the counties of the emigrants highlights that there are several centers which support with migrants the labor market abroad.

The counties that focus a large number of people who have migrated to foreign especially in the early years, are the counties of west and central Romania (Sibiu, Brasov, Cluj and Arad), while other areas have much lower weights.

5. Emigration of Romanians by age groups

An analysis on the age groups of Romanian emigrants in 2015 show that 57% of them have the aged between 25-54 years, hence it follows that most have gone in the active period of their lives in which they develop their professional life.

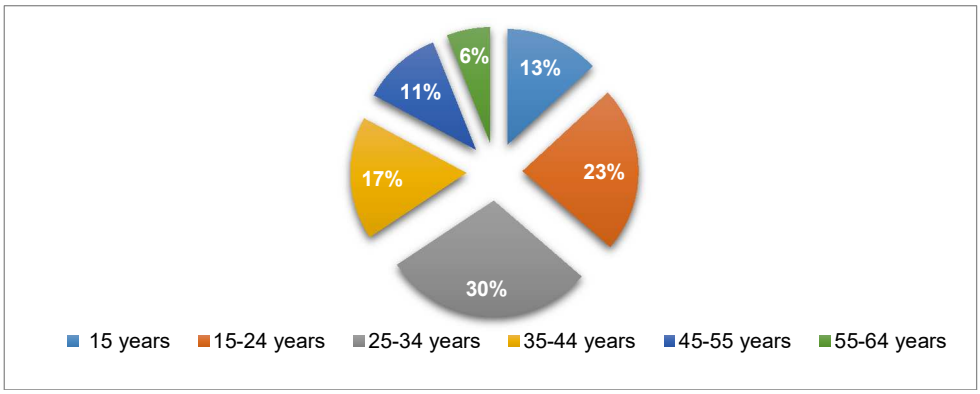

Figure 4. Proportion of immigrants by age

Source: author representation using National Statistics Institute www.insse.ro/cms/files/publicatii/.../Migratia_internationala_a_Romaniei_n.pdf

Emigrants under 15 years in 2015 were 13% it means that those who have left in the past want to settle in those countries and want to reunite their family.
According to the International Organization for Migration in the first 10 years after the revolution, the share of women in total emigrants was 52.3%, after the year 2000 the emigration flow is characterized by a high degree of feminisation, their share reaching at 59.8%.
It also show that the share of women in all people who have decided to leave is growing, the share increased by 10.9 percentage points (OIM, 2016)

6. Conclusions

Migration has evolved over time from a regional process, determined by economic, social, natural or political factors, in a global phenomenon. The year 2017 means for Romania, a decade after joining the European Union. According to the National Institute of Statistics, the forecasts for the total population of Romania in 2050 are pessimistic, estimates of population reduction ranging from a minimum of 15 million people to a maximum of 18 million people. A decisive factor in the decline is migration, our country faced with a phenomenon of mass migration. And because of the economic differences between our country and the developed countries in the European Union, emigration will not decrease, so from Romania will disappear temporarily or permanently persons qualified or less qualified. Another concern is the aging of the population. Romania is experiencing a slow but steady population aging.

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EDUCATION AND EMPLOYMENT RATE IN ROMANIA

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Abstract: *Education can improve economic development. Starting from this assumption, the purpose of this study is to examine and understand the Romanian education system. To illustrate this aim, we have applied cluster analysis for a sample of 41 forty-one counties and we have used seven variables (Enrolled Population, Employment rate, Gross domestic product, ClassRooms, ClassRoom Teachers, School workshop and Education Units). One of the more significant findings to emerge from this study is that counties such as Cluj, Iasi, Timis, Constanta and Prahova presents the highest number of school workshops and classroom teachers, while also underlining the existence of the best-performing economies – in terms of GDP and Employment rate.*

Keywords: *education; employment; Romania; cluster; development.*

JEL classification: *I21; A20; E23; C38.*

1. Introduction

For Romanian education system the end of the communist era meant a lot of transformations. The reforms attempts over the last 27 years generated by the instability of the political class affected the Romanian education system. A confirmation of the problems facing by Romanian education system is: the results obtained at the annual national assessments and at the baccalaureate, the dropout rate, the enrolment rate and so on. This paper will focus only on Romanian education system.

According to Eurostat (2016), education is a key component of the Europe 2020 strategy. The target is to reduce „the share of early leavers of education and training to less than 10% and increasing the share of the population aged 30 to 34 having completed tertiary or equivalent education to at least 40% by 2020". (European Commission, 2014).

We have organized the rest of the paper in the followings way: *Section 2* presents a literature overview of the main education determinants, *Section 3* describes the methodology used and our database. In the *fourth section* we discuss the results to finally conclude (*Section 5*).

2. Literature review

Romania allocates one of the lowest GDP percentages to the education system, while Denmark, Sweden, Finland, Malta, Belgium and Cyprus was reported the highest public expenditure on education, according Eurostat database.

Because of his prominent role in human life, education and system education of a country represent a persistent concern not only for the government, policy makers, and mass-media but also for the specialists in the field. There are a lot of studies which analyse the role of education for the economic growth, the dropout rate, the enrolment rate, the quality of education, the importance of education for the individual and for the whole society, the link between education and labour market, and the key role of education in poverty reduction, the infrastructure of education, the teaching staff.

„The two very basic reasons for expecting some link between education and economic growth" (Stevens and Weale, 2004) are: the rise of the living standards because of education and the level of income which depends on the level of education. The three mechanisms through which education may affect economic growth are highlights by Hanushek and Woessman (2010): „education can increase the human capital indispensable in the labor force; education can increase the innovative capacity of the economy; education can facilitate the diffusion and transmission of knowledge needed to understand and process new information and to successfully implement new technologies devised by others". Badea (2011), Khattak et. al. (2012), Okilov (2012), Barro (2013), consider education not only a goal, but also a factor which influences the prosperity of a country and focuses on human capital as a determinant of economic growth, including education.

All the opinions regarding the importance of education for the economic growth converge to the fact that „education plays an increasingly important role in preparing new labor market entrants for the workforce and providing skill upgrading throughout the working career" (Karoly, 2010).

An important determinant of the school results is the infrastructure of education and the teaching staff. The basic element necessary to ensure access to education is the infrastructure of education. A school classroom must be a proper space to learn. According to Mureșan and Gogu (2012) „the lack of an adequate infrastructure and competences has a negative influence especially on the research activities". A key role in the educational process has the human resources, especially the teaching staff, because great teachers help create great students. According to Hasan and Dolgun (2016) „the most important school-related factor influencing student achievement is an inspiring and informed teacher". Moreover, Ciumas and Muresan (2016), explain in a qualitative research on a survey on Romanian students that „teachers have the possibility to steer their instruction activities towards fulfilling the students'expectations".

3. Methodology and data

The authors propose seven variables (Enrolled Population, Employment rate, GDP, ClassRooms, ClassRoom Teachers, School workshop and Education Units) to understand the Romanian education system. As you can see, Table no. 1 contains information regarding all variables from our sample.

Table 1. Description of the variables used in the cluster analysis

Variable	Variable Description	Code	Source
Enrolled Population	"all children in nurseries and kindergartens and students enrolled in the formal training and educational process during a school/academic year, regardless of the educational form, study programme or age."(Source:NSI)	**EP**	NSI
Employment rate	"represents the ratio, expressed as percentage, between the civil employment population and the labour resources."(Source:NSI)	**ER**	NSI
GDP	Gross domestic product	**GDP**	NSI
ClassRooms	the rooms used for educational and training process within school units. It can be used by two or three classes at the most, successively, during a day.(Source:NSI)	**CLASS**	NSI
ClassRoom Teachers	are the individuals who work in the educational system and teach in the educational and training process. (Source:NSI)	**Teacher**	NSI
School workshop	School workshop represents a room endowed with devices, instruments, machinery and equipment for school experiments and practical trainings. (Source:NSI)	**SW**	NSI
Education Units	"represents the administrative educational unit, juridical entity included in National Nomenclature SIRUES, where one or more level of education are functioning and having a single management system." (Source:NSI)	**EDU**	NSI

Source: own construction

In order to identify the optimal number of clusters for the current data, a Hierarchical Cluster procedure was compiled for each of the two years taken into account. The variables were standardized before being included in the analysis, so their different measurement scales won't affect the quality of the results. The two analyses concluded, through the usage of their respective dendrogram graphs that the optimal number of clusters should be set to three for both 2006 and 2015.
The analysis was conducted initially on the forty-one counties and the capital city – Bucharest. However, preliminary analyses placed Bucharest in its own cluster. Given this aspect, it was excluded from further analyses due to its behavior as an outlier. The final cluster membership was conducted using the results obtained from the Hierchical Cluster analysis that were injected into two independent K-Means procedures for the years 2006 and 2015.

4. Results

The results of the K-Means procedure for the year 2006 returned the following break-outs. The first cluster contains a total of twenty-two counties, while the second houses an addition eight. The final cluster presents the remaining eleven counties. The composition of each cluster can be observed in the *table 2.*

Table 2. The components of cluster analysis for the year 2006

***Cluster 1**:*
Alba, Bistrita-Nasaud, Botosani, Braila, Buzau, Calaras, Caras-Severin, Covasna, Giurgiu, Gorj, Harghita, Ialomita, Ilfov, Mehedinti, Olt, Salaj, Satu Mare, Teleorman, Tulcea, Valcea, Vaslui, Vrancea.
***Cluster 2**:*
Bacau, Cluj, Constanta, Dolj, Iasi, Prahova, Suceava, Timis
***Cluster 3**:*
Arad, Arges, Bihor, Brasov, Dambovita, Galati, Hunedoara, Maramures, Mures, Neamt, Sibiu

Source: own computations according to the results returned by SPSS

In order to have a better understanding of the differences between clusters it is recommended to underline the findings from the Final Cluster Centres. The first cluster houses the lowest Z scores for all the variables considered. As it can be seen in the table2, *Cluster 1* presents the lowest number of school workshops, lowest number of education units and the lowest number of enrolled population. In addition, macro-indicators such as the Gross Domestic Product and Employment Rate also score the lowest levels in these counties.

Cluster 2, that includes Bacau, Cluj, Constanta, Dolj, Iasi, Prahova, Suceava and Timis – presents the highest normalized scores for every variables included in the analysis. More precisely, in these counties, in 2006 was present the highest number of school workshops and classroom teachers, while also underlining the existence of the best-performing economies – in terms of GDP and Employment rate.

The third cluster houses the remaining counties that distance themselves from the others present in the aforementioned two clusters due to their medium-level results of the normalized scores.

Table 3. The results of cluster analysis for the year 2006

Variables	Cluster 1	Cluster 2	Cluster 3
SW	-,65752	1,45880	,25410
ER	-,12241	-,00953	,25175
GDP	-,69404	1,35654	,40151
CLASS	-,72972	1,35854	,47140
Teacher	-,72411	1,48692	,36682
EP	-,74999	1,55784	,36700
EDU	-,68498	1,46106	,30736

Source: own computations according to the results returned by SPSS

The results returned by the K-Means procedure for the year 2015 do not change much the landscape presented by the analysis on the 2006 data.

Major changes can be noted regarding the Cluster 2. Here, from a previous total of eight counties the final number dropped to five. While counties such as Cluj, Constanta, Iasi, Prahova and Timis retained their position as members of the best-performing cluster in terms of proxies for education and economic-based indicators, Bacau, Dolj and Suceava dropped in the third cluster (the group of counties with a medium-level of development for the data considered).

Table 4. The components of cluster analysis for the year 2015

***Cluster 1**:*
Alba, Bistrita-Nasaud, Botosani, Braila, Buzau, Calaras, Caras-Severin, Covasna, Giurgiu, Gorj, Harghita, Ialomita, Ilfov, Mehedinti, Olt, Salaj, Satu Mare, Teleorman, Tulcea, Valcea, Vaslui, Vrancea.
***Cluster 2**:*
Cluj, Constanta, Iasi, Prahova, Timis.
***Cluster 3**:*
Arad, Arges, Bacau, Bihor, Brasov, Dambovita, Dolj, Galati, Maramures, Mures, Neamt, Sibiu, Suceava.

Source: own computations according to the results returned by SPSS

Table 5. The results of cluster analysis for the year 2015

Variables	Cluster 1	Cluster 2	Cluster 3
SW	-,57395	1,90479	,28285
ER	-,06200	,12942	,05991
GDP	-,61137	2,13259	,26143
CLASS	-,69277	1,55408	,62795
Teacher	-,70123	1,78740	,55318
EP	-,70287	1,90864	,50946
EDU	-,72468	1,73289	,61563

Source: own computations according to the results returned by SPSS

In addition, the other significant change from the previous decade was registered regarding the Hunedoara County that downgraded from the cluster with the medium-level development to the cluster with the weakest registered performances.

5. Conclusions

The results showcase a high stability of the results from one decade (mid 2000s) to another (mid 2010s), as the number of counties in each cluster remains slightly similar. It should be noted that the best-performing in terms of education-oriented indicators remain the components of the second cluster (of 2015), as all of the five counties previously highlighted retained their initial positions. On the downside, Hunedoara County was downgraded from its initial placing, while former Cluster no. 2 members Bacau, Dolj and Suceava scored lower values for the considered indicators, a result that translated into a lower placing than a decade earlier.
We should be deeply involved in development of counties because education is the most powerful intangible assets

6. Acknowledgements

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CORPORATE PERFORMANCE MEASUREMENT: AN INTEGRATED APPROACH

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Abstract: *The online retail market has achieved dynamic growth in recent years, making up 4% of the total retail sales. Not only the net sales in e-commerce have grown, but also its share of the whole trade has increased gradually. The number of enterprises engaged in electronic trading in Hungary is roughly 5,000-6,000, which is continuously increasing. Today, the possibilities provided by the Internet play an increasing role in every segment of the economy. In an increasing market competition it is no longer sufficient to provide services to the local population. The driving force behind online trading is market activity, and thus it is crucially important to measure their performance. Over the past year e-commerce has expanded three times faster than the whole Hungarian retail trade, but the borders and limits of this growth are already visible; therefore, this sector faces greater challenges and changes than ever before. It is increasingly important to measure performance accurately, and to support managerial decisions based on performance measurement. Excellent results and success basically and primarily depend on performances, in addition to luck. Performance is construed as measurable results or, in a broader sense, successful efforts made to achieve corporate goals. Performance measurement is the process of measuring the effectiveness and economic efficiency of an activity. It is aimed at supporting decisions and actions relating to the operation of the company. Performance measurement is not only a decision-support tool but also an influential element at all levels of the decision-making system, which has an impact on the actions taken by the persons concerned. Both its danger and importance is that its inappropriate functioning (using an inappropriate standard) may result in an operation which conflicts with corporate objectives. The growing interest in business performance measurement can be explained by the information demand from corporate decision-makers. Companies' approach to and toolkit of performance measurement have undergone radical change over the last 15-20 years. The international and Hungarian literature usually refer to performance evaluation, thereby also making it clear that quantitative features that can be measured directly and qualitative features that cannot be measured directly alike are crucial factors in performances. The performance indicators used can in fact play their role if they form a uniform system, which takes into account interactions whilst also being sensitive to the actual needs of the company. I intend to assess corporate performance measurement practices, and evaluate the relationship between financial and operational performances. In addition, I will give a theoretical overview of integrated performance measurement systems.*

Keywords: *corporate performance; performance measurement; integrated performance measurement systems; Balanced ScoreCard; performance prism; performance pyramid.*

JEL Classification: *M21.*

1. Introduction

It is a common phenomenon that financial indicators dominate corporate management, i.e. a large majority of companies only use financial indicators in corporate management. In her study entitled "A rendszerszintű teljesítménymérés és a teljesítménymérési rendszerek" [Systematic performance measurement and performance measurement systems], Ágnes Wimmer examines performance measurement systems from the perspective of supporting processes that provide added value. According to the author, performance measurement practices can support processes that provide added value if they "are orientated towards supporting decision-making; consider various aspects evenly to both content and the information used; and are consistent, i.e. they contain information supporting strategic goals that are important for the company (and useful to decision-makers)". Integrated performance measurement models offer practical guidelines to companies that intend to measure their individual, group-level or corporate performance in order to maintain and enhance their competitiveness, and wish to improve their operation relying on such results.

2. Performance and performance measurement

2.1. Definition of performance

The various literature sources put different interpretations on performance. There is an extra-long list of definitions of this concept, but they mostly focus on efficiency and effectiveness. Nonetheless, other popular expressions used to define performance are not defined with the same content everywhere: productivity, efficiency, economic efficiency, profitability and effectiveness. The most common definition of productivity has been provided by the OECD (Organisation for Economic Co-operation and Development), which says that productivity is the ratio of a volume measure of output to a volume measure of input use (Zsidó, 2015).

In the business world and public life people or institutions will generally be judged on the basis of performances. Excellent results and success basically and primarily depend on performances, in addition to luck. Performance is construed as measurable results or, in a broader sense, successful efforts made to achieve corporate goals. Accordingly, if a work does not help to achieve corporate objectives, it usually will not be considered to be performance even if it required considerable efforts. Measuring performances is a natural concomitant of individual and corporate life (Németh et al., 2016). This article only focuses on the problems of business organisations, where performance evaluation is the most advanced, but whose lessons even apply to organisations outside the business world, including public institutions, public administration, non-profit organisations and cases of individual evaluation. (Hollóné, 2009.)

2.2. Performance measurement and evaluation

Performance measurement is the process of measuring the effectiveness and economic efficiency of an activity (*Neely et al.* 1995). It is aimed at supporting decisions and actions relating to the operation of the company by collecting, processing, analysing and interpreting relevant data. On the one hand, it quantifies

the efficiency and effectiveness of past decisions. Effectiveness expresses the achievement of goals, whereas economic efficiency indicates in what quality resources are used in order to achieve goals (Wimmer, 2004.). On the other hand, it can also predict how the company will perform in the future, thereby supporting the corporate management in implementing their strategy as effectively as possible ((Fenyves – Dajnoki, 2015; Kalmár et al, 2015; Oláh – Popp, 2016, Veresné, 2013). The growing interest in business performance measurement can be explained by the information demand from corporate decision-makers. The companies' approach and toolkit of performance measurement have undergone radical change over the past 15-20 years. Corporate performance measurement is one of the supporting pillars of corporate success. Besides traditional performance measurement indicators, it is more and more important to use indicators and methods relating to the new system of values in practice. A practical performance system provides feedback and information about what progress the company has made towards achieving the goals set.

The international and Hungarian literature usually refer to performance evaluation, thereby also making it clear that quantitative features that can be measured directly and qualitative features that cannot be measured directly alike are crucial factors in performances. If performances can be measured directly, measurement results will be considered defining. In many cases, however, performances cannot be measured directly, which may then entail performance estimation.

Performance evaluation is a basic managerial and organisational tool, which is used by almost every company. It mainly serves the purpose of making it clear to the management and the persons affected to what extent a certain activity has contributed to the achievement of corporate goals. Planned figures may also be a target, but usually strategic statements are made about what is considered important at the company.

The so-called hard goals, which can be quantified and measured directly and easily, include profit, revenue, costs and efficiency. The so-called soft goals, which cannot be quantified directly, may include reliability, customer satisfaction, innovation initiatives, and respect for the environment or top quality. Features that cannot be quantified directly are increasingly important in companies' life. Receiving favourable ratings is also the result of good performances.

It primarily depends on the companies' goals what method of performance measurement they opt for. The goal of an e-commerce company may be to increase shareholder value or a brand value, besides maximising profits.

Measuring performance includes the collection and appropriate classification of actual figures and comparing them to the desired target values. Evaluating performance entails deciding whether the relationship between actual figures and planned figures is appropriate, whether any interference is needed, and if so, in what direction. Potential changes of target values are also closely related to this.

Collecting and classifying planned figures besides actual figures and ensuring their comparability is not yet part of the evaluation. Evaluation is more than just defining the difference between target figures and planned figures, which is still part of the measurement. Evaluation takes place when we reveal the causes of differences, and interfere.

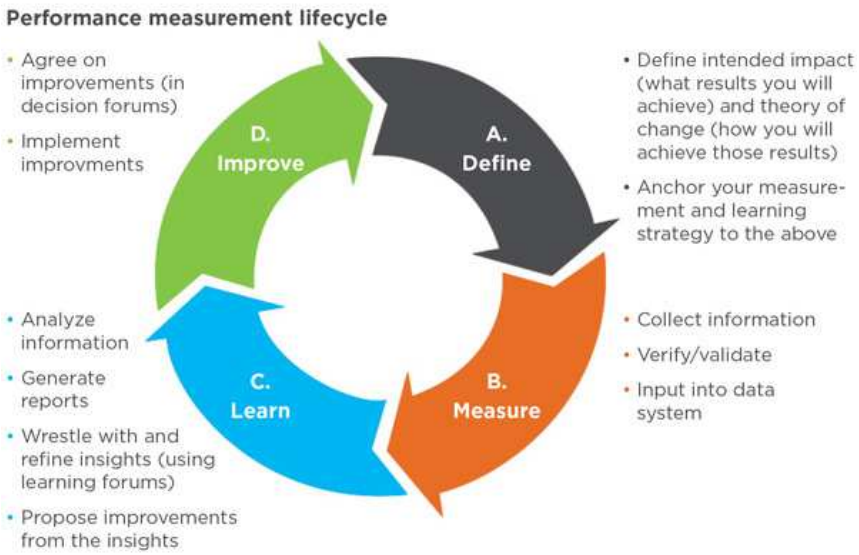

Figure 1. Organisational cycle of performance measurement and evaluation
Source: Ákos Székely: A teljesítménymérés és –értékelés magyarországi gyakorlata [Performance measurement and evaluation in Hungary] (2005.)

Performance evaluation is part of the measurement process, provided that it means the structuring of data. Yet in this case it refers to a structural process in which conclusions are also drawn. This management-oriented performance testing already belongs to performance evaluation. The key to the success in making performance measurement and evaluation function appropriately is that measurement and evaluation should be balanced. This is how the cycle can achieve its real goal to increase performance. Yet in fact, the fixed cycle of performance measurement and evaluation is very often ignored by companies. (Ákos Székely, 2005.)

3. Integrated performance measurement systems

Traditionally, financial indicators calculated from accounting data were used to measure performances. The argument long presented was that the various accounting and financial indicators are most suitable to the measurement and comparison of corporate performances. Recently – as early as the 1980s – those who used traditional indicators have faced more and more problems, and thus started to look for other performance measurement options. One of these options is the integrated performance measurement method presented in this section (Fenyves – Tarnóczi, 2014).
Integrated performance measurement systems provide companies with a certain framework for the development of the performance measurement system, but its actual elements must be tailored to the needs, strategic goals and characteristics of the company.

3.1. Balanced ScoreCard

The performance indicators used can play their role the best if they form a uniform system, which takes into account interactions whilst also being sensitive to the actual needs of the company. One of the most well-known performance measurement frameworks today is the **Balanced ScoreCard** (BSC) strategic management system.

Balanced Scorecard is a strategic management system (Kaplan-Norton, 1997) that makes it possible to communicate strategic goals as well as to connect them to operational indicators. The developers of this method recommend four question groups for setting corporate goals and related performance indicators. The traditional financial approach is supplemented with goals and indicators relating to *customers*, *operational processes*, *learning* and *development*. The name is a reference to the fact that the system tries to balance external and internal indicators, which relate to consumers and shareholders as well as business processes and learning and growth competence, respectively. It strives to maintain a balance between past profit/loss indicators and factors influencing future profit/loss, i.e. performance drivers. An important principle of the method is to start with strategic goals, and "translate" the strategy into comprehensible goals at different organisational levels.

Figure 2. Balanced Scorecard
Source: Kaplan-Norton, 1997.

If Balanced Scorecard is used in an appropriate environment effectively, it gives companies many advantages. These include, for example, the substantial reduction in complexity, since the company's performances (profit/loss and performance drivers) become transparent by classifying different indicators into four big groups and reducing their numbers to 4-5. Rendering the strategy into indicators means that incomprehensible future visions and strategies at corporate level are formed

into actual comprehensible corporate, group-level and individual objectives. Revealing a cause-and-effect relationship between indicators (and thus the individual corporate goals, fields and processes) and proving their effects on each other make it easier to understand the operation of the organisation, thereby facilitating maximum performance. Consequently, BSC is not only a performance evaluation system but also an integrated planning and management system. It must be used by companies to introduce a new planning and management system.
Based on practical experience, the four aspects proved to be sufficient in most cases, but this should not be viewed as exigency, but rather as framework. Some organisations used less than four dimensions, but these BSC aspects could even be further explored with one or two other points of view. In the BSC system profit/loss indicators and performance drivers should be indicated if they give a competitive advantage, and help to achieve corporate goals in an explicit way.
The literature refers to several other integrated performance measurement systems such as performance prism, performance pyramid, Tableau de Bord, Intangible Asset Monitor and "Wissensbilanz".

3.2. Performance prism

Performance prism is a performance measurement and management tool, which primarily relies on the mutual relationship among stakeholders. This is a framework with five facets, which is vividly illustrated by a prism with a triangular base and rectangular sides: the grounds are formed by stakeholder expectation (satisfaction) and stakeholder contribution, while the sides are formed by strategies, processes and capabilities. This analytical framework was developed by Andy Neely and his colleagues in the second half of the 1990s in a performance measurement research centre in Cambridge in collaboration with lecturers, researchers and Accenture (former Andersen Consulting) consultants (Chikán – Wimmer, 2003.).

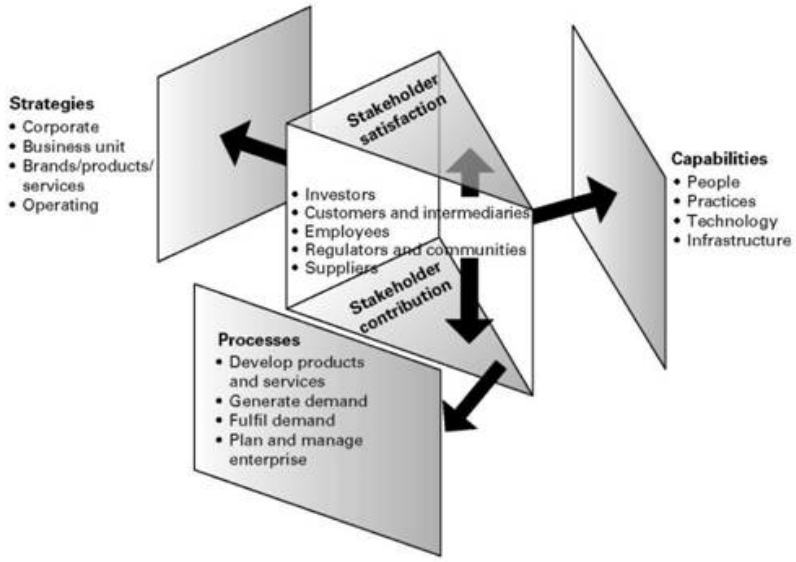

Figure 3. Performance prism
Source: Neely, 2004

The performance prism – as referred to by its developers – is the second generation of performance measurement and management systems. Similarly to the recommendations in the early 1990s, it also strives to examine performance from several points of view. What is new in it is that it takes into account the relationship with every stakeholder of the company. Over the past decades owners and customers have received close attention (just think, for example, of →the focus of attention on consumer satisfaction and →the preference for a shareholder value approach) (Chikán, 2003.).

3.3. Tableau de Bord

Tableau de Bord is another strategic system of indicators worthy of note. "Tableau de Bord" (TdB) is a French expression. Its essence is that it collects and presents key indicators from a management perspective to the corporate management. Managers must make quick decisions based on environmental factors and the company's situation whilst bearing the objectives in mind.

TdB is primarily known as a short-term information device, which summarises key indicators from the perspective of the given goal and decision-maker that are available in the short term. A good TdB system is characterised by the fact that it not only makes it possible to monitor performances quickly, but also bears in mind the long-term objectives of the company. Key indicators and the determination of their acceptable levels must be kept synchronised with the long-term (strategic) goals of the company (Kemény, 2010.).

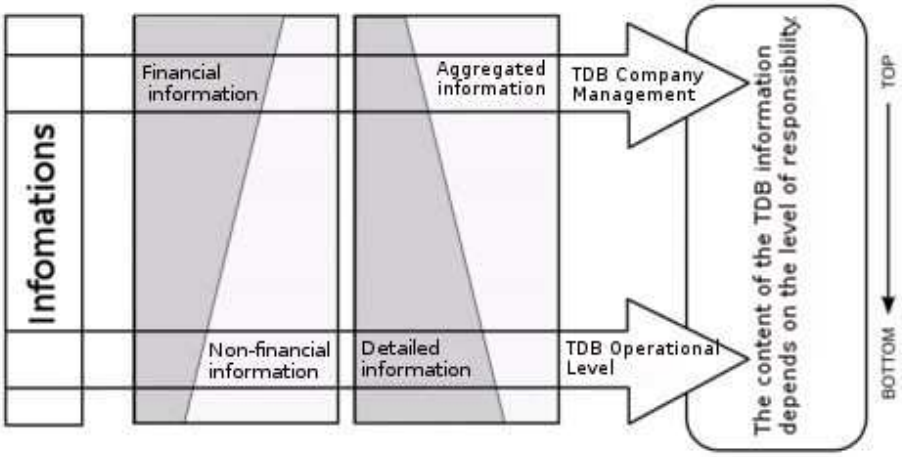

Figure 4. "Tableau de Bord" information system
Source: Kemény, 2010.

Relative performance evaluation or benchmarking is one of the tools used to compare corporate performances. Generally speaking, benchmarking is a tool for comparing production units (Fenyves et al., 2015). Production units include companies, organisations, business units, projects, decision-making units or private individuals. Benchmarking can be used in very different situations. Modern benchmarking analyses use the method of best practice or marginal analysis (DEA,

Data Envelopment Analysis) more and more, which has both methodological and practical advantages. From its most practical aspect, it makes a lot more sense to learn from the best than to emulate average performances (Fenyves, 2014).

4. Summary

Today, most companies cannot implement their strategies successfully because they usually use management processes focused on finance. Management systems that only rely on financial data fail to help to achieve goals because companies encounter obstacles during their application. Using BSC is more than just a solution to performance measurement problems, it also helps to implement new strategies efficiently and to build a strategy-centred organisation. Strategies always change due to the constant change in the competitive environment. Real demands generated by market conditions have encouraged the development of strategy-centred organisations. This is a kind of response to the challenges posed by the ever-changing business environment that companies always face if they want to remain competitive in the long term and operate successfully. Integrated performance measurement systems are a great help to them.

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UNEMPLOYMENT, NEETS AND THE SOCIAL ROLE OF EDUCATION IN EUROPE

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Abstract: *Education is maybe the most important engine for economic and social development and cultural empowerment, and also the most beneficial investment that a government can make. In this paper we present a short overview on the socio-educational situation of the young people in Europe. If we refer to the social situation, the role of education becomes an undeniable one, regarding the support of the learners from a socio-economic point of view. Starting from the premise that education represents the society's health, the education must be considered as the most important factor regarding the situation of the unemployed people from different age groups. Knowing that the higher the level of education of individuals, the more appropriate and probable are the individuals' commitments during work. This leads to the hypothesis of a socio-economic climate, beneficial growth and further economic development. Moreover, we investigate several employment indicators, such as the unemployment rate at the European level, from the age groups of 15-24, on the period 2013-2015. We particularly investigate data in the base of some indicators, part of the training process in countries such as Poland, Estonia, Hungary and Bulgaria.*

Keywords: *education; public expenditure; unemployment; NEET.*

JEL Classification: *I21; H52; J21; P51.*

1. Introduction

The education, as a social phenomenon, transmits the values of an experience gained from one person to another. We start from Maccoby's statement (1992), that „the child is the man's father", which takes us to the idea that a child should be seen as a major individual. Assuming the above statement that the child can become a direction of an individual, then society itself must play an important role in supporting the individuals. We refer to the socio-educational role, that role through which each of us should be responsible for one another, and by the mere fact "moral support"' of a certain situation. In our case, education is the cornerstone of child, student, training so they would find their place later in their familial, social, economic and, not least, cultural frame. Pierre Varly (2014) stated that:

> "it is not enough to know that it is essential the realisation of further investments in order to boost efficiency at a social and individual level. This investment must be intelligently done, based on a careful analysis of the ways in which additional funds can be allocated to different levels of education (...)".

Referring to the levels of education, as a first assumption, we could emphasize which might be causes of dropout school, starting from a lower level of analysis to a higher education, and we will see that in some age groups, where the dropout is high, the unemployment rate is also significant.
For that, the education in this respect should be granted the due consideration by governments to public budget allocations (% of GDP for education) on some levels of education more efficiently.
Education is the most important engine of the economic development and social empowerment for the developing countries, and fostering education is the most appropriate policy in this respect. That is why education, especially economic and entrepreneurial education have an important place in academics' research interests (Dodescu et al, 2011; Dodescu and Badulescu, 2010; Badulescu and Dodescu, 2010; Badulescu, 2010; Badulescu et al, 2014; Badulescu Daniel, 2015; Badulescu, Badulescu and Csintalan, 2017; Badulescu and Petria, 2011; Badulescu and Petria, 2013; Badulescu and Vancea, 2013; Hatos and Saveanu, 2016).
This paper is a work in progress article investigating several issues such as the situation of education, unemployment, NEETs in selected European countries, by analysing facts and figures as published by European statistics.

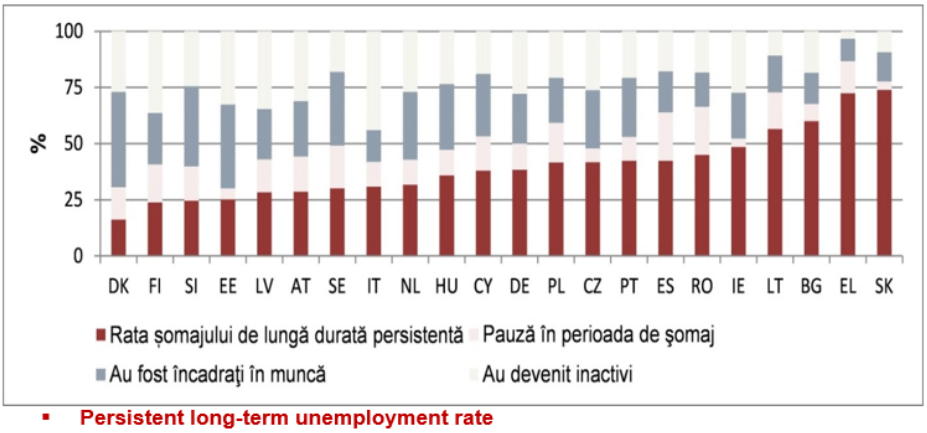
2. Social situation in Europe: an overview

The social policy of the European Union has changed in the last decade, recognizing the need for poverty reduction, which has to be approached from the perspective of sustainable development. Thus, many international organizations have been involved in the development of a framework to define the concept of social responsibility and to establish the indicators through which it can be evaluated in a transparent manner. Although the overall unemployment in the EU has reported a downward trend, the unemployment among youth has reached a record level of over 7 million young people in the EU compared to 2013, i.e. 8.3% of Europeans are unemployed (according to Eurostat, November 2016). Among the causes of the unemployment among the young people we could mention: the low remuneration, poor quality jobs, often temporary. Marianne Thyssen, Commissioner for Employment, Social Affairs, skills and labor mobility, said: "Creating jobs is our most urgent mission and the consequences of the crisis makes the situation even more difficult" (Thyssen, 2015).
The figure presented below shows the transition rates for long-term unemployed between 2013 and 2014.
As a first conclusion, we deduce that, for several Member States, the persistence rates in the long-term unemployment (the long-term unemployed people who are still unemployed a year later) are significant and reach levels above 50% in Lithuania, Bulgaria, Greece and Slovakia. On the other hand, there occur relatively frequent turns on the labor market in Denmark, Sweden, Estonia and Slovenia. Meeting the matters of unemployment rate, Marianne Thyssen said:

> "The long-term unemployment is one of the most difficult challenges and the most acute caused by the economic crisis, affecting more than 12 million people in Europe." (Thyssen, 2015).

Three main steps are being proposed:

- to encourage the registration of long-term unemployed at an Employment Agency;
- to offer every registered long-term unemployed thorough individual assessment to identify their needs and possibilities, no later than 18 months of unemployment;
- to provide an agreement for reintegration of all registered long-term unemployed, no later than 18 months of unemployment.



- **Persistent long-term unemployment rate**
- **Have been employed**
- **Pause during unemployment**
- **Became inactive**

Figure 1: Indicator of the labor market in 2014, of the unemployed, long-lasting in 2013
Source: European Commission (2015), "Employment and Social Developments in Europe (ESDE) 2" available at:
http://ec.europa.eu/europe2020/pdf/2016/ags2016_draft_joint _employment_report_ro.pdf, accessed on 23.01.2017.

In addition to the declaration, the European Parliament and Council (2013) have stated that:

> ”the reunion of the formal, non-formal and informal learning into a single program should create synergies and encourage cross-sectoral cooperation between different sectors of education, training and youth. During the implementation of the program, the specific needs of different sectors and, where appropriate, the role of local and regional authorities should be taken into account as appropriate”.

Bringing formal, non-formal and informal learning together in a single programme should create synergies and foster cross-sectoral cooperation across the various education, training and youth sectors. During the implementation of the Programme, the specific needs of the various sectors and, where appropriate, the role of local and regional authorities should be duly taken into account. We can surely say that the socio-economic needs of the population are known by the local officials.

3. Education aspects in selected Eastern European countries

According to international studies conducted by UNICEF,

> ”an extra year of school increases the revenue by 8-9% and the decreasing with 8% of the risk of health problems. In general, the more, the greater the income you get. Therefore, a higher level of education is beneficial on an individual level".

Assuming the above theoretical hypothesis, we can conclude that the role of education in fostering economic growth is undeniable, unless it becomes financially sustainable. Education should be the chance of formation of large masses of individuals of all age groups, and it must consider all the levels which can be studied. Therefore, we believe that the education systems in Europe will be much better analyzed as a whole, compared with as many benchmarks as possible.

In the table below we have described, based on some comparative analysis tools, some aspects regarding the average years of school, the rate of early school leavers in the 18-24 years age groups, compared with the unemployment rate of an age group almost close to the one within early school dropout, for 2013-2015.

Table 1. Indicators for benchmarking, on the level of education in several countries of Eastern Europe (2013-2015)

No.	Country	Average number of the school years (2014)- UNDP	The absorption rate of higher education (%), within the 30-34 years age group (2015)- Eurostat	Rate (%) of early school dropouts within the 18-24 age group (2013 and 2015)- Eurostat	Public expenditure as (%) of the GDP (2013)- Eurostat	Unemployment rate among young people within the 15-24 age group (2013 and 2015)
1	Romania	14.2	25.6	17.3- 19.1	2.07	23.7- 21.7
2	Bulgaria	14.4	32.1	12.5- 13.4	4.27	28.4- 21.6
3	Hungary	15.4	34.3	11.9- 11.6	4.13	26.6- 17.3
4	Poland	15.5	43.4	5.6- 5.3	5.00	27.3- 20.8
5	Estonia	16.5	45.3	9.7- 11.2	4.92	18.7- 13.1
6	UE-28	-	38.7	11.9- 11	5.34	23.7- 20.3

Source: made by authors based on the data from the UNDP or Eurostat, the European Statistics, available at: http://ec.europa.eu/eurostat/web/education-and-training/data/ database, accessed on 20.02.2017.

Analyzing the data in Table 1, we notice the following:

1. public expenditures as share in GDP spent for education in the EU-28 countries are around 5%, Estonia being the only country that comes close to this threshold among the selected Eastern European countries;
2. we also mention the aspect through which Estonia and Hungary, during the period 2013-2015, made the most significant efforts in order to reduce the unemployment among young people in the analyzed age group;
3. Estonia and Romania are the only countries in Eastern Europe where the drop-out rates in the 18-24 age group experienced the most significant percentage increase;

4. Another noticed aspect would be that Estonia would reduce the rate of youth unemployment in the analysed period, for the 15-24 years age group, but increases the school dropout in the analyzed age group;
5. Estonia holds the highest percentage in the 30-34 years age group, in 2015, on the absorption rate of higher education, and the percentage of GDP allocated to education is one of more than 5%, a remarkable aspect, considering to be a good one for the Eastern European countries;
6. Bulgaria, compared to Romania, reports a much greater percentage of expenditures allocated for education as share in GDP, and also reports a higher rate of absorption of the higher education in the 30-34 years age group (in 2015);
7. Moreover, Bulgaria, compared to Romania, gas reported significant lower rates of unemployment among the 15-24 years age group, for 2013-2015, i.e. a reduced unemployment rate from 28.4% to 21.6%.

Following the analysis, we conclude that, although Estonia reports a rate of over 45% on the absorption rate of students for the 30-34 years age group, the year 2015 appear to be a major problem in the education system, with rates of school dropout between the years 2013-2015 which has significantly increased. However, an outstanding issue for Estonia: it can be noticed that the unemployment rate in the nearest age group fell.

Hungary stands out with the unemployment rate, which decreased significantly from 26.6% to 17.3%, just below the EU-28 average for the 15-24 years age group and for 2013-2015. Thus, we conclude that the policy of supporting the unemployed in Hungary is quite effective.

4. Unemployment, NEET and young Europeans

At the EU level, the poverty rate of the total population in 2013 remains at the percentage of 24.4%. But in all European countries, young people are more affected by periods of long-term unemployment than the average population (5.1% in 2013, as reported by Eurostat).

Table 2. Indicators regarding the unemployment for the 15-24 years age group, EU-28 and selected European countries, 2013

No.	Country	Area EU-28	Share (%) of young people in the 15-24 years age group, who are not employed and aren't attending any education program (NEET), 2013	Unemployment rate among young people as (%) of the workforce in the 15-24 years age group, 2013
1	Bulgaria	13%	21.6	28.4
2	Romania		17.2	23.6
3	Cyprus		18.7	38.9
4	Holland		5.1	11.0
5	Ireland		16.1	26.8
6	Finland		9.3	20.0
7	Sweden		7.4	23.6
8	Denmark		6	12.6

Source: made by authors based on UNDP (2013), *Human Development Report*, available at http://hdr.undp.org/en/ indicators/147906, 110906, 140606, accessed on 09.01.2017

Regarding the employment, the reaction to the recession took place with the delay caused by the labor legislation and the companies' decisions to avoid the possible redundancy and further recruitment costs. In some EU Member States, the governments have sponsored short term or part time employment schemes, which substantially contributed to the liquidation of the effects on employment.
Moreover, as it can be noticed by investigating Figure 2, if for the group age of 15-19 years, 80% of the population is in "education", and only 5-6% of the population is in NEET situation ("neither employed nor in education and training"); in the case of the age group of 20-24 years, the situation is much more dramatic. Almost 30% of the population in the respective age group is NEET ("neither employed nor in education and training"). The picture is even worse in the case of women in NEET situation (see Figure 2).
A closer look on the NEET phenomenon reveals serious differences among European countries and among age groups. As revealed by Table 3, as a European average, the most severe situation is for the age group 25-29 years, with a proportion of almost 20% of the population in the respective age group finding themselves in NEET, with a considerable worse situation in the case of women. When analysing different countries, the situation in Bulgaria and Romania appear to be dramatic: in Bulgaria, the share of population in NEET situation ranges from 19.7% for males, 30-34 years and 31.6% for females, 25-29 years. In Romania, the figures are ranging from 13% for males 30-34 years to 33.6% for women 25-29 years. Considerably better situations are reported in Sweden, Denmark and Netherlands, where the values of social cohesion are dominating and determine a more balanced situation.

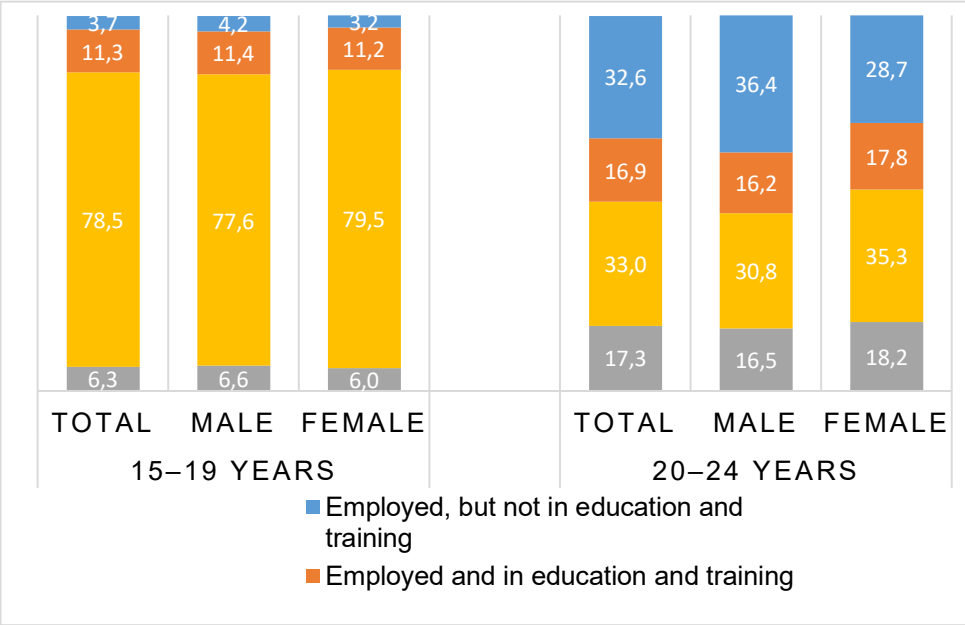


Figure 2. Employment, education and training status of young people, by age and sex, EU-28, 2015
Source: Eurostat, Accessed on 19.03.2017

The situation of young unemployed people and who aren't following any kind of education or training (NEET) from the following countries: Bulgaria, Cyprus, Romania and Ireland are above the EU-28, as a percentage of the 15-24 years age group. Another noticeable aspect refers to the rate of youth unemployment in the 15-24 years age group, the percentage being high enough for the countries: Cyprus, Bulgaria, Ireland and, to our surprise, Romania and Sweden at an equal percentage of 23.6%, being considered the most vulnerable age group.

Table 3. Share of young people neither in employment nor in education and training (NEET), by sex and age, 2015, selected countries (%)

Country	Total				Male			
	20-34 years	20-24 years	25-29 years	30-34 years	20-34 years	20-24 years	25-29 years	30-34 years
EU-28	18.9	17.3	19.7	19.4	14.9	16.5	15.3	13.0
Bulgaria	25.2	24.0	26.5	24.8	21.4	23.4	21.6	19.7
Denmark	10.2	9.3	10.9	10.5	9.1	9.2	9.5	8.5
Ireland	20.1	19.7	21.4	19.3	17.4	19.8	18.6	14.7
Cyprus	21.5	22.2	22.9	19.4	19.5	22.9	20.1	15.9
Netherlands	10.1	7.2	10.6	12.6	7.8	7.0	8.2	8.2
Romania	23.7	24.1	25.3	21.6	16.5	19.0	17.7	13.0
Finland	15.5	15.7	15.7	15.1	13.1	17.6	11.8	10.2
Sweden	8.5	9.3	8.6	7.6	7.8	9.6	7.6	5.9

Country	Total				Female			
	20-34 years	20-24 years	25-29 years	30-34 years	20-34 years	20-24 years	25-29 years	30-34 years
EU-28	18.9	17.3	19.7	19.4	23.0	18.2	24.3	25.8
Bulgaria	25.2	24.0	26.5	24.8	29.1	24.7	31.6	30.3
Denmark	10.2	9.3	10.9	10.5	11.3	9.3	12.3	12.7
Ireland	20.1	19.7	21.4	19.3	22.7	19.6	24.0	23.5
Cyprus	21.5	22.2	22.9	19.4	23.3	21.5	25.5	22.6
Netherlands	10.1	7.2	10.6	12.6	12.4	7.3	13.1	17.1
Romania	23.7	24.1	25.3	21.6	31.4	29.5	33.6	30.8
Finland	15.5	15.7	15.7	15.1	18.0	13.8	19.8	20.2
Sweden	8.5	9.3	8.6	7.6	9.3	8.9	9.5	9.4

Source: Eurostat, Accessed on 19.03.2017

5. Conclusions

Starting from the existing theoretical and legislative approaches drafted by the European Union and the Organisation for Economic Co-operation and Development, the European Parliament and Council, respectively by Marianne Thyssen, Commissioner for Employment, we can say that there is a mutual support regarding the reducing of the unemployment at EU-28 level. We also want to meet the theoretical aspects developed by the bodies mentioned above, by lowering the unemployment level of monitoring the unemployment rate at the local councils

(referring especially to those in the rural areas). Such monitoring could be more transparent, more exactly the job offers on a regional level should be made publicly available, on the town halls' sites, in public places etc. Following the indicators analyzed at the level of some selected countries (Bulgaria, Romania, Cyprus, the Netherlands, Finland, Sweden, Denmark) and the EU-28 aggregate, we came to a first finding, that the unemployment rate among the young people in the 15-24 years age group, in 2013 is lower in Denmark than the EU-28 average. Another aspect of the rate of the unemployment among young people within the 15-24 years age group, (for 2013 and 2015), the most significant efforts of reducing the unemployment in Europe, have been made by the following countries: Hungary, Bulgaria and Poland. The population being unemployed but not in education or training (NEETs) raises also serious economic and social concerns, due to the large proportion of people being in this situation, especially women and particularly in less developed countries, creating considerable worse and more vulnerable situation for demographic groups already found in difficult situations.

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CROSS-BORDER COOPERATION IMPACT ON REGIONAL TOURISM. THE CASE OF BIHOR COUNTY

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Abstract: *The present paper aims to investigate the cross-border cooperation impact on regional tourism based on the Bihor County case study. The first part of the paper analyses the literature regarding cross-border cooperation impact on regional tourism. In the second part, the paper provides a synthetic analysis of the Bihor County tourism in the context of North-West Region of Romania. Based on national territorial statistics, regional and local development strategies for 2014-2020, Bihor County Department of Statistics, Bihor Trade Office and Bihor Council data, other available dataset for tourism sector, the analysis shows that Bihor County has the highest tourism potential at regional level and the most diversified, covering large areas of the county. Also, Bihor County tourism is above the regional average at almost all tourism indicators. The third part of the paper documents about cross-border cooperation impact on Bihor county tourism. The location of Bihor County on the border with Hungary and the opportunity to benefit of funding from EU through Cross-border Cooperation Programmes are competitive advantages for Bihor County at regional level. Based on Oradea Regional Office for Borders Cooperation (BRECO) data, the paper presents the positive effects of cross-border cooperation on Bihor County tourism due to the 10 tourism projects implemented under the PHARE CBC Programme 2004-2006 and HU-RO CBC Programme 2007-2013 in Bihor-Hajdu-Bihar Euroregion and their impact on regional tourism.*

Keywords: *regional tourism; regional development; cross-border cooperation; North West Region of Romania; Bihor County.*

JEL classification: *O18.*

Introduction

Euro-regional development is an important component of the regional development process of the European Union (EU), supported by the Cross-Border Cooperation Programmes. The diversity of areas of cooperation (tourism, transport, environment, SMEs, etc.) presented in the Cross-Border Cooperation Programmes provide Euro-regions the chance to implement development projects aimed at common objectives. Romania's involvement in cross-border cooperation is highlighted by the existence of 12 Euro-regions established in our country. In border regions, which represent 20% of European territory, cross-border tourism projects have a real impact on the growth of local economies as Committee of the Regions shows (CR, 2016:2). Development of tourism projects through PHARE CBC and HU-RO Cross-Border Cooperation Programmes at Euro-regional level reflects the importance given to tourism, which is considered the engine for the development of border/cross-border regions.

Cross-border cooperation usually starts with individual initiatives, even if the objective is for the long-term. The framework and the current forms of cross-border cooperation (harmonious cooperation between the communities and authorities located on each side of the national boundaries) is based on the idea that if two or more border regions merge together, they will be able to solve issues they are faced with, with greater ease than if approaching such issues individually. Even if border regions are deeply rooted locally, the development of cross-border regions is a lengthy and unstable process as it is subject to national wills. Thus, cross-border regions constitute the main catalysts in terms of European integration. The European edifice needs such cross-border regions so as to demonstrate the authenticity and reliability of a united Europe.

1. Literature review – Cross-border cooperation impact on regional tourism

Tourism is and continues to be an important area of the economic development policy in many regions of the world (Sharpley and Telfer 2002:35 cited by Borma, 2014:34). World Tourism Organization (WTO) claimed in Manila Declaration that: "*global tourism can contribute to establishing a new global economic order that will help eliminate the growing economic gap between developed and developing countries and ensure economic acceleration and constant social development, as well as progress, especially in the developing countries"* (WTO, 1980:1 cited by Borma, 2014:34).

Countries worldwide turn to tourism as a strategy for development, therefore being in a fierce competition for revenues from international tourism, which are projected at a total of USD 2 trillion, up to 2020 (WTO, 1998a) and international tourist arrivals are estimated at 1.6 billion (OMT, 2011:11).

According to UNWTO (2014, 2015 and 2016), Europe is the most visited region in the world. In 2014, international tourist arrivals in Europe were up 15 million (+3%), to reach a total of 582 million (UNWTO 2015:7). Tourism receipts grew by 4% in real terms, reaching 509 billion US$ (383 billion euro) (UNWTO 2015:7). These are „robust results" for „the world's most visited region", which accounts for 51% of all international arrivals and 41% of receipts and comprises many of the world's largest and most mature destinations (UNWTO, 2015:7). In 2015, Travel & Tourism sector generated US $7.2 trillion (9.8% of global GDP) and supported 284 million jobs, equivalent to 1 in 11 jobs in the global economy (WTTC, 2016:3). Travel & Tourism continued to show its resilience in 2016, contributing direct to GDP growth of 3.1% and supporting 6 million net additional jobs in the sector, generated 7.6 trillion US$ (10.2% of global GDP) and 292 million jobs in 2016, equivalent to 1 in 10 jobs in the global economy and „*the tourism sector* will continue to grow its economic contribution, providing the rationale for the further protection of nature, habitats, and biodiversity" (WTTC, 2017:3).

Cross Border Cooperation (CBC) is a key element of the EU regional development policy. According to European Commission **(EC), European Cross-border cooperation** aims to tackle common challenges identified jointly in the border regions and to exploit the untapped growth potential in border areas, while enhancing the cooperation process for the purpose of the overall harmonious development of the Union (EC, 2017a).

Tourism is a principal factor giving rise to meetings and interactions between populations, and this aspect takes on another dimension in a cross-border context:

it is first of all a “social and cultural link” across the border between two populations (CR, 2016:2). Thus, tourism is a catalyst in the development of border regions, contributing to the development of diverse areas such as (AEBR, 2000:272 cited by Borma, 2014:119): “*regional economic development, development of the regional labour market, development of infrastructure and facilities, investment and business placement”.*

Tourism will continue to play a prominent role in planned ERDF investment, as well as related investments into the conservation, protection, promotion and development of natural and cultural heritage (see graph), with about € 8 billion of planned ERDF allocation. Tourism has not been included as a thematic objective in the European Structural and Investment Funds (ESIF) regulations as it constitutes a means or a sector rather than an objective (EC, 2017b).

The European Territorial Cooperation Programmes support numerous cross-border tourism projects in Europe, with the following main objectives: the improvement of the quality of tourism at the regional and local level, the development of more sustainable models of tourism, and the establishment of stronger cross-border links between economic and cultural actors (CR, 2016:3)

2. Bihor County Tourism in the Regional Context

The North West region has a high potential for diversified tourism - spa, cultural, mountain, rural, religious, sports and leisure, business etc., determined by natural and anthropic tourism resources of great value, varied landscape, attractive and unpolluted rich thermal water and mineral resources, valuable cultural heritage (picturesque towns, wealth of historical monuments, wooden churches, Roman forts, castles, manors, castles with stylistic authenticity and unique character), the large number of accredited places with tourism potential (163) and ethnic diversity (NW RDA, 2014). The main weakness of the region is the accessibility and low mobility, which directly impact the access to the unique and valuable touristic objectives (NW RDA, 2014).

Even if the importance of developing an integrated regional tourism is acknowledged (Regional Development Plan 2007-2013, Regional Development Plan 2014-2010, many projects financed from structural funds etc.), the number and diversity of information tools to promote the regional tourism are obviously insufficient and there are not yet diversified integrated tourist packages. Although there were increases in gross investments in tourism, they have focused mostly on accommodation infrastructure and, eventually, gastronomy and food components, but far less the tourist services and activities that tourists can carry on the natural and cultural potential offered by the different areas the region.

According to the Regional Development Plan 2014-2020 (NW RDA, 2014), there are many similarities between tourism potential and its value as a whole in the North-West Region (counties: Bihor, Bistrita-Nasaud, Cluj, Maramures, Satu Mare, Salaj) and Bihor county:

- The existence of diversified tourism potential - spa, cultural, mountain, rural, religious, sports and leisure, business tourism, etc., determined by the combination of valuable natural tourism resources and cultural heritage;
- The existence of the same major weakness related to reduced availability of sightseeing, especially due to poor road infrastructure;

- The existence of the same problems to value the potential of tourism and tourism service quality as those reported nationally in the SWOT analysis;
- Similar trends regarding the evolution of structure in tourist reception with functions of accommodation, development of tourist arrivals and overnight stays in hotels in the past five years: a significant increase of the number of rural guesthouses along with drastic decreases when motels, tourist chalets, villas, camps, school camps; an insignificant increase of tourist arrivals generally, drastic drops of tourist arrivals in accommodation structures related to ecotourism or adventure tourism;
- Low attractiveness for foreign tourists, the North-West region ranks fourth nationally;
- Low use of tourist accommodation capacity - under 40% in all counties in the region.

Despite these similarities, the analysis of tourism indicators according with national territorial statistics (RNIS, 2015), Bihor situation is above the regional average. Compared to the other counties in the North-West region, foreigners preferred almost exclusively counties like Cluj, Bihor and Maramures, and the volume of gross investments in hotels and restaurants, although declining in 2010, locates Bihor County as the 1st at regional level, while the North - West region ranks 3rd after Bucharest-Ilfov and South-East (NW RDA, 2014).

Bihor County has, in our opinion, the highest tourism potential and also the most diversified, covering large areas of the county. Summarized below, based on Bihor County Development Strategy 2014-2020, several arguments in support of this assertion:

- Innovative combination of natural heritage and an important cultural heritage, also geographical and ethnographic diversity;
- Unique combination between mountain and water as elements that define natural heritage:
    - Mountain: Beauty, karst wealth and high biodiversity of the Apuseni Mountains in the county of Bihor (Bihor-Vlădeasa Forest Mountains, Forest-Moma, Ses - Plopiş) :
        - Protected Areas: From the standpoint of the number of protected areas of national interest Bihor County is best represented at the regional level with 64 such protected areas, about half of the entire park Apuseni is in Bihor County.
        - Caves: the county with the largest number of caves in the country, over 8% of the approximately 20,000 known cavities in the country, among them being found also four superlatives Romanian cave: the deepest cave - V5 Vărăşoaia System – Padiş, the longest cave – Wind Cave - Şuncuiuş, the largest underground waterfall – Câmpeneasca cave – Vașcău, deepest submerged cave – Izbucul Izbândiş plus Bear Cave largest cave complex and landscaped country that recorded the highest number of tourists nationwide. A special feature in Bihor Mountains is the presence of forested karst, which are the premises of the existence of ice caves: Scărişoara Glacier, Bortig

pothole, Live Fire, ice pit from Vârtop Plateau, Barsa Glacier etc.
        - Biodiversity: peculiarities of other geographical factors, climate, hydrographic network, vegetation and fauna. In addition to limestone areas, plateaus and cliffs as well as numerous species of plants, is a special attraction for tourists.
    - Water: Spa resources exploited Felix Spa and May 1 and more, rich water resources, numerous lakes, mineral and thermo mineral springs, surface waterfalls (BC, 2014);
- The existence of 4 resorts, including 2 of national interest: Baile Felix and Stana de Vale and 2 of local interest: 1 Mai and Tinca (RNAT, 2015);
- The existence of 2 ski slopes approved: Hidisel (Hidiselul de Jos), Piatra Grăitoare (Vârtop) (RGDCAT, 2015) and a resort of national interest for winter sports (Stana de Vale, 3 functional ski slopes, although not approved, two cross country skiing slopes)
- Large number of tourist routes approved (MRDT, 2014) and under the approval;
- Very high potential for extreme sports (climbing, escalade, mountain rivers water sports, etc.).
- Rich built heritage: 431 built heritage monuments, of which 170 are archaeological sites and monuments, 221 monuments and architectural ensembles and 40 are memorials and monuments, fine art, Fortress of Oradea, Museum of Ţării Crişurilor (BC, 2014);
- Ethnic and religious diversity (Bihor county are registered monasteries and churches representative of many religions, including 3 synagogues (BC, 2014);
- The diversity of cultural traditions and cultural events (BC, 2014);
- County tradition in tourism and hospitality industry, a large number of classified businesses active in this sector and specialization in vocational tourism education system, vocational and academic, training for adults (BTR, 2015; BCDS, 2015);
- Structure of county economy oriented towards services with high added value which requires skilled and specialized labor (BC, 2014);
- Bihor county residents are distinguished by their hospitality and tolerant and cooperative mentality(BC, 2014);
- Increasing foreign investors interest in Bihor County (BC, 2014);
- Increasing investment in transport infrastructure to increase accessibility to the main areas of tourist interest: upgrading of the access road to the Padiş (BC, 2014);
- Increasing investment in tourism infrastructure and tourism services (BCDS, 2015);
- Bihor County location on the border with Hungary and Bihor county eligibility for Pre-accession program PHARE CBC and CBC Programme Hungary-Romania - tourism being a major area of intervention covered by a total of 10 projects (BRECO), location of the Regional Office for Cross Border Cooperation (BRECO) Oradea - Compete at regional level benefits;

- Greater capacity of absorption of European funds in at regional level tourism (ROP) of Bihor county compared to the other counties in the region - reflected in attracting four projects (one for cultural heritage: Oradea Fortress revitalization and 3 for tourism infrastructure of all 14 existing across the region), capacity due to Oradea City Hall (no. 2 in the country in the absorption of EU funds) and business tourism in Bihor County (2 from 7 existing projects in tourism across the region for tourism infrastructure) (NW RDA, 2014).

Statistical data on tourism activity in Bihor (BCDS, 2015; RNIS, 2015) shows a rising trend for most of the indicators, 2007-2013.

Regarding the tourism infrastructure, number of tourist accommodation in Bihor County is 128 in total, an increase of 14% in 2011 compared to 2010, with the highest growth categories *villas and bungalows and guesthouses areas.*

Table 1: Tourist receptions with tourists' accommodation functions, in Bihor County

	2007	2008	2009	2010	2011
Total	85	83	100	110	128
Hotels	29	30	32	39	43
Hotels Apartments	-	-	-	1	2
Motels	4	6	7	5	4
Hostels	1	1	1	2	3
Tourist inns	1	1	1	-	-
Chalets	5	5	6	7	4
Camping and cottage type units	8	7	7	6	4
Villas and bungalows	20	12	12	12	21
Camps for students and preschool children	6	6	6	3	3
Urban guesthouses	6	6	9	4	7
Rural guesthouses	5	9	19	31	37

Source: *BCDS, 2013*

The territorial accommodation infrastructure is not reduced numerically, but is relatively concentrated as a distribution area, distinguishing two infrastructure concentration in two areas: 1. Oradea and Sanmartin (Baile Felix – 1 Mai) area; 2. Apuseni Mountains. There are many uncovered accommodation infrastructure areas although there is demand from tourist's northern area of the county, where, although there is potential for tourism, it offers only three cities: Marghita, Valea lui Mihai and Sacuieni.

Table 2: Indices of net use of tourist accommodation capacity

2007	2008	2009	2010	2011	2012	2013
47.0	44.5	44.1	37.7	38.4	38.1	36.7

Source: *BCDS, 2015; RNIS, 2015*

A very relevant aspect is also that the number of tourists, who stay at least one night in the location of the county they are visiting, is much larger than the number of tourist arrivals. From the accommodation point of view the category most tourist

reception structures are classified at a good quality level, of 3 and 4 stars hotel in Oradea and Baile Felix. Availability of accommodation is a problem, but especially in rural areas of the county, where, if the accommodation infrastructure is found, it is improperly equipped. Also in rural areas an important issue is the lack of tourist services such guidance, signaletica etc. Moreover, in Bihor county there is an acute lack of local tour guides. The current method to identify a local guide is to ask the locals. "Official" guides are that can be found in the field and are mostly those serving a specific objective, tourist cave, museum etc., but they don't have the necessary training.

Use of tourist accommodation capacity instead is low - 36.7% in 2013, lower than in 2007 (47%) (BCDS, 2015; RNIS, 2015). From the accommodation point of view the category most tourist reception structures are classified at a good quality level, 5 stars category (1 hotel in Oradea) 3 and 4 stars hotel in Oradea and Baile Felix (BCDS, 2015). Availability of accommodation is a problem however, in rural areas of the county a bit better covered but insufficient, in the mountains (BTR, 2015; BCDS, 2015).

The analysis of statistical data on tourism activity in Bihor (RNIS, 2015; BCDS, 2015; NW RDA, 2014) indicates the following trends for 2007-2013:

- Number of tourist reception with functions of tourists' accommodation in Bihor County increased by 50% in 2007-2011, overall the highest growth recorded for rural guesthouses (7 times, from 5 in 2007 to 37 in 2011); tourism capacity increased as the number of seats at 10.071 in 2013 but with drastic reductions for motels, tourist cabins, villas, camps, school camps but decreased as the number of places-days (the operation) at 2.596.300 in 2013 (RNIS, 2015 ; BCDS, 2015);
- The number of tourist arrivals in the establishments of tourists' reception with functions of tourist accommodation in Bihor County increased slightly (0.44%) in 2011 compared to 2007, but significantly from 2010 (17.63%) while the lowest was recorded. In 2013, the number of tourist arrivals increased at 252.100 compared with 194.100 in 2010. The number of tourist arrivals in accommodation structures related to tourism or adventure tourism: tourist chalets, villas, camps, school camps, however, is almost insignificant (numbers in the thousands of tourists per year) (RNIS, 2015 ; BCDS, 2015);
- The number of foreign tourists in Bihor is low - 38 939 in 2011, but an increase of 30.65% over 2010. In regional context, foreign tourists prefer almost exclusively Cluj, Bihor and Maramureş counties (NW RDA, 2014);
- The number of nights spent by tourists in the establishments of tourists' reception with functions of tourist accommodation in Bihor County was 952.200 in 2013 with a slight increase compared to 2010, when register 885.400 but a big drop from 2007(RNIS, 2015; BCDS, 2015);
- Net use index of tourist accommodation capacity in operation in Bihor county is low – 36,7% in 2013, again with a slight increase compared to 2010, but a big drop from 2007, when register 47%. The situation of Bihor County for this indicator is above the regional average, where net use index of tourist accommodation capacity in operation dropped dramatically in one quarter (RNIS, 2015; BCDS, 2015);

- The volume of gross investments in hotels and restaurants, although down from 2010, ranks Bihor County on the first place on regional level (North- West region ranks 3 after Bucharest-Ilfov and South-East) (NW RDA, 2014).

3. Cross-border Cooperation Impact on Bihor County Tourism

The location of Bihor County on the border with Hungary and the opportunity to benefit of funding from EU through Cross-border Cooperation Programmes, as well as the location in Oradea of the Regional Office for Borders Cooperation (BRECO) are competitive advantages for Bihor County at regional level. Positive effects on tourism are visible through:

- *Partnerships and funds for tourism development through tourism projects, financed by PHARE Cross-border Cooperation Romania–Hungary Programme 2004 – 2006 and Hungary-Romania Cross-border Cooperation Programme 2007 – 2013*. In Bihor – Hajdú-Bihar Euroregion, established in 2002, were implemented a number of 4 tourism projects under the PHARE CBC Programme between 2004-2006 and a number of 6 tourism projects through HU-RO CBC Programme between 2007 – 2013 as shown in Table 3.

Table 3: Completed CBC projects in tourism in Bihor – Hajdu-Bihar Euroregion (2004 - 2013)

Code	Project title	Beneficiary name/ Leader partner	Project value (Euro)	PHARE / European Fund for Regional Development co-funding (Euro)
Touristic projects implemented under PHARE CBC Romania–Hungary program, in 2004-2006, in Bihor–Hajdú-Bihar Euroregion				
RO 2004/016-940.01.01.01.11	Unity and diversity in Bihor – Hajdú-Bihar Euroregion tourism	Chamber of Commerce and Industry, Bihor County	57,525.00	50,025.00
2006/018-446.01.01.01.14	Integrated center for business development by promoting regional tourism and culture	Alesd Local Council, Bihor County	335,650.00	300,058.75
2006/018-446.01.01.01.15	Development and promotion of integrated packages with common theme in the Euro region Bihor – Hajdú-Bihar	University of Oradea, Faculty of Economic Sciences, Bihor County	102,341.00	85,841.60
2006/018-446.01.01.01.20	Complementarity and similarity as a means of sustainable	Center for Protected Areas and	110,410.00	97,410.00

Code	Project title	Beneficiary name/ Leader partner	Project value (Euro)	PHARE / European Fund for Regional Development co-funding (Euro)
	development in Euro region Bihor – Hajdú-Bihar	Sustainable Development, Bihor County		
Touristic projects implemented/completed, in 2007-2013 under HU-RO CBC program, in Bihor – Hajdú-Bihar Euroregion				
HURO/0801/144	Making innovative joint packages for tourism development in Hajdú-Bihar and Bihor counties	Chamber of Commerce Hajdú-Bihar County	96,510.27	80,623.55
HURO/0801/155	Adventure, recreation, entertainment: tourism promotion in Hajdú-Bihar and Bihor counties	Local Self-Government of Hajdú-Bihar County	510,795.00	422,947.57
HURO/0801/160	Development and promotion of ecological tourism opportunities in the North-East Plain and the Apuseni Mountains	Friends of Nature Tourism Association, Debrecen, Hajdú- Bihar County	163,150.00	134,169.95
HURO/0802/131_AF	Business incubator for cross-border tourism development	Vadu Crişului Municipality, Bihor County	552 633,86	466,766,86
HURO/0901/017/2.1.3	Join development and promotion of integrated rural tourism thematic in Bihor – Hajdú-Bihar Euroregion	University of Oradea, Faculty of Geography, Tourism and Sport, Bihor County	174,866.00	148,636.10
HURO/0901/192/2.1.3	Opportunities of improvement of the cultural heritage through cross-border cooperation with the means of development in tourism and business environment	Salonta Municipality, Bihor County	505,920.00	430,032.00

Source: work of authors based on information provided by BRECO, 2014

- *Results of cross-border cooperation implemented projects in tourism and their spill-over effects on Bihor County tourism development* as shown in Table 4 and Table 5.

Table 4: Results of the PHARE CBC projects in tourism (2004 - 2006) in Bihor–Hajdú-Bihar Euro-region

Project title	Results
Unity and diversity in Bihor – Hajdú-Bihar Euroregion tourism	• creating a brochure that describes six common packages in six foreign languages (Romanian, Hungarian, English, German, French, Italian),the modernization of one building (already existing) with an area of about 736 square meters, in order to create commercial spaces for Small and Medium Enterprises (SME's) which have tourism activities, • creating multimedia CD with information on tourist destination of Bihor – Hajdú-Bihar (1000 copies in the 6 languages mentioned above) and the creation of a travel portal.
Integrated center for business development by promoting regional tourism and culture	• the modernization of one building (already existing) with an area of about 736 square meters, in order to create commercial spaces for Small and Medium Enterprises (SME's) which have tourism activities, • creating 4 new jobs in the business incubator.
Development and promotion of integrated packages with common theme in the Euro region Bihor – Hajdú-Bihar	• establishment of the Tourism Promotion Center in *Bihor – Hajdú-Bihar* euro region, • the creation of a website in order to present a model for the development and promotion of tourism packages , • the training of 40 travel services providers in Bihor county (who were involved in the project), by means of specialists (teachers, cavers , etc.) in tourism, • the creation of a catalogue of bidders in tourism from Bihor–Hajdú-Bihar euro region, in which it was described the offers of accommodation, catering and leisure available within the 6 circuits from the common theme developed in the project, • a published a Tour Guide of the bidder in tourism; • the creation of a database that includes the bidders in tourism that were participants in the project; • the organization of a tour fair in proximity of Bihor – Hajdú-Bihar euro region.
Complementarity and similarity as a means of sustainable development in Euro region Bihor –Hajdú-Bihar	• completed by conducting a feasibility study for the creation of a human resources training in the Apuseni Natural Park and that provides alternatives chances of employment and contributes to combating social exclusion; • creating a database of images with valuable national elements of the two parks (over 10,000 digital images); • the printing of two publications (a photo album about the Apuseni Natural Park and a booklet - in Romanian - describing Hortobágy National Park) in order to support tourism development through complementary increase of attractiveness in tourism destination like Hortobágy National Park - Cefa - Apuseni Natural Park;

Project title	Results
	• organizing an annual fair of the ones involved in small and medium businesses, producers and artisans from the protected natural areas in the Euro region, with the role of facilitating the development of links between people, businesses and institutions in the region.

Source: work of authors based on information provided by BRECO, 2014

Table 5: Results of HU-RO CBC projects in tourism (2007 - 2013) in Bihor – Hajdú-Bihar Euro-region

Projects	Results
Making innovative joint packages for tourism development in Hajdú-Bihar and Bihor counties	• creating a website www.bihariturizmus.eu • the creation of thematic touristic packages following the identification of tourism resources of the Euroregion
Adventure, recreation, entertainment: tourism promotion in Hajdú-Bihar and Bihor counties	• 7 package offers for tourist, • 180.000 leaflets, 84.000 brochures, 1000 image books, • 1 web portal (www.bihar-bihor.eu)
Development and promotion of ecological tourism opportunities in the North – East Plain and the Apuseni Mountains	• feature film on the natural values of the region analyzed and 10 short films presenting thematic routes defined by the project; • a web site (http://www.thematic-routes.eu) that includes information about attractions in the region North - East Plain and the Apuseni Mountains, databases , videos , surveys , contacts etc.; • the definition of 10 thematic tourist routes based on tourist attractions, accommodation and restaurants, and entertainment programs available in the existing euro region, named as follows: *The route of inns, The craft trail, The wine trail, The trail of significand landscapes, The route of health, The water trail, The trail of famous personalities, The route of the museums and traditional houses, The local traditional products route, The route of caves and karst formations*.
Business incubator for cross-border tourism development	• establishing a business incubator in Vadu Crișului for travel agencies • establishing a tourist information center located at the main entrance of Hajduszoboszlo swimming pool • mutual promotion of tourist attraction from the Euro-region (Hungary spa tourism and Romania mountain tourism).
Join development and promotion of integrated rural tourism thematic in Bihor – Hajdú-Bihar Euroregion	• creating a project site; • creating a map of Bihor – Hajdú-Bihar Euro region and some thematic tourist maps; • the development of travel albums and brochures, etc.
Opportunities of improvement of the cultural heritage through cross-border cooperation with the means of	• development of promotional materials of cultural tourism in Salonta and Debrecen: short films about the two cities, commercials, newspaper articles, etc. short films about the

Projects	Results
development in tourism and business environment	two cities Salonta and Debrecen), commercials, newspaper articles, etc. • creating a website about the two cities: http://www.nhd.ro/salonta/index_hu.html.

Source: work of authors based on information provided by BRECO, 2014

- **Emphasizing competitiveness in tourism sector,** particularly in the spa tourism, but also to all other forms of tourism, except for mountain tourism, that is not threatened due to specific touristic attractions for Hajdú-Bihar County: thermal resorts, national parks and natural reserves. In Hajdú-Bihar County the most famous resorts are Debrecen and Hajduszoboszlo. Besides these resorts, there are small town like Puspokladany, Balmazujvaros and Berettyoujfalu that also have spa facilities. Hortobágy National Park (included in the UNESCO World Heritage since 1999), located in Hajdu-Bihar County is a real gem of the region, being the first national park of Hungary. Also, we must add anthropogenic sights: architectural and historical monuments (County Hall and The Prefecture in Debrecen, Nine Bridge holes from Hortobágy, memorial houses of personalities Ady, Arany, Petofi, etc., religious centers and holy places, Debrecen is considered the most important religious center of Reformed Church from Eastern Europe, World Summit of the Reformation, Pope's visit linked to Debrecen, etc.), folk customs and traditions, ethnographic centers (pottery, carvings, embroidery, etc.), gastronomy, event organization (National and International Dance Festival for Children, Bela Bartok International Choir Festival and Military Band Festival, etc.), conferences, leisure activities and sporting events (cycling, riding, fishing are very popular) etc.

Conclusions

At the regional level, Bihor County presents the greatest potential for tourism development and tourism specialization meets the recommendations of the North-West Regional Development Plan 2014-2020 of the areas of smart specialization. At Euro-regional level - Bihor County tourism benefited by partnerships and networks of cross-border cooperation in tourism, strategies to develop cross-border tourism, thematic tourism packages etc. created by cross-border cooperation projects implemented, allows the transfer of know-how, exchange of experiences, sharing of certain services related etc. within resulted cross border cooperation networks. At the same time, Bihor County tourism competitiveness increased as a competitor response to Hajdú-Bihar County tourism competitiveness, particularly in the spa tourism. In our opinion, the experience of cross-border cooperation projects and their results created in Bihor County a very important portfolio for tourism development, a critical mass of relevant players in tourism and touristic infrastructure, databases, promotional materials, strategic documents etc. The superiority of these projects is based on the importance given to relational and network-type factors, essential for nowadays tourism development. Through promoting in an integrated manner the main touristic areas of the Bihor County and through fostering partnerships between operators in the tourism sector with local public administration and tourism sector

institutions for collaboration, cross-border cooperation projects providing competitive advantages at regional level.

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BOOSTING INCLUSIVE ENTREPRENEURSHIP AS A STRATEGIC OPTION OF LOCAL DEVELOPMENT IN ROMANIA IN 2014-2020 (I)

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Abstract: *The present paper is the first part of an analysis that aims to clearly identify and assess the needs of the inclusive entrepreneurship target groups in Romania for 2014-2020, in order to encourage inclusive entrepreneurship and self-employment as local development strategic option. The specific objectives of the analysis are: 1. to analyze the national context in terms of employment and entrepreneurship for the period 2014-2020; 2. to identify the groups at risk and uncertainty compared to employment and entrepreneurship, disadvantaged on labour market or under-represented in entrepreneurship; 3. to assess the specific needs of identified groups in four small towns in Romania and if boosting inclusive entrepreneurship is a viable local development strategic option. As first part of this research, the present paper analyses the national and regional context regarding boosting inclusive entrepreneurship as a strategic option for 2014-2020. In the second part of the research, in order to investigate if boosting inclusive entrepreneurship is a viable strategic option of local development, we'll analyse through comparison this option for 4 small towns in Romania: Slănic Moldova, Găeşti, Balş, Seini located in different development regions, respectively North-East, South, South-West Oltenia and North-West. The paper uses OECD/EC inclusive entrepreneurship framework and OECD research methodology. The analysis of needs is based on Eurostat and national statistics, EU strategic documents, national strategies, regional development strategies for 2014-2020.*

Keywords: *inclusive entrepreneurship; self-employment; labour market; regional development; local development.*

JEL classification: *L26; O18; O20; R11; J21; M21.*

1. Theoretical and research background

The inclusive entrepreneurship concept was launched by the Organization for Economic Co-operation and Development (OECD) and European Commission (EC) through Local Economic and Employment Development (LEED) programme, looking both to support business creation and self-employment for groups at risk and uncertainty compared to employment and entrepreneurship, disadvantaged groups on labour market or under-represented in entrepreneurship: youth, women, seniors, ethnic minorities, rural people, people with low education levels, people with disabilities, migrant populations, etc. (OECD/EC, 2013: 18-19). Consequently, boosting inclusive entrepreneurship as a strategic option addressed both economic and social objectives: promoting entrepreneurship, securing labour market and reducing social exclusion (OECD/EC, 2013). The most sensitive issue for boosting

inclusive entrepreneurship is the carefully setting of target groups (Dodescu and Pop-Cohut, 2016) tailored on local needs. Generally, women have a smaller inclination to entrepreneurship than men, young people encounter the great difficulties in accessing financing, rural people face specific obstacles in self-employment, but only local needs analysis can identify specific target groups in order to design specific measures for inclusive entrepreneurship support.

The present analysis aims to clearly identify and assess the needs of the inclusive entrepreneurship target groups in Romania for 2014-2020**,** in order to encourage entrepreneurship and self-employment as regional and local development strategic option.

Our analysis is derived from a larger study looking at inclusive entrepreneurship in Romania in the context of European Union. Our previous research on this topic addressed policy analysis for 2007-2013 (Dodescu and Pop-Cohut, 2015, 2016). We concluded that the need for inclusive entrepreneurship policy support definitively exists in Romania but the target groups are partially different compared to the EU general context, more disadvantaged groups are especially: youth, women and rural people (Dodescu and Pop-Cohut, 2016). Looking at existing policies and programmes in 2007-2013, we identified national programmes targeting only youth and women entrepreneurship, the strengths in 2007-2013 are related with EU structural and agricultural funds, particularly ESF-supported actions (Dodescu and Pop-Cohut, 2015).

The specific objectives of the present analysis are: 1. to analyze the national context in terms of employment and entrepreneurship for the period 2014-2020; 2. to identify the groups at risk and uncertainty compared to employment and entrepreneurship, disadvantaged on labour market or under-represented in entrepreneurship; 3. to assess the specific needs of identified groups in four small towns in Romania and if boosting inclusive entrepreneurship is viable local development strategic option. The tools used for need analysis were the following: Eurostat and national statistics, EU strategic documents, national strategies, regional and local development strategies.

The present paper is the first part of this research and analyses the national and regional context regarding boosting inclusive entrepreneurship as a strategic option for 2014-2020. In the second part of the research, in order to investigate if boosting inclusive entrepreneurship is a viable strategic option of local development, we'll analyse through comparison this option for 4 small towns in Romania: *Slănic Moldova, Găeşti, Balş, Seini* located in different development regions, respectively North-East, South, South-West Oltenia and North-West. The paper uses OECD/EC inclusive entrepreneurship framework and OECD research methodology. The paper is structured in 2 main sections: *Section 1* analyses the need for inclusive entrepreneurship support in Romania in 2014-2020 based on the labour market and entrepreneurship context and describes inclusive entrepreneurship target groups; *Section 2* analyses if boosting inclusive entrepreneurship is a strategic option of local development based on national and regional strategies for 2014-2020 and is finalized by *Conclusions*.

2. Needs Analysis for Inclusive Entrepreneurship in Romania, 2014-2020

The analysis of Romanian labour market indicators according with Eurostat and national statistics (RNIS, 2016) in correlation with Romanian strategic documents (NRP 2015, AGS 2015, CSR 2014, 2015; NSE, IPYW 2014-2015) and RPES data (collected through caravans on employment, awareness campaigns organized in partnership with local authorities, etc.) leads to following interesting findings:

- There are optimistic forecasts regarding employment - projected to grow in 2016 and 2017 along with sustained economic growth (EC, 2016). At present, there are limited employment opportunities and a lack of opportunities in rural areas.
- Over the period 2000-2014, the unemployment rate in Romania was constantly below EU average with several points (6.8% compared to the EU average of 11.4% in 2014) (Eurostat, 2015). There are some hidden causes for low rate of unemployment: a continuous decline in the working-age population due to ageing and net outward migration (EC, 2016, p. 3) and an important share of total employment in subsistence agriculture (RNIS, 2010).
- *Unemployed and long-term unemployed people* are not necessarily disadvantaged in labour market access and participation. Despite low rate of unemployment, there is a continuous increase of the share *of long-term unemployment* but *long-term unemployed people* are rather just pursuing to benefit from unemployment benefits than seeking employment.
- *Women* aren't disadvantaged on the labour market access and participation. The unemployment rate for women is slightly below the overall unemployment rate by less than one percent on average, while the unemployment rate for men is slightly above the overall unemployment rate with less than one percent on average throughout the period 2000-2014 (RNIS, 2016). In 2014, the unemployment rate for women was 6.1% compared with 7.3% for men and 6.8% the general average (RNIS, 2016).
- Worrying increase in the unemployment rate for young people and disparities related to access to and participation in the labour market of certain disadvantaged persons leads to the identification of the following *disadvantaged groups in labour market access and participation:*

Youth and NEETs

In 2014, young people employment rate had reached one third of the total employment rate (EC, 2016). The analysis of the unemployment rate for young people (15-24 years) compared with the one for people of 25 years and over shows an alarming increasing over the period 2000-2014 from 18,4% (compared with 5,1%) in 2000 at 24% (compared with 5,1%) in 2014, from 3.6 times higher in 2000 at 4.36 times higher in 2014 (RNIS, 2016). Even more worrying is the increase of percentage of young people not in employment, education or training (NEETs) well above the EU average, underscoring the difficulties in ensuring adequate transition from the education system to the labour market. According with HC OP 2014-2020 (2016), the NEETs rose to 17.2% in 2013 compared to 12.9% in the EU but the number of unidentified young people NEETs was approx. 441.000. NEETs became a *multiple disadvantaged group* on the labour market due to their age and social status. According to the RPES (2016), the NEETs indicator recorded important disparities - by gender: young women being more affected than men (18.9% versus 13.2% in the EU); educational level: high school graduates (approx. 70%) are more affected than university graduates (approx. 20%); other criteria: approx. 5% are people with

disabilities and approx. 1% belong to the Roma minority. According with IPYW 2014-2015, the situation of young Roma in the labour market is influenced especially by low level of education (8 grades or less).

Older workers

The analysis of the employment rate over the period 2000-2014 shows, also, a progressive worsening of the employment situation of older (55-64 years) people (RNIS, 2016). In 2014, the rate of employment among older workers (55-64 years) was 43.1% well below the national average (61%) (RNIS, 2016) with significant regional differences (the lowest rates recorded for Bucharest-Ilfov and Central Region) as shows HC OP 2014-2020.

People with low level of education

During 2000-2014 period, the unemployment rate for people with medium and low education is higher by about 1% to 5% from that of people with higher education (RNIS, 2016), those with medium level of education tend to be more affected than those with low education (EC, 2016). The employment rate for people with low levels of education showed similar trend with unemployment: 40.5% for those with low levels of education in 2013, 62.3% for those with average education compared to 82.1% for people with higher levels of education (RNIS, 2016). Low level of education is an aggravating factor of risk in relation to employment for people from rural area, persons with disabilities and Roma people – another multiple disadvantaged groups on the labour market.

People from rural area employed in subsistence agriculture

At national level, the agricultural sector comprised 31.9% of the total employment, while 52% of the active rural population was working in agriculture; also, 87.4% of people engaged in secondary and multiple activities and 90.1% of those who said they were own-account workers and unpaid family workers (farm work is their secondary activity) live in rural areas according to the AMIGO Survey conducted in 2010 by the RNIS in individual households (RNIS, 2010). The farming population is aging, the share of people aged over 54 in employment was 33.6%, in 2010 (RNIS, 2010). Low level of education and qualification is predominant, that determine weak possibilities of migration to other activities. Moreover, according with HC OP 2014-2020, agricultural exploitations in Romania cover only 29.7% of the total utilised agricultural land and the farms under 5 hectares represented 93% of total, which indicates the magnitude of the subsistence and semi-subsistence agriculture.

Roma people

Characteristic for Roma people is the predominance of unskilled occupations. According with RPES, the registered unemployment among the Roma population is 3 times higher than among non-majority population (RPES, 2016). According with Duminica and Ivasiuc (2013), only 1 from 10 Roma people had a permanent job in the past two years, the employment rate among Roma workforce was only 46.2%. Roma youth or Roma women are *multiple disadvantaged* on the labour market due to their age/gender and social status.

Persons with disabilities

According with HC OP 2014-2020, from the total of 1.4 million people reported as persons with disabilities, 56% said they have never worked and only 12.7% were employed. Low level of education is an aggravating factor of risk in relation to employment for people with disabilities.

The analysis of Romanian SBA profile and SMEs sector according with EC (2015a, b) and RG (2014) leads to the identification of interesting findings:

- There are optimistic forecasts for 2016: 6.2% increase in the number of SMEs, around 190,000 new SMEs jobs and 8.5% annual growth of SMEs added value (EC, 2015a). EC considers that “the outlook for the 'non-financial business economy' as a whole, and especially for SMEs, is positive”, even if Romania's non-financial business economy has not recovered fully from the crisis (EC, 2015a). SMEs account for 99.7% of total enterprises and 67% of total employment, in line with the EU average (RG, 2014), but the SMEs influence on the Romania’s economic evolution (about 55-56% of GDP) and the SMEs value added, productivity and competitiveness are significantly lower than the EU average, the most important gap being registered at the level of labour productivity (75-77% lower than the EU average) (EC, 2015b).
- Romania’s SBA performance was visible improved, from 2008 to 2015, in particular for entrepreneurship (best performance, Romania is the EU leader), access to finance, and state aid & public procurement (EC, 2015b). Romania scores average results for ‘second chance’, ‘responsive administration’, state aid & public procurement and access to finance, but remains well below the EU average for four SBA principles - skills & innovation (worst performance), internationalisation, environment and single market (EC, 2015b). Also, Romania is making important progresses regarding business environment: in 2014, time to start a business in Romania was 2 days (while the EU average was 3.5 days), cost to start a business in Romania was 100 EUR (while the EU average was 313EUR), paid-in minimum capital (in percentage of income per capita) was 0.7%, (while the EU average was 11.3%), time to transfer property was 19 days (while the EU average was 26) and the cost of the property value was 1.5% (while the EU average was 4.5%) (EC SWD, 2016).
- There is no national data about business creation or self-employment rates for inclusive entrepreneurship target groups: women, youth, seniors, people with disabilities, people with low education, rural people, ethnic minorities, migrant populations etc. The analysis of the self-employment rate according with OECD (2015) leads to the identification of the following *under-represented groups in self-employment:*

Women and youth

The self-employment rates for young people and for women are well below the overall self-employment rate throughout the period 2000-2013, just over half in 2013 for both women and young people (OECD/EU, 2015). On the contrary, the self-employment rate of older people is almost double than the overall self-employment rate in 2000 and higher in 2001, fell sharply in the 2001-2013 period, but remained 1.5 times higher than the overall self-employment rate in 2013 (OECD/EU, 2015).

3. Boosting inclusive entrepreneurship as strategic option in Romania, 2014-2020

The analysis of the Romanian strategic documents (GSDSMEIBE 2020, PA 2014-2020, NSE 2014-2020, NCS 2014-2020, NSSIPR 2015-2020) leads to the identification of the following strategic targets in the SME sector in Romania - 2020 and *relevant* objectives for boosting inclusive entrepreneurship in major national strategies for the 2014-2020 as shown below in the Tables 1 and 2.

Table 1. *The strategic targets in the SME sector in Romania – 2020*

Performance indicators	**31-Dec.-2011**	**31-Dec.-2012**	**31-Dec.-2013**	**Increase (2020 / 2013)**	**31-Dec.-2020**
Number of active SMEs cf. CAEN Rev. 2 B - J, L - N	435,778	437,126	474,416	195,584	**670,000 (+ 41.23%)**
The target of SMEs economically active: surpassing the ceiling of 670,000 SMEs active in the Romanian economy					
Romania's population	20,121,641	19,920,425	19,721,221	-1,338,653	**18,382,567 (-6.79%)**
Number of active SMEs per 1,000 inhabitants	21.66	21.94	24.06		**36.45 (+51.50%)**
The density target of SMEs: increase by more than 50% of the density of active SMEs					
Total number of employees in active SMEs	2,519,954	2,522,128	2,623,448	609,552	**3,233,000 (+ 23.23%)**
Average number of employees in active SMEs	5.78	5.77	5.53		**4.8 (-13, 20%)**
The target of employees in SMEs: surpassing the ceiling of 3.2 million employees in active SMEs in the Romanian economy					
Gross value added of SMEs (EUR million)	24,963	24,849	26,792	11,208	**38,000 (+ 41.83%)**
The contribution of SMEs to the gross value added	49.51%				**approx. 60%**
The target of the gross value added (GVA) of SMEs: Creating a total GVA of SMEs of 11 200 million EUR in the 2013-2020 period					
Labour productivity (EUR / employee)	9,906	9,852	10,212	1,541	**11,754 (+ 15.09%)**
The target of labour productivity per employee: Increasing by 15% in 2020 compared to 2013.					

Source: GSDSMEIBE 2020, Annex no.5

Table 2. Relevant objectives for boosting inclusive entrepreneurship in major national strategies for the 2014-2020

Direction	Strategic document	Objectives/Priorities
Promoting entrepreneurship and self-employment	*GSDSMEIBE 2020*	*General objectives:* creating a favourable environment for business, private initiative and entrepreneurial spirit, boosting the creation and growth of SMEs and supporting more competitive local business environment on local, regional, national, European and international level by a significant increase in terms of dimensional, sectoral and regional net balance of economically active SMEs, the development of existing businesses and creating new jobs by the end of 2020. *Directions:* 1. Supporting and promoting entrepreneurship 2. Access to appropriate finance for SMEs 3. Innovative SMEs 4. Access to markets and internationalization of SMEs 5. The reactivity of government to the needs of SMEs
Securing labour market & promoting entrepreneurship and self-employment	*PA 2014-2020* *NSE 2014-2020* *NCS 2014-2020* *NSSIPR 2015-2020*	Thematic Objective 8: Promoting sustainable and quality jobs and supporting labour mobility Priority investment 8.iii - Self-employment, entrepreneurship and business creation, including of some micro, small and medium innovative enterprises

Source: processed by the authors

The analysis of the regional context addresses four development regions in Romania: North-East, South, South-West Oltenia and North-West and four small towns as shown above in the Table 3.

Through regional context comparative analysis of strengths, weaknesses, business environment, regional specialization, competitive advantages, position and regional significance – we tested the regional conditions that could boost or adversely affect the inclusive entrepreneurship.

Given that the regional structure of Romania is the centre-periphery type and the direction of growth and economic development is from West to East, there is a general tendency to increase the regional disparities between the West-East and the centre-periphery in terms of employment, industrial production, investments and incomes (Dodescu, 2013). In this context, the comparative analysis of the four regions analysed highlights the following particularities: North-East and South-West

regions are agricultural regions with the lowest levels of economic development; the South-Muntenia region has the largest rural population, the North-West region has the largest share of the population in the services sector.

Table 3. Presentation of the development regions and towns analysed

Region	North - East	South - Muntenia	South – West Oltenia	North - West
	Counties: Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui. The surface of the region is 36.850 sq. km and thus represents 15,46% of Romania.	*Counties: Argeş, Călăraşi, Dâmboviţa, Giurgiu, Ialomiţa, Prahova and Teleorman The region's surface is 34.453 sq. km and represents 14,5% of Romania.*	*Counties: Dolj, Olt, Vâlcea, Mehedinţi and Gorj The surface of the region is 29.212 sq. km and thus represents 12,25% of Romania.*	*Counties: Bihor, Bistriţa-Năsăud, Cluj, Maramureş, Satu Mare and Sălaj. The surface of the region is 34.160 sq. km and thus represents 14,3% of Romania.*
County	*Bacău*	*Dâmboviţa*	*Olt*	*Maramureş*
Town	*Slănic Moldova*	*Găeşti*	*Balş*	*Seini*
Population	*4.198 inhabitants*	*13.317 inhabitants*	18.164 inhabitants	*8987 inhabitants*
Location				

Source: processed by the authors on the basis of: MRLD, 2014; RDA S Muntenia, 2014; RDA S-V Oltenia, 2014; RDA N-V, 2014.

We notice as *strengths* that could boost inclusive entrepreneurship the following:
- favourable geographical position and natural resources endowments, dynamic business environment, entrepreneurial mind-set and the ability to attract foreign direct investment and structural funds make the difference in all the analysed regions;
- educated population and relatively inexpensive workforce in all analysed regions;
- long tradition in higher education and the largest share of student population (17.2% and 17.7%) in North - West and North – East (MRLD 2014);
- valuable tourism potential (spa and therapeutic tourism, rural tourism, sport tourism) in North-East and North-West (MRLD 2014);

The main *weaknesses* identified at regional level that could adversely affect the inclusive entrepreneurship are:
- active population migration, mono-industrial or predominantly agricultural economic structure, poor infrastructure and low accessibility to Western Europe in all analysed regions (MRLD 2014);
- structural vulnerability of the population due to massive migration of men working abroad, compounded by the limited offer of workplaces for women, low qualification of population, labour productivity lower than the national average, high percentage of population concentrated in rural areas (59.23%), highest unemployment rate (12.3% in Vaslui county) in North – East (MRLD 2014);
- low standard of living, low accessibility of rural areas to major transportation network and urban technical facilities, high percentage of mono-industrial localities in the region (17.8%); aging of the employed labour force, low levels of education, high unemployment and rising levels of poverty and social exclusion in South-Muntenia (RDA South Muntenia, 2014);
- improper roads and railways, lack of the basic infrastructure in rural areas; insufficiency of support structures for the creation and development of businesses; the economy of the region still relies on large industrial facilities with outdated technology; higher share of rural population 52% compared to 48% in urban areas in South - West Oltenia (RDA SV Oltenia, 2014);
- low accessibility and reduced mobility, poor road infrastructure, high rurality (47.4% of the population lives in rural areas, the degree of rurality is higher than the national average) accentuated by population decline, deindustrialization, external migration and internal migration from town to village); low wages, low labour productivity, R&D infrastructure concentrated in Cluj-Napoca in North – West (RDA NW, 2014).
Regarding *regional specialization*, we identified key areas/ industries specific to each region and economic agglomerations (industrial parks, business incubators, clusters, etc.) that could help stimulate inclusive entrepreneurship, as follows:
- woodworking industry, furniture industry, textile industry; 2 industrial parks (Bacau and Iasi), 3 business incubators in North – East (MRLD 2014);
- automotive industry, metallurgical industry for the extraction and processing of petroleum and natural gas, electrical industry, tourism, agriculture, food industry, textile industry; 20 industrial parks (1st nationally), more than half of which are located in rural areas in South-Muntenia, an innovative functional cluster (RDA South Muntenia, 2014);
- electrical industry, chemical (rubber) and engineering (with skilled labour in the field), clothing and textile industry, wood products and metal (aluminium) in South - West Oltenia (RDA S-W Oltenia, 2014);
- furniture industry, electrical equipment industry, metallurgical industry, leather and footwear industry; 10 industrial parks and 5 business incubators, 2 logistics parks; 6 active clusters and high clustering potential in the following areas: creative and cultural industries, agriculture, tourism, water distribution, food industry, environmental technology, healthcare, ICT - software, automotive in North – West (RDA NW, 2014).
Regarding the *competitive advantages* of the four regions analysed, we identified the following competitive advantages that could underpin the stimulation of inclusive entrepreneurship:
- originality of the Bucovina area and the village specificity as valuable potential for sustainable tourism, including sports, leisure and health improvement activities

(Vatra Dornei, Solca, Cacica and on the Bistriţei and Moldovei Valley) in North - East (MRLD 2014);
- the presence of a great number of localities with touristic, historic and cultural importance; the existence of pair-towns on the Danube shore (Turnu-Măgurele-Nicopole, Giurgiu-Ruse, Olteniţa-Turtucaia, Călăraşi-Silistra); an innovative functional cluster; Giurgiu Free Zone which aims to promote international trade and attract foreign capital to introduce new technologies and to increase efficiency in the national economy's resources in South-Muntenia (RDA South Muntenia, 2014);
- the existence of areas of economic concentration: Craiova for the vehicle manufacturing industry and the machine building industry, Slatina metallurgy, chemical industry Ramnicu Valcea, Targu Jiu for extractive industry, energy industry Drobeta Turnu Severin; Airport Craiova; waterway - access to the Danube river; the presence on the territory of the most important development corridor in Romania (axis Brasov - Ploiesti - Bucharest) in South-West Oltenia (RDA S-V Oltenia, 2014);
- Spa tourism potential (Baile Felix, 1 May); light industry: apparel, clothing, textiles, leather and footwear, food industry, automotive industry, electrical equipment industry, electronics industry, chemical industry, woodworking and mobile; 2nd place nationally in terms of area of pastures and meadows and, respectively, the number of head of sheep and ovine animals (favourable conditions for the development of animal husbandry and food industry - meat processing, traditional products etc. in North-West (RDA N-W, 2014).

3. Conclusions

Romanian inclusive entrepreneurship policy must be tailored on Romania's specific needs for inclusive entrepreneurship support, partially different compared to EU general context, and target, especially, youth and rural people business creation, respectively youth and women self-employment. Structural problems on labour market, active population migration, big disparities between rural and urban areas as major weaknesses at national level are completed by mono-industrial or predominantly agricultural economic structure, poor infrastructure and low accessibility at regional level. The analysis of the regional context in the four development regions (North – East; South - Muntenia; South - West Oltenia; North - West) revealed that the all analysed regions have great potential for the development of inclusive entrepreneurship within the activity fields preferred by women and youth, namely: services, tourism, light industry, manufacturing, education, etc. The major problem that may cause a limitation of boosting inclusive entrepreneurship as a strategic option for local development in these areas is related to rural people but also to people from small towns with mono-industrial specialization. High share of population concentrated in rural areas with low standard of living, low accessibility of rural areas to major transportation network and technical – urban facilities, low levels of education and qualification, low wages and labour productivity, lack of opportunities and business support infrastructure are the main challenges that must be addressed carefully and integrated at local level.

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CROSS-NATIONAL DIFFERENCES IN THE TRADE UNION MOVEMENT ON THE BASIS OF INSTITUTIONS

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Abstract: *This study deals with an issue of collective action theory. Its question is related to the activity of trade unions. According to the literature on collective action, large organisations, such as trade unions, have problems with organising themselves. The reason for this is social and economic incentives do not work in large groups, unless they consists of several smaller groups. The hypothesis of this paper is the relationship between confederations and their affiliates plays an important role in explaining cross-national differences in trade union movement and trade union activity. Based on a study a quantitative analysis was carried out in order to explore it. The obtained result is a small contribution to the empirical literature on trade unions. The methodology included a factor analysis and k-means clustering. Two out of the selected four variables describing the relationship between confederations and the member organisations fit into the factor structure. These variables did not form an independent dimension because they were linked to other variables but their factor loadings were large and they remained in one factor. So they were not separated from each other. Based on the cluster analysis it can be stated that the resulting factors are suitable for classifying the OECD countries. Three groups of countries were identified. The first group can be characterised by relatively small importance of trade union activity compared to the other two groups. Concertation at national level is important in the other two clusters but there is a difference in the institutionalisation. Social pacts have important role in the second group of countries. Finally, corporatist states constitute the third group in which the importance of confederations is the largest. The clusters created by the factors correspond roughly to trade union models in the literature.*

Keywords: *trade unionism; labour institutions; federation.*

JEL classification: *J51; J52; K31.*

1. Introduction

Disputes about the realization of collective action are still popular today (see Pecorino, 2015; Sandler, 2015). Organisations are the manifestation of solving the problem of collective action, which stems from the antagonism between individual and common interest. Scientists have different opinions about the solution. The cornerstone of the debate is undoubtedly the existence of large organisations.

It is probably no exaggeration to say that trade union movement has one of the most comprehensive literature in this field. From time to time new literature reviews and books were published, for example some authors are Fiorito and Greer (1982), Riley (1997) and Schnabel (2013).

Describing trade unions' collective action is a complicated task because many factors cannot be measured precisely. This provides an opportunity to rethink the

problem. Ortiz and Riba (2015) created four indices to capture the institutionalisation of trade union activity at the national level. These four dimensions of collective action (concertation, corporatism, collective bargaining and trade union in the workplace) represent transmission channels between labour and capital (Ortiz and Riba, 2015). The importance of institutional design is also mentioned in the literature on collective action. Refunds or federated structure may foster the cooperation of group members and this is particularly significant for organisations which have large number of members (Sandler, 2015: 199). In general, large organisations – like trade unions - often have federal structures (Congleton, 2015). Yet this characteristic of the trade union movement is seldom subject to empirical analysis.

The purpose of this paper is to explore the role of federal structure in the trade union movement and to complete the description of the institutionalisation of trade union activity. In order to do this, Section 2 presents the dimensions of institutionalisation and the relationship with federal structure. Section 3 contains data and methodology. The structure of institutionalisation is examined by factor analysis and k-means clustering in Section 4. The study concludes with brief remarks in Section 5.

2. Institutionalisation of trade union activity

According to Avgadic, Rhodes and Visser (2011: 62) institutionalisation is 'both a process and the outcome of a process whereby social activities become regularized and routinized as stable reference points around which actors build legitimate and sanctionable expectations'. Based on this definition Ortiz and Riba (2015: 121-122) identified three domains where trade union activity can be more or less institutionalised:

- national level negotiation about employment and social policies,
- the process of collective bargaining, and
- company or workplace level negotiation.

The authors observed two dimensions at national level not exactly in lines with their expectations: one for social pacts and another one for the corporatist systems of representation, namely the bi- or tripartite councils (Ortiz and Riba, 2015). Reasonable explanations of the separation are that eventual social pacts mean alternative to regular bi- or tripartite councils and social pacts have their own process of institutionalisation (Avgadic, Rhodes and Visser, 2011: 61-85). The third dimension is collective bargaining which is regarded to be more institutionalised in a country if it is more centralised and more coordinated and the law provides extension of collective agreements to non-union members. Trade union activity at the workplace or company level is the fourth dimension. The institutionalisation of this dimension depends on the existence of formal organs of representation and the role of these. The value of the index increases if formal organs are better involved in bread-and-butter issues, so information, consultation, or co-determination rights are enforceable.

These dimensions or levels of trade union activity are built on each other. Although indices describe individual dimensions, they contain little information on how the levels are related to each other, so how federative the trade union movement is. According to literature on collective action this relationship between the levels may play a role, and it can be a significant feature or dimension of trade union activity.

The relevance of federal structure lies in establishing national, regional and local privileged subgroups (Congleton, 2015). As Olson (1965: 62-63) showed small groups were more efficient in realization of common interest as economic and social incentives predisposed them to invest time and resources to foster this collective goal. He pointed out that social incentives could not have effect in latent group because the lack of face-to-face contact. But there is an exception. If latent group is a federation of smaller groups and the central or federated organisation offers some service to its small member organisations, the latter may apply social incentives to induce individual members' contribution to the realization of the large group's common objectives. Therefore latent group can be mobilized through social incentives (Olson, 1965). In addition, individual activities are made more visible to the group, which promotes collective action (Sandler, 2015). Congleton (2015) draws attention to the possibility of explaining the emergence of hierarchical organisational structures on the basis of The Logic of Collective Action written by Mancur Olson (1965). Sandler (2015) sees federal structure as a low-cost institution that changes the incentives to make the contribution a dominant strategy. Accordingly, the federal structure may be a significant factor, which is worth examining.

3. Data and methodology

Two data sources are used in this paper: the ICTWSS Database and the Database for Institutional Comparisons in Europe (DICE). The importance of federal structure is analysed by exploratory factor analysis which is validated by cluster analysis.

3.1. Data

The dataset (please, see Annex for variables' list) contains variables mainly from professor Jelle Visser's Database of Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS), which can be downloaded from the website of Amsterdam Institute for Advanced Labour Studies (AIAS) (Visser, 2016a). The database provides a wide range of information on the institutional characteristics of trade unions, wage determination, state intervention and social-level agreements. Annual data for the period 1960 to 2014 cover all OECD and EU Member States, a total of 51 countries (Visser, 2013). The variables of ICTWSS Database that can be capable of capturing the connections between confederations and their affiliates are

- Confederal control over appointment of leaders of affiliates (cfappt)
- Confederal or joint strike fund (cffund)
- Main confederation(s) represent affiliates politically (cfrep) and
- Confederal power over strikes by affiliates (cfveto).

Not all countries in ICTWSS have been included in the analysis, as some important variables (A4, A8, A31, A34 and A35) are derived from CESifo Group's Database for Institutional Comparisons in Europe (DICE). The DICE Database contains organised information on institutions, regulatory systems, legal requirements and the process of their implementation. It is suitable for international comparisons in several areas, but what is most important here, the DICE Database includes table for labour market regulation in 34 countries: 'Institutional Characteristics of Trade Unions, Wage Settings, State Intervention and Social Pacts, 1960-2007' (DICE Database, 2011). Ortiz and Riba (2015) used the DICE Database but in fact its data

came from an earlier version of the ICTWSS Database (1960-2007). So I decided to use the latest version of the ICTWSS Database but for the period 1986-2007 and for 34 countries, as Ortiz and Riba (2015) did in their publication.
The following countries are included in the study: Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States of America.
Ortiz and Riba (2015) created three new variables. 'Agenda' is an additive index, which is generated from the proportion of 13 variables related to issues treated in a social pact or agreement. 'Intensity' is the combination of 3 variables which shows the importance of the pact. 'Agents' represents the number of actors who take part in the pact or agreement. Besides, the authors smoothed all variables that are linked to social pacts or agreements in order to take into account the possibility that a social pact or agreement may be in force for three years (such as in Ireland).

3.2. Methodology

A global exploratory factor analysis was conducted for the whole dataset in order to find out whether the relationship between peak organisations of trade unions and their affiliates had a role in the institutionalisation of trade union activity. The purpose was to explore if it represented a new dimension next to the other four. The method of extraction was principal axis factoring with Promax rotation. Meeting the general rule, only factors with eigenvalues equal to or bigger than one were retained. Subsequently, cluster analysis was performed in order to verify the ability of resulting factors to create groups of countries that correspond the models of trade union movements in the literature.

4. Results of multivariate analyses

4.1. Factor analysis

After running exploratory factor analysis the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.801, the Bartlett's test of sphericity was significant and MSA values were between 0.751 and 0.917. 'Cfappt' and 'cfrep' did not fit into the factor model, so these variables were omitted from the investigation. Based on the Kaiser criterion the extracted number of factors were four and cumulative variance was 63,014%.
The identified factors and factor loadings can be seen in Table 1. Variables related to the relationship between confederations and their member organisations did not yield a new dimension as it was expected, but were added to the factors obtained previously.
Indicators relating to the operation and importance of works councils constitute the first factor. The stronger the presence of the works council and the wider its rights, the more institutionalised the activity of the trade union at the workplace level. Factor 2 can be interpreted as the ability of confederations to influence the activity of its affiliates and to represent them in social and political affairs.

Table 1: Pattern matrix with the results of exploratory factor analysis

	Factor 1	Factor 2	Factor 3	Factor 4
Structure of works council (A35)	**0,984**			
Involvement of works councils in negotiation of wages (wc_negot)	**0,851**			
Status of works councils (A34)	**0,828**			
Rights of works councils (wc_rights)	**0,643**	0,305		
Extension of collective agreements (A4)	**0,592**			
Confederal power over strikes by affiliates (cfveto)		**0,842**		
Existence of institutionalised bipartite council (bc)		**0,840**		
Confederal or joint strike fund (cffund)		**0,709**		
Routine involvement in government decisions (ri)		**0,568**		
Intensity			**0,878**	
A social pact is proposed and negotiated (pactneg)			**0,800**	
Agenda			**0,557**	0,427
Agents			**0,542**	
Existence of institutionalised tripartite council (A31)		0,335	**0,456**	-0,301
Coordination of wage-setting (coord)				**0,831**
The predominant level at which wage bargaining takes place (level)				**0,694**

Source: Data are derived from Visser (2016) and DICE Database (2011)
Note: Only factor loadings bigger than 0.3 are presented (this threshold based on Hair et al, 2009).

The analysis put together the variables linked to social pacts in the third factor. The 'existence of tripartite council' is also in this factor, however this variable may be logically attributed to factor two, in which 'existence of bipartite council' and 'routine involvement in government decisions' can be found. The factor loadings of the 'existence of tripartite council' is not so high (0.456) and it is not very far from loadings for Factor 2. The last factor consists of two variables that show the degree of coordination and centralisation of collective bargaining. Variable 'cfrep' would be in Factor 2, if it were appropriate for the factor model. This may confirm the interpretation of the second factor. Finally, 'cfappt' would be part of Factor 4.

4.2. Cluster analysis

Subsequently, following Ortiz and Riba (2015), k-means clustering was performed on the resulting factor scores in order to classify countries and compare the results with the authors and the literature. Cluster analysis was run for years 1997 and 2007. The results are summarised in Table 2.
Similarly to the results of Ortiz and Riba (2015) the analysis proved to be better with three clusters. There are almost the same countries in each group with the index of confederation power as in paper of Ortiz and Riba (2015).
The cluster centres differ significantly in the first cluster compared to the others. Anglo-Saxon countries and some Central and Eastern European countries are in this first group. The index of concertation and the index of collective bargaining are the highest in the second cluster, in which there are countries where the importance of social pacts increased in the 1990s and 2000s in order to facilitate compliance with the requirements of Maastricht Criteria (Baccaro, 2014).

Table 2: Results of cluster analysis (final cluster centres) and typology of countries based on institutionalisation of trade union activity

	Cluster 1	Cluster 2	Cluster 3
Index of TU institutionalisation in the workplace	-0,93040	0,29768	0,92907
Index of confederation power	-0,63959	-0,26152	0,96009
Index of concertation (social pacts)	-0,59541	1,28977	-0,16338
Index of collective bargaining	-0,76101	0,79824	0,37742
Typology of countries in 1997	Australia, Bulgaria, Canada, Cyprus, Czech Republic, Estonia, Japan, Latvia, Lithuania, Malta, New Zealand, Poland, Slovak Republic, Switzerland, United Kingdom, United States	Finland, France, Greece, Ireland, Italy, Portugal, Slovenia, Spain	Austria, Belgium, Denmark, Germany, Hungary, Luxembourg, Netherlands, Norway, Sweden
Typology of countries in 2007	Australia, Canada, Cyprus, Czech Republic, Estonia, Japan, Latvia, Malta, New Zealand, Poland, Switzerland, United Kingdom, United States	Bulgaria, Greece, Ireland, Italy, Lithuania (from 2005), Portugal, Romania, Slovak Republic, Slovenia, Spain	Austria, Belgium, Denmark, Finland (from 2007), France, Germany, Hungary, Luxembourg, Netherlands, Norway, Sweden

Source: Ortiz and Riba (2015), data are derived from Visser (2016) and DICE Database (2011)

The third cluster has the highest cluster centre values for the first and second indices. The countries here can be characterised by classic corporatism (Ortiz and Riba, 2015). Accordingly, the role of confederations seems to be the most significant in these countries.

5. Concluding remarks

The main conclusion of this study is that the relationship between confederations and their member organisations can contribute to explaining cross-national differences in trade union activity. However this connection needs further investigations. An interesting path for future research could be a detailed study with variables which describe more precisely the relationship between the levels of trade union activity.

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Data annex

List of variables (mainly from ICTWSS Database)	
Variable	**Label**
coord	Coordination of wage-setting
level	The predominant level at which wage bargaining takes place
A4 (from DICE Database)	Mandatory of compulsory extension of collective agreements to non-organised firms
pactneg	A social pact is proposed by government, unions or employers, and negotiations do take place in specified year
pactsign	A social pact between government, unions and/or employers is signed in specified year
agrsign	Agreement between central organisations of trade unions and employers is reached and signed in specified year
pactstructure	Pact or agreement is negotiated by all or some of the (possible) actors
wage	Pact or agreement is about wage issues
wage_proc	pact or agreement is about procedure for wage setting, articulation of levels, conflict procedures, etc
wage_max	pact or agreement contains a norm or ceiling regarding maximum wage rise
agrapplies	Wage clause in central agreement applies in specified year (if agreement covers > year, or implemented in next year)
tax_budget	Pact or agreement contains, and/or is predicated on, concessions regarding taxation and/or budgetary decisions
work_hrs	Pact or agreement contains, and/or is predicated on, concessions regarding working hours
empl_pol	Pact or agreement contains or is predicated on concessions regarding employment policies (job creation, subsidies)
empl_leg	Pact or agreement contains, or is predicated on, concessions regarding employment protection legislation (labour law)
soc_sec	Pact or agreement contains, and/or is predicated on, concessions regarding social security
pensions	Pact or agreement contains, and/or is predicated on, concessions regarding (old age, retirement) pensions
training	Pact or agreement contains, and/or is predicated on, concessions regarding vocational training
union_rights	Pact or agreement contains, or is predicated, concessions regarding union rights
inst_conc	Pact or agreement sets up or changes nation-wide councils for concertation
A31 (from DICE Database)	Existence of a standard (institutionalized) tripartite council concerning social and economic policy (private sector)
Bc	Existence of institutionalised bipartite council of central union and employers organizations for wage setting
ri	Routine involvement of unions and employers in government decisions on social and economic policy
A34 (from DICE Database)	Work Councils in firms and establishments with 50 or more staff
A35 (from DICE Database)	Structure of works council or employee representation
wc_rights	Rights of works councils

List of variables (mainly from ICTWSS Database)	
Variable	**Label**
A37 (from DICE Database)	Involvement of the works council in the negotiations of wages in thefirms, enterprise or establishment
cffund	Confederal or joint strike fund from which member unions are reimbursed
cfveto	Confederal power over strikes by affiliates
cfrep	Main confederation(s) represent affiliates politically and is routinely involved in consultation with government
cfappt	Confederal (political) control over appointment of leaders of affiliates
A8 (from DICE Database)	The tripartite social pact contains policy commitments
Agenda	Proportion of the 13 issues treated in the pact or agreement contained in the variables (from 'wage' to 'inst_conc', continuous: 0-0.69)
Intensity	Intensity of the pact (combination of the variables pactsign, A8 and agrsign; 0=no pact, 1=agreement, 2=social pact, 3=social pact with policy commitments)
Agents	Number of actors involved in the pact or agreement (recodification of pactstructure, 0=no pact, 1=bipartite act, 3=tripartite pact)

Source: Visser (2016b), DICE Database (2011), Ortiz and Riba (2015: 141)

THE MICROFINANCE INDUSTRY

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Abstract: *In this paper the microfinance industry will be described, both as it is today and with historical perspectives. Brief history of past failure of subsidized loans is mentioned. Different but important contributions from Stiglitz and Yunnus are explained and then the microfinance industry´s growth and current state will be described. Finally, different microfinance institutions types are explained. The microfinance industry is peculiar and deserves to be researched and focused upon for several reasons. The most important is that it aims towards poverty reduction by reaching out to the poor and provide them with capital. Noteworthy, that is to be done in a sustainable way, which allows the industry to thrive and expand. Indeed it has expanded greatly over the last few years. While the microfinance industry expands the importance of understanding the industry becomes ever more important. Researches on corporate governance for microfinance institutions have been carried out but more researches are needed, in particular for the social goal called outreach. Because the microfinance institutions have both social goals and financial goals, the microfinance industry is different from most other industries where profit maximization is the main and often the only goal. The corporate governance findings for microfinance industry may therefore be different and may not be easily transferred to other industries.*

Keywords: *Microfinance; corporate governance; outreach; sustainability.*

JEL classification: *M14.*

1. Introduction

If the market would work properly the principle of diminishing marginal returns, introduced by the 18th and 19th century economists such as Turgot, Stuart and Ricardo, would work. Then the poor with little capital would become able to earn higher return on their investment than those who have a lot of capital, hence by the market the capital would be pushed to those very poor who needs it. However that has not been the case. Traditional banks avoid granting the poor the small loans they need because, first the loans are so small it is hard to profit for providing them and the bank does not have information about the loan taker and second these poor people do often not have any collateral, Armendáriz and Morduch (2007/2010). The two features, adverse selection and moral hazard has resulted in that the poor have not received any loans, which they very much need in order to leave the poverty trap they are stuck in.

The failure of the market, to provide the poor with capital was addressed strongly in the aftermath of the second World War, development programs were created which were often in the form of governmental or institutional subsidized loans and agricultural banks were established, however low repayment rate, unprofitable investments and corruption lead to the results were somewhat disappointing, Adams et al (1984).

More successful attempt to address people lack of access to capital came with the introduction of the microfinance phenomena in the 1970´s. Although it is always hard to say where, when and how it exactly started, it is a fair beginning to introduce on the one hand Stiglitz theories, particularly where he addresses joint liability and on the other hand Yunnus establishment of the Garmeen Bank in 1976.
Providing the poor with unsubsidized capital can indeed be a challenging task even to those who are actually willing and able to make loans. In their seminal paper Stiglitz and Weiss (1981) address the problem of credit rationing which takes place in the loan market even though it is in equilibrium, due to imperfect information. This issue is addressed further in the literature by Stiglitz (1991) who points out that one solution might be peer monitoring, whereby the risk is transferred from the bank to the loan taker and increases his welfare at the same time. In peer monitoring or group lending, the loan taker does not have to provide collateral in order to receive a microfinance loan, but instead he or she (most microfinance borrowers are women) belongs to a group who are together hold responsible for repayment of their loans; and if they repay the loan they receive a higher amount of borrowing next time, but if the loan is not repaid, no member of the group will obtain another loan. By this means it is possible to provide a loan where transaction costs are high and at the same time no collateral is provided. It is important to note, however, that many microfinance programs do not rely on group lending, and some microfinance programs offer individual loans with collateral, just as commercial banks do.
The most famous player in the microfinance field is probably the receiver of Nobel Peace Prize, Mohammad Yunus, founder of the Garmeen Bank of Bangladesh, who started to lend small amounts of money to women in Bangladesh so they could begin entrepreneurial activities; and this became a sort of benchmark for microfinance institutions (MFIs). Yunnus began by lending his own money to poor women, these women repaid their loans without having collateral, Yunus (2007), In substitute for collateral Yunus used the loan taker´s network´s connection to make sure for repayment i.e. group lending with joint liability to repay the loan. In addition to joint liability, Garmeens lending method also presented new methods in the form of dynamic incentives for the loan taker to repay since if all of them repaid they could get higher amount next time and in order to keep the business risk to minimum a very frequent repayment was introduced.
At the turn of the 21th century microfinance industry had become a growing industry, however great numbers of MFIs were not sustainable and received considerable amount of capital in form of subsidization. But their social performance was on the other hand quite impressive, institutions that are mainly concerned with social issues have entered in to microfinance field, institutions such as Catholic Relief Services, CARE and Freedom from Hunger, Armendáriz and Morduch (2007/2010). The recent trend is in similar manner, the microfinance industry is growing and furthermore, MFIs performances may be improving as well. The growth and the current state of the microfinance industry will be discussed next.

2. The Current State of Microfinance Industry.

The microfinance industry is indeed a growing industry. With just handful of institutions in the 1970´s and early 1980´s, the industry has grown greatly and in 1997 the “State of the Microcredit Summit Campaign” reported 618 institutions reaching over 13 million clients. At the turn of the last century the number of the

institutions had more than doubled, now reaching more than four time as many clients and for the year end 2010, the State of the Microcredit Summit Campaign reported 3.652 MFIs reaching more than 205 million clients, of those more than 137 million are considered “very poor” i.e. living on a less than 1.25$ per day and more than 113 million were women or more than 82%, Maes and Reed (2012). Furthermore in some countries the industry is growing of more than 20% a year. Lascelles and Mendelson (2011).

To conclude about the total dollar amount involved in the microfinance industry is not easy, however in a report issued by the Center for the Study of Financial Innovation, Lascelles and Mendelson (2011) stated that from the 2.000 MFIs which reported to the Microfinance Information eXchange (MIX), the total assets of these MFIs amounted to $72bn. The institutions reporting to MixMarket had 105m borrowers so knowing that there are more than 3.600 MFIs existing with over 200 million clients, the total amount should be considerably higher.

Microfinance institutions are not equally distributed around the globe. More than 95% of all MFIs are in the developing world, little less than half of all these institutions are in Asia & the Pacific, roughly quarter are in Sub-Sahara and a little less than 20% in Latin America, Maes and Reed (2012). Most of the biggest institutions are in the Indian sub-continent. The biggest one ranked by staff size is a non-government organization (NGO) called BRAC in Bangladesh, with 44.306 staff members, more than 5 million borrowers and $646 million as gross loan portfolio. The second one is the famous bank Grameen Bank with 25.283 staff members, 8.3 million borrowers and gross loan portfolio of $939 million and third is the Non-banking financial institution SKS Microfinance in India, with staff size of 22.733, total 7.3 million borrowers and gross loan portfolio of $925 million. These institutions are then followed by ASA (Bangladesh), Compartamos Banco (Mexico), BASIX (India), Bandhan (India), Vietnam Bank for Social Policies (Vietnam), Spandana Sphoorty Financial Ltd (India) and ACLEDA (Cambodia), Villarino 2012 (webpage).

From the “State of the Microcredit summit campaign report 2012 it is possible to see that only 5% of MFI are in the developed world and only 2% are in “North America & Western Europe”. In the MixMarket data set, which I use for my research, not a single MFIs in neither North America nor Western Europe reports their findings to the MixMarket. Following are the numbers of MFIs reporting to MixMarket and their regions, since no institution from North America or Western Europe reported their findings they are not included in the table.

Table 1. The MFIs divided into regions as follow for the year 2011

AFRICA	289
EAST ASIA AND THE PACIFIC	197
EASTERN EUROPE AND CENTRAL ASIA	196
LATIN AMERICA AND THE CARABBE	363
MIDDLE EAST AND NORTH AFRICA	55
SOUTH ASIA	212
TOTAL	1312

It is important to note that Africa is the African countries that are located Sub-Sahara. The countries in North Africa are considered more similar in economical respect to the middle eastern countries, for example the average loan balance is 606$ while it is only 475$ for Sub-Sahara Africa. It is however not complicated to take all Africa

together as a continent, since each country from the data set is listed separately, for example those countries that have a MFIs and report to MixMarket from North Africa are from Egypt, Tunisia, Morocco and Sudan. Graphically the brake down is presented in Figure 1.

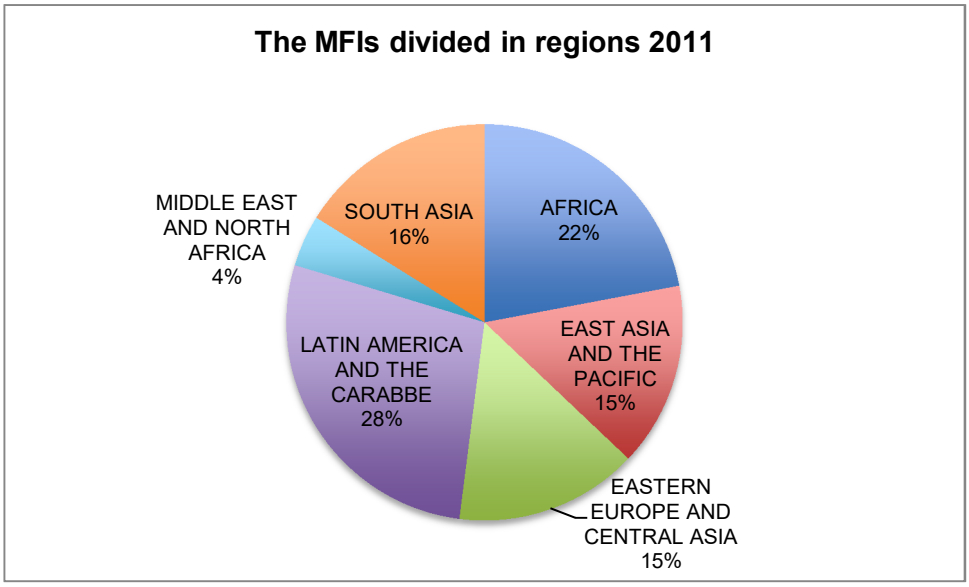

Figure 1. The MFIs divided in regions 2011
(Sources: Descriptive statistics from the MixMarket data set)

The microfinance industry is not only growing, it is also changing. New players are entering, some looking for profit and as Hartarska and Nadolnyak (2011) point out and noteworthy, annual funding for microfinance activities in 2004 was somewhere less than $1.5billion with 90% coming from developed nations´ taxpayers while just few years later in 2008 the same amount was more than $5billion, but now mostly by many private institutional investors via Microfinance Investment Vehicles with intermediate between foreign investors and MFIs.
However, although microfinance industry has grown, according to the World Bank (2012), only half of the world's 7 billion people receive any kind of financial inclusions. The growth of microfinance clients from 13 million clients in 1997 to more than 200 million in 2011 is a step forward but so far the microfinance movement has only reached fraction of the worlds´ poorest people. Reaching out to the poor and provide them with capital is an essential part of decreasing poverty but in order to make sure we do not get ahead of our self, the microfinance movement has to be surly helpful for those who use it and in particular it must be accessible to the poorest part of the population. Researches on the phenomena, if properly carried out should be useful in order to fulfil this agenda.

3. Different Microfinance Types

Although it might be challenging to define microfinance, it is easier to distinguish between different types of MFIs. The MFIs will be categorized into four main types in the same way as in the data set used in this research (called MixMarket). This is a commonly accepted way of dividing these institutions as can be seen in the literature of microfinance by scholar such as Servin et al (2012), Périlleux et al (2012), Galema et al (2012), Bassen (2008), and Mersland (2008). The microfinance institutions are put into four categories, now presented based on the definition used in MixMarket.

The first type of MFIs to be described is the one focused on in this research namely NGO or Non-Governmental Organization. NGOs are usually registered as non-profit organizations and they are usually not regulated by a banking supervisory agency. Their financial services are usually more restricted than other MFIs and they are commonly not allowed to collect deposits, although there are number of exceptions. This particular limitation may severely affect their financial performance. NGOs are usually more focused on their social mission than on their financial performance, Bassen (2008). It is therefore not surprising that among all the different microfinance types, they do perform best on that matter.

The second microfinance institution to be described is the Microfinance bank that is licensed financial intermediary regulated by a state banking supervisory agency. Microfinance banks often provide several kinds of financial services such as deposits, lending and money transfer. Microfinance banks are perhaps the closest to traditional banks of all the microfinance institutions. The third microfinance type mentioned is Cooperative/Credit Union (c/c) which is a non-profit, member-based financial intermediary. These institutions usually offer several types of financial services such as lending as well as deposit where the aim is to benefit its members. The Cooperative/Credit Union´s may be regulated differently than traditional financial institutions such as banks. The fourth and final type of MFIs described here is NBFI or Non-Banking and Financial Institutions. NBFI usually provide similar services to their customers as banks do. The main difference lies in their different capital requirements and limitations on certain financial service offerings.

It is important to be able to distinguish between different microfinance types and their different characteristics. These institutions are different legal entities which results in their different behavior and performances. By having access to the breakdown of how the MFIs are defined it is possible to focus with more accuracy on their different characteristics such as their emphasis on sustainability and outreach.

The NGOs are normally the smallest of the entities while the MFIs banks are the largest, however things are not that simple. The largest MFI in the world by staff size is BRAC in Bangladesh. They have more than five million borrowers, and gross loan portfolio of more than $646 million, yet this institution is classified as NGO. They do also have deposit accounts for their customers. At the same time the second largest MFI, Grameen Bank, also in Bangladesh, is classified as MFI bank and the third largest, called SKS Microfinance in India is NBFI. In other words, the classification itself does not tell the whole story, for example, a large NGO might be very different from a small such institution and might in fact be much closer to a large commercial bank than to a small scale NGO. However it is possible to see certain trend in the characteristics of these institutions, the NGOs being perhaps the closest to the original MFIs that were established in the 1970s.

Those MFIs that are used in this research are from MixMarket. The NGOs are greatest in numbers of all the institutions. The breakdown for the year 2011 is presented in Table 2.

Table 2. The breakdown for the year 2011

NGOs	456
NFBI	403
Banks	138
c/c	218
Different	97
Total	**1312**

This categorization looks graphically like this:

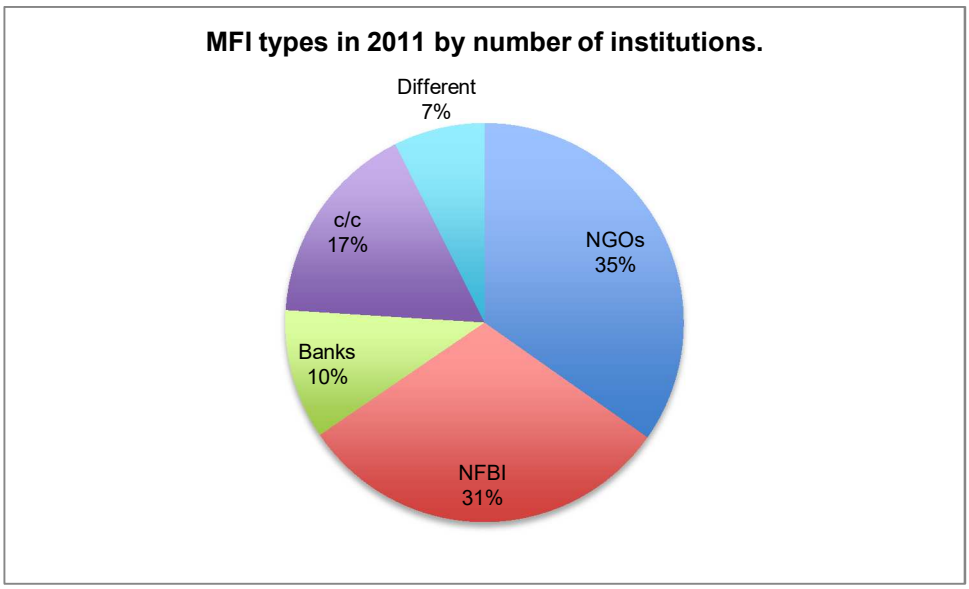

Figure 2. MFI types in 2011 by number of institutions
(Sources: Descriptive statistics from the MixMarket data set)

Although the NGOs are the most common MFIs within the MixMarket data set, the size in term of gross loan portfolio is different. On average NGOs have 16.6 million USD as gross loan portfolio (even less if large outliers are removed), while NBFI has 44.5 million USD, Banks 395 million USD and cooperatives and credit unions have 20.2 million USD as gross loan portfolio. Graphically it looks like in Figure 3.
If we take the sum of the total gross loan portfolio in order to understand which organizations are largest viewed only in relation to my data set, which should, however give some idea about the industry as a whole, then the total gross loan portfolio for all NGOs in 2011 were 7.490 million USD, 17.900 million USD for NBFI, 54.100 million for MFIs banks and 4.380 million USD for C/C which looks graphically like this:

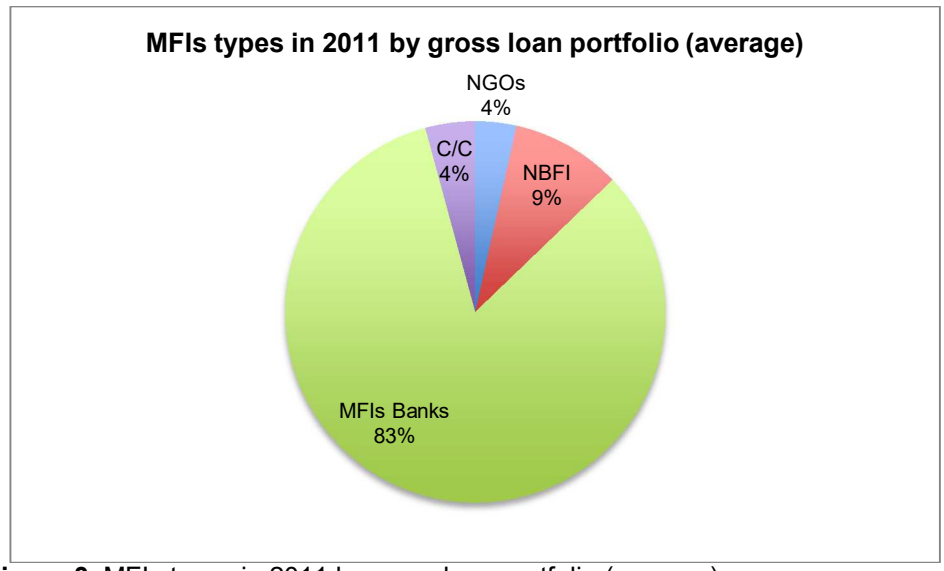

Figure 3. MFIs types in 2011 by gross loan portfolio (average).
(Sources: Descriptive statistics from the MixMarket data set)

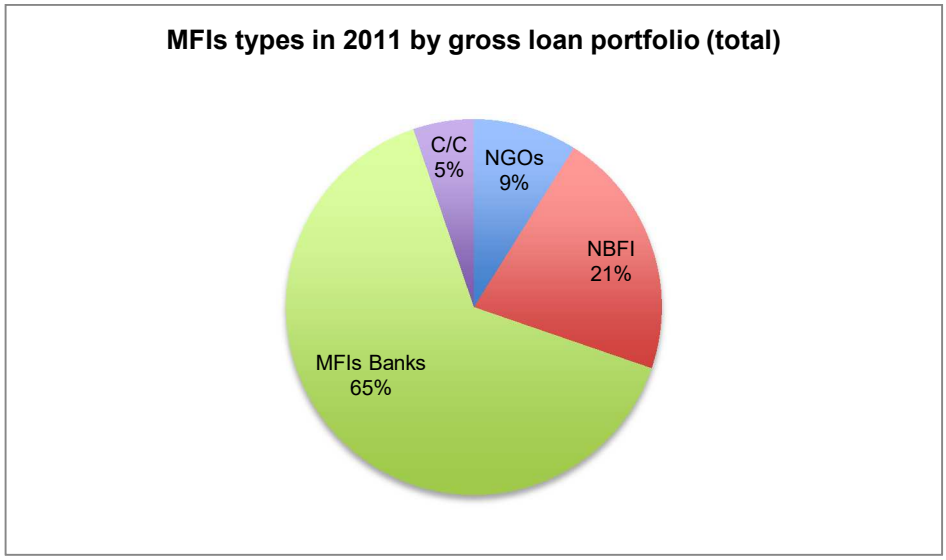

Figure 4. MFIs types in 2011 by gross loan portfolio (total).
(Sources: Descriptive statistics from the MixMarket data set)

In short, although most of MFIs are either NGOs or NBFI, then the MFIs banks are by far largest MFIs when we look at gross loan portfolio.

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IS IT POSSIBLE FOR WESTERN SOCIETY TO RUN ONLY ON RENEWABLE ENERGY? – THE CASE OF ICELAND

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Abstract: *Iceland is rich of energy sources, mainly hydropower, geothermal energy and wind. The energy production in 2016 was 13,472 GWh in hydropower and 41,400 GWh in geothermal energy. The wind energy is barely used but that could change in next decades. Realistic maximum potential of electricity production is 30,000 GWh from hydropower and 20,000 GWh from geothermal energy but the potential in wind is not known. Lot of oil is used in Iceland and it is important to decrease consumption of oil and try to revert to renewable energy as much as possible. When analysed in categories it comes out that airplanes are the biggest users of oil, 10,000 kWh/capita per year. In second place are ships using 6,000 kWh/capita of oil and in third place is the family car using 5,700 kWh/capita. Other users of oil are heavy cars, heavy machines and agricultural machinery. The possibilities of reverting to renewables in these categories is very different. It is easy in the case of family cars and that change is ongoing in Iceland. It is difficult in the cases of ships, heavy cars, heavy machines and agricultural machinery. In these categories the change to renewable energy is heavily dependent on production of electric equipment of this kind or production of fat for biodiesel, mainly with oil plants like rapeseed. Regarding airplanes use of renewable energy is difficult and totally impossible these years. So the answer is no, it is not possible for western society like Iceland to run only on renewable energy. Not at this point in time but there are technical solutions so in the future it should be possible. Because of the long distance between Iceland and the rest of Europe it has not been possible to use the resources of the country for export of electricity. It is now technically possible using submarine power cable. The longest cable in the world of this kind is the 580 km long NorNed cable. Such cable between Iceland and Scotland would have to be over 1,000 km. The energy through cable from Iceland could be sufficient for about 600,000 people in Britain. Because of the unused wind source in Iceland it is likely that more cables would be set up if the fists would be of success.*

Keywords: *Iceland; renewable energy; electricity; biodiesel; energy production; energy consumption per capita; submarine power cable.*

JEL classification: *Q2; Q4.*

1. Energy production in Iceland

Iceland is 103,000 km2 island in North Atlantic Ocean. The island is slightly bigger than Hungary but the inhabitants are only 340.000. Big part of the island is uninhabited highlands. In the highland are several glaciers, one of them the biggest glacier in Europe.

Iceland has several energy sources which all are renewable. Because of the extensive highland there is plenty of hydro energy. As well there is lot of geothermal

energy in Iceland. The third source is the wind. But it has not been used for energy production jet as it has not been competitive to the other two sources. That will probably change in next decades. No oil or gas has been found in or around Iceland. The energy production in Iceland can been seen on Figure 1.

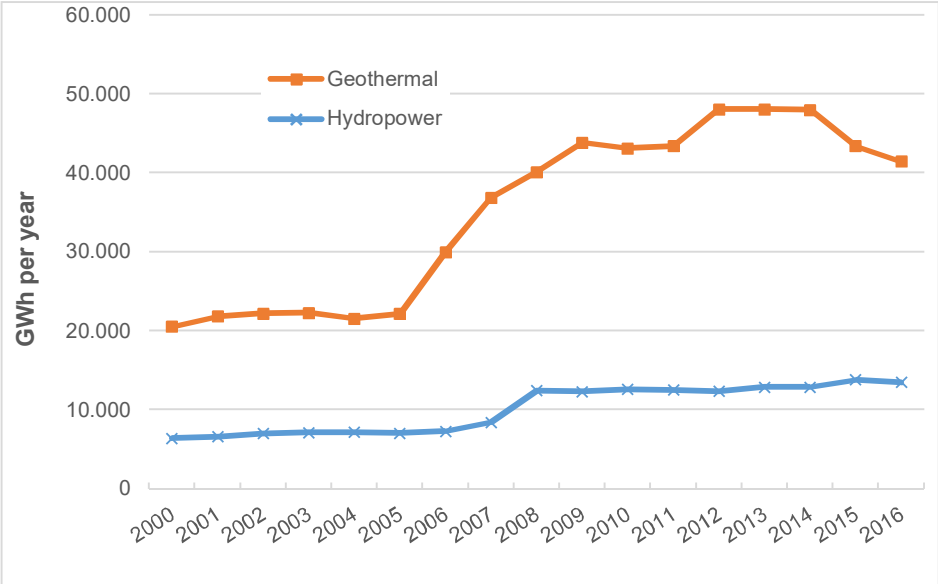

Figure 1: The energy production in Iceland.
Source: Author with data from Orkustofnun

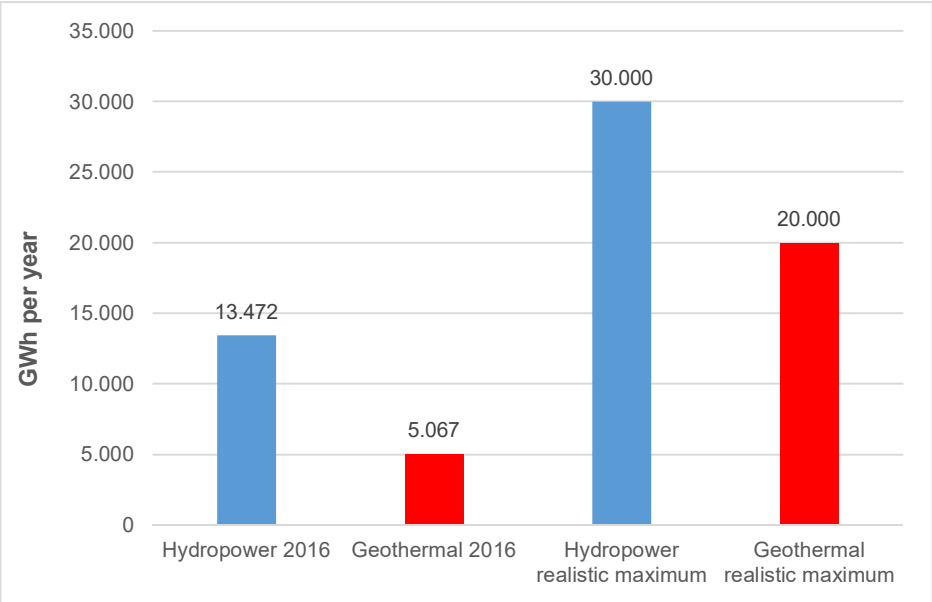

Figure 2: Electricity production in Iceland and the potential of production.
Source: Author with data from Orkustofnun

About 41,400 GWh geothermal energy was produced in Iceland in year 2016 (Orkustofnun, 2017a). There of 8,200 GWh is used for various kinds of heating (Orkustofnun, 2017b) and to produce 5,100 GWh of electricity (Orkustofnun, 2017c). The rest is not used (wasted), mostly in the production of electricity.
The electricity production in Iceland in 2016 in shown in next figure (figure 2). The potential of electricity production in the country is also shown. The National Energy Authority has estimated that the realistic maximum in electricity production is about 30,000 GWh in hydropower and 20,000 GWh in geothermal energy (Orkustofnun; 2004).
The potential in wind for electricity production has not been investigated as much as the hydropower and geothermal power. What is known is that conditions for windmills are good, the island is windy. Two windmills have been running for some years as development project by Landsvirkjun (National Power Company of Iceland) and running time seems to be higher percentage than in Europe. The potential for the whole country in wind energy is likely to be counted in TWh (TWh = 1,000 GWh) or dozens of TWh.

2. Energy consumption in Iceland

For what is energy used in Iceland? It is used for:

- Energy intensive industry, electricity
- Heating of houses
- Common electricity use, households and industry
- Family cars
- Heavy cars, for transportation of goods and people
- Heavy machines
- Agriculture machinery, (tractors)
- Ships
- Airplanes
- Various oil and geothermal use

2.1. Energy intensive industry

Iceland is very special regarding energy intensive industry. In Iceland there are few inhabitants in big country with plenty of energy to produce electricity. Because of how far away Iceland is from other European countries it has not been possible to export electricity. ,,Export" of electricity has only been possible by building factories in Iceland. Three aluminium smelters and one silicon metal factory are now operated in the country plus other smaller factories. The energy intensive industry used 76,4% of produced electricity in 2015 (Orkustofnun, 2016). That percentage is 14.200 GWh of the total 18,539 GWh produced electricity in 2016. That is about 42,000 kWh/capita per year. This energy, electricity produced by hydropower and geothermal, is 100% renewable. The energy intensive industry uses also little bit of coals in its production process, the only coals used in Iceland.

2.2. Heating Houses

In Iceland about 6,500 GWh where used in year 2015 to heat houses, residential and industry (Orkustofnun, 2016). More in needed in cold years, less in hot years.

Included is all other household use of hot water (shower and etc.). This is about 19,000 kWh/capita per year. About 90% of this energy use is geothermal heat and about 10% is electricity. Almost no oil or coal are used for heating houses in the country. Energy used to heat houses is 100% renewable energy.

2.3. Common electricity use

In Iceland about 3,400 GWh where used in year 2014 for common electricity use. That is use by households and industry except energy intensive industry. In short this is all electricity production minus energy intensive industry and minus loss in the electrical grid (the loss is about 5%). Common electricity use is about 10,400 kWh/capita per year. About 73% of electricity is produced with hydropower and about 27% produced from geothermal steam. This energy is 100% renewable.

2.4. Cars and machines

In Iceland about 285,000 tons of oil were used in year 2014 for cars and machines (Statistics Iceland, 2017). That is about 870 kg of oil/capita per year and equivalent to 10,100 KWh/capita per year (1 kg of oil giving 41,868 MJ=11.63 kWh). This number divides in 245,000 tons used on cars and 40,000 tons on machines. Information are not available how these 245,000 tons split between family cars and bigger cars. Neither are information available how 40,000 tons on machines split between heavy machines (bulldozers, diggers, wheel loaders etc.) and agricultural machinery (mainly tractors) but here educated guess is put forward. The estimation is as follows:

2.5. Family cars

It is estimated that 65% of 245,000 tonnes of oil, that is 159,000 tons, were used on family cars in 2014. Additional to that about 7,000 tons of renewable fuel were used on family cars. Altogether plus electricity on electric cars this energy use on family cars is probably about 2,000 GWh. That means that this use is about 6,100 kWh/capita per year.

Only 1%-2% of family cars do run on other energy than oil. About 1,200 electricity cars and 1,000 natural gas cars of 240.000 (Iceland Transport Authority, 2017). But this is changing. Energy used on family cars is about 6% renewable energy and 94% non-renewable.

2.6. Heavy cars

It is estimated that 35% of 245,000 tons of oil, which gives 86,000 tons, were used on heavy cars in 2014. That is equivalent to 1000 GWh or 3,000 kWh/capita per year. This energy used on bigger cars is 0% renewable and 100% non-renewable.

2.7. Heavy machines

It is estimated that 25,000 tons of oil, equivalent to 290 GWh, were used on heavy machines in 2014. That is 900 kWh/capita per year. This energy use on heavy machines is 0% renewable and 100% non-renewable.

2.8. Agriculture machinery

The estimation is that 15,000 tons of oil, equivalent to 170 GWh, were used on agriculture machinery in 2014. That is 500 kWh/capita per year. This energy use is 0% renewable and 100% non-renewable.

2.9. Ships
In 2014 169,000 tons of oil were used in Iceland on ships. 140,000 tons on fishing vessels and 29,000 tons on other ships (Statistics Iceland, 2017). This energy use is equivalent to 2,000 GWh. That means that energy use on ships is about 6,000 kWh/capita per year. This energy use is (almost) 0% renewable and 100% non-renewable.

2.10. Airplanes
190.000 tons of oil were used on airplanes in Iceland 2014 (Statistics Iceland, 2017). As number of tourists in Iceland rose by 29% from 2014 to 2015 and by 39% from 2015 to 2016 (Icelandic Tourist Board, 2017) the 2014 number is not giving right picture of present situation. It is likely that somewhere around 300,000 tons were used on airplanes in 2016. That number would mean 3,500 GWh per year and 10,000 kWh/capita per year. This energy use is surely 0% renewable and 100% non-renewable.

2.11. Other geothermal use
This use is more or less because in Iceland is plenty of geothermal heat. This use is not essential for the society to run normally (Orkustofnun, 2016).
Green houses (agriculture) 230 GWh, 700 kWh/capita.
Swimming pools and baths 550 GWh, 1,700 kWh/capita.
Fish farming 700 GWh, 2,100 kWh/capita
Snow melting 550 GWh, 1,700 kWh/capita
Industry 230 GWh, 700 kWh/capita
All this other geothermal use, altogether 2,260 GWh is of course 100% renewable energy and is equivalent to 6,900 kWh/capita.

2.12. Other oil use
About 10,000 tons of oil were used in industry in Iceland in 2014. Furthermore other use of oil was about 5,000 tons (Statistics Iceland, 2017). This together was about 530 kWh/capita. This is of course is 100% non-renewable energy.

2.13. Summing up
When all this energy consumption in Iceland is summed up the outcome is as next figure shows, figure 3. When renewable and non-renewable consumption are added up the outcome is that 58% of the energy consumption in Iceland is renewable energy and 42% is non-renewable. This is the result besides the energy intensive industry.
Attention must be made that the numbers reflect the latest year of available information. It is various whether these years are 2014, 2015 or 2016. In the cases numbers from the year 2014 are used it is assumed it has not changed a lot until 2016. In case of rapid change like in the flight the 2014 number is not used but estimation made how much it has changed till 2016. The sum up is therefore thought to be rather good estimation on energy consumption in Iceland in year 2016.

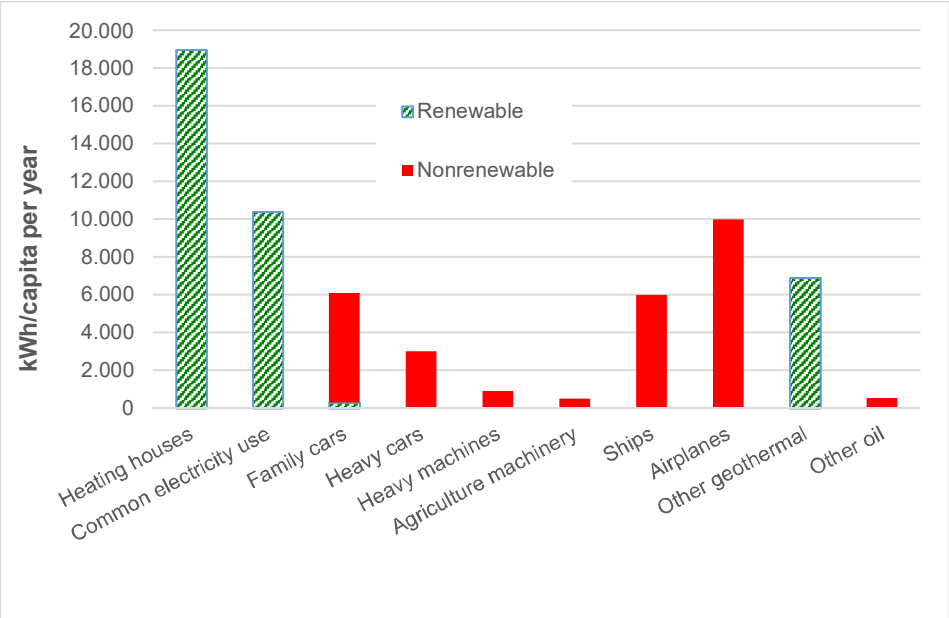

Figure 3: Energy use in Iceland, renewable or non-renewable in different categories.
Source: See text before figure.

3. Energy consumption in the European Union

In the EU some key numbers regarding energy consumption are as follows on next figure, figure 4. (Eurostat, 2017)

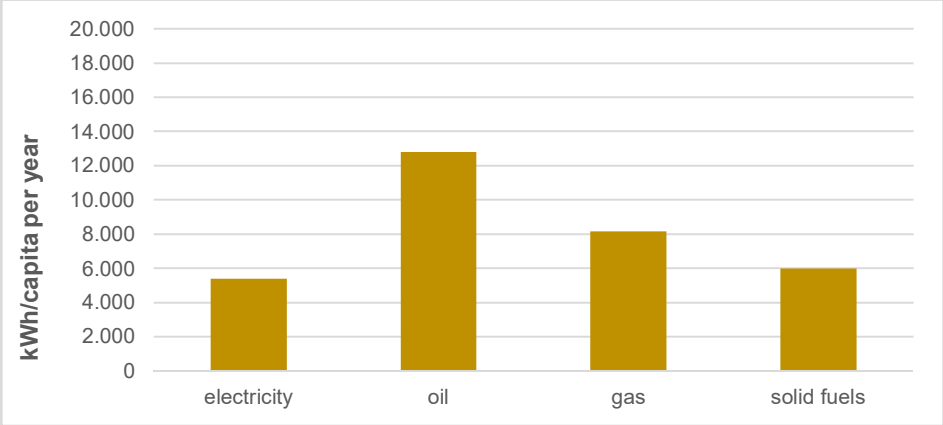

Figure 4: Energy consumption in EU (28) in 2015.
Source: Author with data from Eurostat

The electricity is produced in many ways in Europe. Partly it is produced from gas and solid fuels so part of the gas and solid fuel columns in figure 4 are transformed into the electricity column. It is easy to see that electricity consumption is Iceland is much higher than in Europe. It is also easy to see that the oil consumption is also

much higher in Iceland. The total consumption in oil in Iceland is more than 2 tons/capita per year (about 2,3) but in the EU it is just slightly over 1 ton/capita (1,1).

4. Possibilities of reverting to renewable energy

From figure 3 it can be seen in what sectors the non-renewable energy is used in Iceland. If western society like Iceland should change from non-renewables to renewables the read columns should be looked at. That is: family cars, heavy cars, heavy machines, agricultural machinery, ships and airplanes.

4.1. Renewable energy on Family cars

In this case the reverting to renewable energy is ongoing. The choices for the family car instead of oil is biogas (from bio waste) and electricity. Biogas has been available in Reykjavik for more than 10 years and is now available also in Akureyri. Family cars using biogas are few thousands and electricity cars are about 1.100. Total number of family cars in Iceland is 240,000 in end of 2016 but about 140,000 are in common use (Iceland Transport Authority, 2017b). In the year 2016 about 6% of all new family cars were electricity or natural gas cars. It is expected that the electricity car will be more and more popular as its range increases and price goes down. It is therefore likely that bigger and bigger part of the nation will be driving on renewable energy in next years. So this is probably not the field to be worried about, the evolution is on full speed.

4.2. Renewable energy on Heavy cars

In this type of cars there is not as much going on in reverting to renewable energy as in the case of family cars. The choices of reverting seem to be: Natural gas, biodiesel and electricity. Natural gas is real choice for heavy cars but it is only possible to produce limited volume from bio waste. Something else is needed. Biodiesel has been produced in Akureyri for several years. But more fat is needed. More collection from homes and industry is in action but never the less limited volume is accessible. Is it possible to produce more fat in Iceland? Is it possible to grow oil plants, for example rapeseed or is it too cold? Growing of rapeseed has been tried in Iceland. It seems to be possible but more experience needed (Bernódusson, 2010). If it is something that Iceland can offer then it is LAND. Few people but plenty of land.

It is also question about the electricity, will the next step be electric heavy cars after the step of electric family cars? Hopefully producers will take this step but that is uncertain.

Hopefully some evolution will take place next years but there is no optimism of fast reverting to renewable energy.

4.3. Renewable energy on Heavy machines

The choices of reverting seem to be: biodiesel and electricity. Electricity should be good choice, these machines have to be heavy! Can't they be heavy with batteries instead of iron? We know one machine which runs on electricity, the forklift. But unfortunately producers of heavy machines do not seem to have high interest to produce machines which run on electricity. Fast reverting to renewable energy is unlikely.

4.4. Renewable energy on Agricultural machinery, tractors
More or less the same situation as regarding heavy machines. Electric tractor could be choice but no one is producing such tractor except the smallest kind. Something seems though be going on.

4.5. Renewable energy on Airplanes
The highest of the read column in figure 3 is the Airplanes-column. What possibilities are there to switch from fossil fuel to renewable energy on airplanes? The answer is that such change is difficult. Some research has been done on alternative renewable jet fuel (Hileman and Stratton, 2014). Other possibility is to use hydrogen instead of common jet fuel. That seems technically possible (Verstraete, 2013, 2015) but no producer of airplanes has announced that development of such airplane is underway.

4.6. Renewable energy on ships
There are not many choices of substitute for the oil used on ships. It is barely realistic that ships can entirely be driven by electricity though they could be partly driven with that form of energy. More use of wind like in the old days has been mentioned but the most realistic substitute is probably biodiesel.

4.7. Reverting to renewable energy, summing up
Reverting to renewable energy on family cars is easy, electric cars and gas cars (natural or bio) are already in production and plenty of electricity in Iceland and some of biogas.
Regarding heavy cars, heavy machines, agriculture machinery and ships it is not easy. The reversal is heavily dependent on production of electric equipment of this kind or production of fat for biodiesel, mainly with oil plants like rapeseed.
Regarding airplanes it is difficult and totally impossible these years. Hydrogen airplanes are not produced and are not likely to be produced next decades. But hydrogen can easily be produced in Iceland as there is plenty of electricity.

4.8. The question
Is it possible for western society like Iceland to run only on renewable energy? At this stage the answer is no. It is technically possible and in Iceland the energy is available. But new equipment is necessary which is not yet in production. But it is possible to take steps towards this goal and go as far as possible in the direction of renewable energy.

5. Submarine power cable, European integration?
Is it possible to sell “green” electricity from Iceland to Europe through submarine power cable? The short answer is yes but it is huge project. NorNed is the world longest submarine power cable and it is between Norway and Nederland. It is 580 km long, 450 kV, carries 700 MW, did cost 600 M€ and has been in operation since 2008. This cable, NorNed, has been success story.
Cable between Iceland and Scotland would be over 1,000 km about twice as long as NorNed, the longest in the world. There are though dreams of much longer cables (Chatzivasileiadis et al., 2013). Cost would be much higher than double cost of NorNed.

But what would such cable mean? The National Power Company of Iceland (2017) anticipates that about 5,700 GWh would flow through the cable to Scotland each year. Does it make any difference in Scotland? In United Kingdom the consumption of electricity was 4,670 kWh/capita in 2015. This means that 5,700 GWh is sufficient for 1.2 million people. It means that the cable does matter. If this cable would be of success, like NorNed, other cables would probably be set up from Iceland some years or decades later. As the wind in Iceland is unused source for electricity production the potential is probably for more than one cable from Iceland to Scotland or other European countries. Submarine power cable would also make the electricity price in Scotland (Britain) more even.

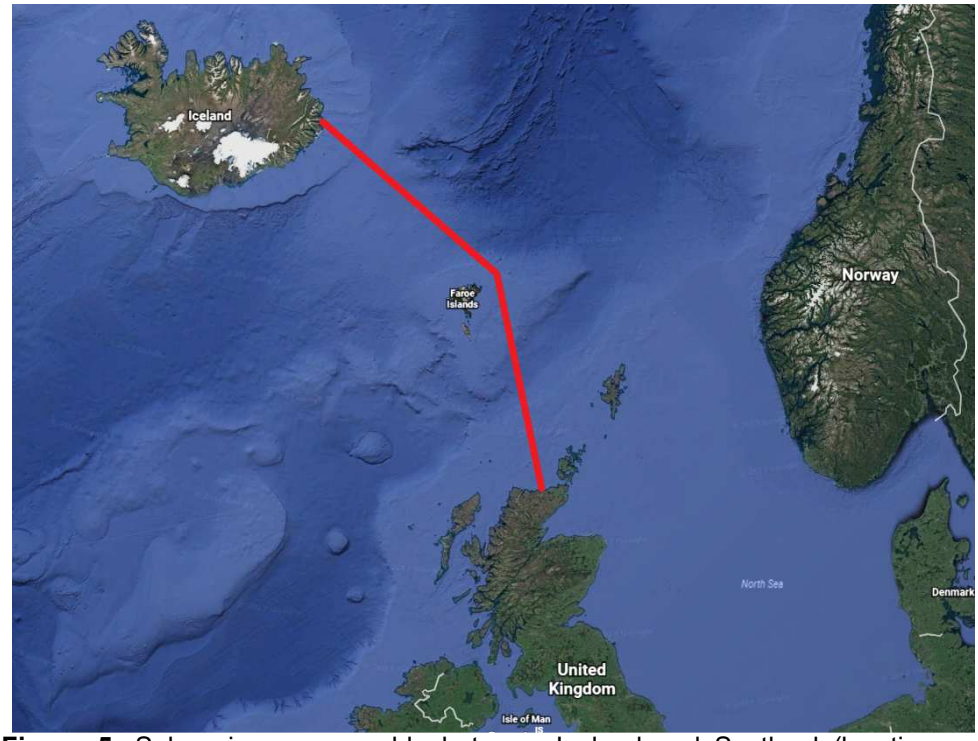

Figure 5: Submarine power cable between Iceland and Scotland (location not decided)
Source: Authors drawing on Google Earth picture.

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THE GDP INFLUENCE ON THE AMOUNT OF RENEWABLE ENERGIES PRODUCTION IN ROMANIA

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Abstract: *Nowadays, energy has become an indispensable part in any human activity. Even so, two billion people i.e., one third of the world population, have no access to modern energy sources. The world's population is being expecting more from the third millennium and the key to a high standard of living is given by the accessibility to sources of clean energy at an affordable price. Energy has an impact on every aspect of modern life as it is in close connection with energy use per capita (which ensures a high level of productivity) and life expectancy. We cannot address phenomena such as economic growth, development and progress and to exclude directly an increase in energy demand. In addition, if we add two current realities of paramount importance, namely air pollution and fossil fuel depletion, then we can say with certainty that the production of renewable energy is the best "clean" and sustainable solution at our disposal. But we know for a fact that it is costly to meet the current level of demand for energy from unconventional sources, and by this we mean the initial investment because later on the maintenance costs are reduced and the resource used is free and inexhaustible. Therefore our work aims to analyze through an econometric model, the impact the Gross Domestic Product has on production of renewable energy. The conclusion we have reached at after developing this model is that there is a direct correlation between renewable energy and Gross Domestic Product. So, we demonstrated using a simple linear regression model that the Gross Domestic Product influence on the amount of renewable energy produced is significant* both in the sample and the total population. *In other words, Gross Domestic Product growth will stimulate the production of energy from non-polluting alternative sources which means less fossil fuel burned.*

Keywords: *renewable energy; GDP; economic growth.*

JEL classification: *O44; Q20; C20.*

1. Pollution - the great challenge of our times

Lately, the terms environment and environmental pollution are interlinked; pollution manifests itself as a continuous aggression against environment integrity. Pollution is actually the price people pay for the benefits of modern technology. What we called now pollution is the end of a process that began with the setting-up of human communities and which, at some point, started to degrade the environment.

Environmental pollution which expanded its threat to the entire planet has reached the peak by carrying out an unleashed attack against human beings and their habitat. By overcoming the nature's capacity to defend, regenerate and balance itself, all new pollutants are spreading rapidly in air, water and soil, and thus creating,

developing and propagating one of the most serious dangers civilization modern has ever encountered (Marin, Ataman, 1996, p. 141).
Air and water pollution are causing a number of adverse consequences experienced by the population such as: degradation of transportation and transmission systems such as *infrastructure, bridges and power transmission systems which are highly vulnerable to natural disasters;* degradation of constructions' plasters and foundations due to the rising temperature and the increasing pace of natural disasters; increasing demand for water and energy supply; increased frequency of storms and floods whose economic, environmental and social impact is considerable; a decreased agricultural production; increased urban pollution that causes various diseases of the respiratory system; tropical storms and rising temperatures which have led to the disappearance of coral reefs and mangroves; and the negative impact on winter tourism which was also affected due to snow melting in the lower regions (Zhang, 2016).
According to a study conducted by the World Health Organization, increasing levels of atmospheric pollution, with all its disastrous consequences, is responsible for 160,000 human fatalities and unless some clear and concrete measures steps are taken, the projections show that by the end of 2020 the number of casualties will double (Tiwari, Mishra, 2012, p. 457).

2. Renewables - an effective solution

The term "*renewable energy*" means the energy derived from a wide range of resources, all endowed with the ability to renew, for example: water, solar, wind, geothermal and biomass (household, municipal, industrial and agricultural waste) (*Energy Consultancy*)
International Energy Agency defines renewable energy as the "energy derived as a result of natural processes which are fed constantly" (Boaz et all., 2010, pp. 5-10). In the new law on energy of Japan issued in 1997, renewable energy is called the "new energy" and it was described as an "alternative energy production that replaces oil, coal and natural gas" (Katin, 2010, p. 11).
As against the conventional forms of energy, unconventional energies are based on the very simple idea that within the scope directly accessible to human knowledge there is enough energy that manifests one way or another. It should only be identified, captured and eventually transformed into the desired form of energy. To get down to basics, in the end it comes down to the cost and efficiency of the conversion. Among these renewables a special emphasis is put on the energy potential of geothermal deposits as a viable alternative to fossil fuels; this idea was supported by the fact that, in addition to technical-economic advantages, a number of over 80 countries worldwide have significant geothermal resources.
Instead of conclusion we can state that renewable energy is the energy that is the result of some renewable natural processes. More specifically, by capturing and making use of solar, wind, water and geothermal energy or biological processes though various processes one obtain electricity and/or heat. Among renewables we recall: wind power; solar energy; water power; hydropower; tide energy; geothermal energy; energy derived from biomass: biodiesel, bioethanol and biogas.

3. The relationship between renewable energy and GDP – literature review

In his works, Roegen describes the link between economic growth and resource depletion. Starting from the idea that fossil fuels (he addressed the coal) participate in a single process of production as by burning it results energy, pollution and waste; thus he concludes that humanity has a limited stock of energy (and of fossil fuels implicitly) which, incidentally, is responsible for current anthropogenic degradation of the environment.

A few centuries ago, mankind was on the verge to face a big problem, namely a food supply crisis due to a massive increase of population; currently a great challenge faced by humanity is the exhaustion of conventional energy resources. Bretschger (Wang, Zhang, 2011, p. 322) complements the above theory by explaining that technological innovation (Loukil, 2016) and discoveries are those factors who once contributed to meet food demand and will be those which, through non-exhaustible resources, will contribute to meeting energy demand, which inevitably will be reflected in our macroeconomic indicators.

Our analysis starts from this truth of our lives, namely: energy is now an engine of growth and economic development. Until recently, the population was content with the fact that the demand for energy was met but, at present, the problem is not meeting the energy demand but how the energy is generated. This is an issue because, on one hand, resources used to produce energy are exhaustible in a not too distant future, which will make them more expensive, and on the other hand because producing energy is one of the biggest roots of increased levels of air pollution. As we explained in the first part of this paper, a possible solution (and we believe that is the single one so far) in order to meet the growing demand for energy without degrading the environment is the alternative energy.

Following the above reasoning for choosing this topic, our paper aims to analyze the relationship between the amount of renewable energy produced and the macroeconomic indicators, to be more accurate: Romania's GDP. The connection between the two parts of the equation was analyzed by Apergis and Payne in 2010; they used data from 20 OECD member states and other 13 countries of Eurasia. Following their analysis, they concluded that there is a direct connection between the real GDP and the amount of alternative energy produced. Specifically, an increase of 0.76% of GDP increases by 1% the amount of energy from renewable sources produced and consumed (Information Resources Management Association, 2017, 1306).

On the other hand, Fang (Information Resources Management Association, 2017:1306) shows in the case of China that the relationship between the two variables is mutual, i.e. a 1% increase in the amount of energy alternative produced increases the real GDP by 0.12% and the GDP/capita by 0.162%.

4. Estimation results and discussions regarding the relationship between GDP and renewable energy

To identify the impact that the Gross Domestic Product (GDP_t) has on the Renewable Energy (RE_t) in Romania, we will use a simple regression. The research is based on the data available on the Eurostat database during the period 1990 – 2015. Given the exponential evolution of the variables considered, the numerical values were transformed by logarithm and the influence of seasonal factors was eliminated using

Tramo-Seats method. The new variables were further symbolized: Renewable Energy - Log_RE and the Gross Domestic Product - Log_GDP.
Specifying an econometric model assumes choosing a mathematical function (*f(x)*) with the help of which the connection between the two variables can be described. In the case of a single factor model, the most common used method is the graphical representation of the two strings of values with the help of the scatter plot. Thus, in order to identify the relation between the mentioned variables, we have created a graphic representation of the pair of points which include the values of the variables, the Renewable Energy and the GDP. Based on the data provided by Eurostat and using the Eviews software, we have obtained the following results:

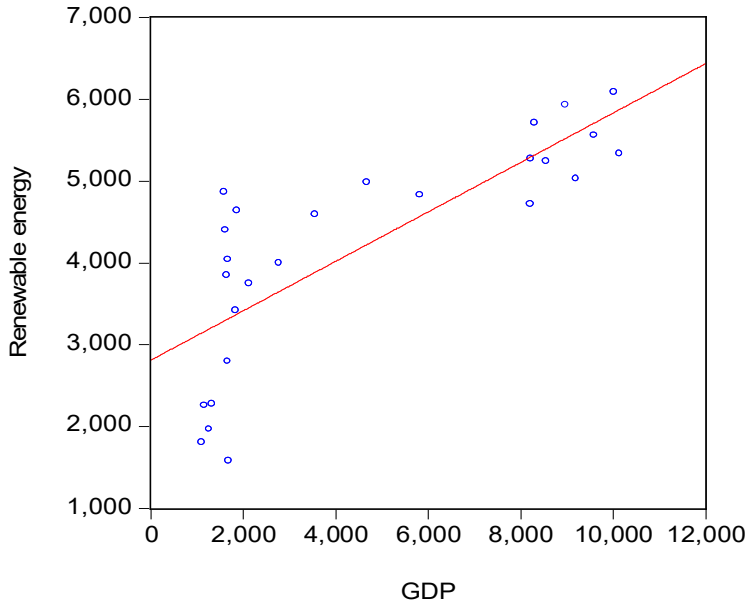

Figure 1: The relationship between Renewable energy and GDP
Source: created by the author

Since the points lie within a well-defined area we may say that there is a direct link between the dependent variable i.e. Renewable Energy and the independent variable i.e. GDP. In order to identify the connection between the variables and the intensity of the relationship between them, we shall assume that there is a form of linear link between variables. Thus the model of simple linear regression proposed in the study of the evolution of Renewable Energy (Yt), according to GDP (Xt) has the following formula:

$$Log\_RE=c(1) +c(2) *Log\_GDP + \varepsilon_t \quad (1)$$

The main problem of any regression model is how to determine model parameters. To determine the model parameters we shall make use of generalized least squares (GLS) technique. To test the validity of the assumptions underlying the classical model we will use various statistical tests. In order to estimate the parameters of

model (1) we used the software Eviews by which we obtained the following results at sample level:

Table 1: The estimation of regression equation

Dependent Variable: LOG(RENEWABLE ENERGY)
Method: Least Squares
Sample: 1990 2015
Included observations: 26
LOG(RENEWABLE ENERGY)=C(1)+C(2)*LOG(GDP)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	5.330396	0.493642	10.79811	0.0000
C(2)	0.363560	0.060611	5.998251	0.0000

R-squared	0.599860	Mean dependent var	8.276379
Adjusted R-squared	0.583188	S.D. dependent var	0.391993
S.E. of regression	0.253075	Akaike info criterion	0.163539
Sum squared resid	1.537122	Schwarz criterion	0.260315
Log likelihood	-0.126001	Hannan-Quinn criter.	0.191407
F-statistic	35.97901	Durbin-Watson stat	0.312898
Prob(F-statistic)	0.000003		

Source: authors' estimates using Eviews based on the data provided by Eurostat

Values of coefficients estimated at sample level are: c(1) = 5.330396 and c(2) = 0.363560. The coefficient c(2) shows the increase level in Renewable Energy when GDP increases by one unit, while the coefficient c(1) shows what would be the value of Renewable Energy if GDP was zero. Also, given the positive nature of the coefficient c(2) and starting from the two coefficients we may state that there is a direct correlation between the two variables since the sign of the estimated coefficient c(2) is positive. To determine GDP's influence on the dependent variable Renewable Energy in the total population starting from the simple linear regression model, we generalize the results of two coefficients estimated by applying Student Test. Based on the data in the table above one may notice that the parameter c(1) is significantly different from zero, with a significance level $\alpha = 0.05$, as $t_{calc}=10.79811 > t_{tab}=2.05$, which means that the null hypothesis is rejected. This can be seen by the probability associated with the parameter c(1) which is equal to p = 0.000, which confirms that the parameter is significant in the total population. Also, in the case of the parameter c(2), it is noted that $t_{calc} = 5.998251 > t_{tab} = 2.05$, and the probability associated with the parameter c(2) is zero. This confirms that the parameter is significant and hence the null hypothesis H_0 is rejected.
Therefore, the results obtained by using Eviews software shows that two parameters are significantly different from zero, meaning that the model was correctly specified, identified and evaluated, and that one may continuing the econometrics based arguing.
We determine the R-square value in order to measure the intensity of the correlation between endogenous variable and its determinants. As to what the Adjusted R-square is concerned, this is equal to 0.599860 at sample level, which suggests a

medium to strong correlation between the model variables. In order to study the size of Adjusted R-square for the entire population, we used the Fisher test. Since F_{calc} = 35.97 > F_{tab} = 3.15, it results that the null hypothesis is rejected therefore the exogenous variable influence on the endogenous variable is significant. The largest the difference between F_{calc} and F_{tab} is, the stronger the relationship between variables in the total population is.

Testing the basic hypotheses regarding the random variable ε

The first hypothesis we are going to put to test is the *independence of the residual variable ε_i values*. For this study we shall make use of the Durbin-Watson test. Starting from the following equation (Stancu, 2011, p.48):

$$\varepsilon_t = \rho \cdot \varepsilon_{t-1} + \omega_t \tag{2}$$

We start from the following assumptions:

H_0: $\rho = 0$, with the alternative

H_1: $\rho \neq 0$

The above ρ is the first-order autocorrelation coefficient of the errors. To choose the correct hypothesis, we determine the calculation DW_{calc}=0.31. By working with a significance level α = 5%, the number of exogenous variables is *k* = 1, and the number of observations is T = 26, in the Durbin-Watson Significance Table we address the values d_1 = 1.30 and d_2 = 1.46. Since 0 < DW_{calc}=0.31 < d_1 = 1.30, errors have a positive autocorrelation, and the hypothesis H_0 is rejected, therefore the errors independence hypothesis is not confirmed.

In order to eliminate the autocorrelation phenomenon we shall estimate the parameter ρ using the Cochrane-Orcutt estimation procedure (Andrei, Bourbonnais, 2008, p.126). After the calculations, we obtained the value of the parameter below:

$$\rho = 1 - \frac{DW_{calc}}{2} = 0.74 \tag{4}$$

Thus the residues can be calculated according to the following formula:

$$\varepsilon_t = 0.74 \cdot \varepsilon_{t-1} + \omega_t \tag{5}$$

From the multiple linear regression model

$$Log\_RE_t = c(1) + c(2) * Log\_GDP_t + \varepsilon_t \tag{6}$$

and

$$Log\_RE_{t-1} = c(1) + c(2) * Log\_GDP_{t-1} + \varepsilon_t \tag{7}$$

By substituting in equation (5) one obtains the following formula:

$$Log\_RE_t - (0.74 * Log\_RE_{t-1}) = C(1)*(1-0.74) + C(2)*(Log\_GDP_t - 0.74*Log\_GDP_{t-1}) + \omega_t \quad (8)$$

Estimation of the new regression model

We check the features of the new regression model by repeating the same steps as in the case of the previous model. In order to evaluate the parameters of the new regression model we have also used the Least Square Method. The results are presented in the table below.

Table 2: The estimation of new regression equation

Dependent Variable: Log(renewable energy) - (0.74 * (Log(renewable energy(-1))))
Method: Least Squares
Sample (adjusted): 1991 2015
Included observations: 25 after adjustments
Log(renewable energy)-(0.74*(Log(renewable energy(-1))))=c(1)*(1-0.74)+c(2) *(Log(GDP)-0.74*(Log(GDP(-1))))

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	6.851289	0.698119	9.813934	0.0000
C(2)	0.193716	0.083285	2.325928	0.0292

R-squared	0.190424	Mean dependent var	2.200425
Adjusted R-squared	0.155225	S.D. dependent var	0.119261
S.E. of regression	0.109614	Akaike info criterion	-1.507077
Sum squared resid	0.276352	Schwarz criterion	-1.409567
Log likelihood	20.83847	Hannan-Quinn criter.	-1.480032
F-statistic	5.409940	Durbin-Watson stat	1.760032
Prob(F-statistic)	0.029196		

Source: Source: authors' estimates using Eviews based on the data provided by Eurostat

Resulted regarding the two parameters of the new regression model show that Student statistics parameters are higher in absolute terms than the tabular value equal to 1.96 for a significance level of 5%. Also, the probability that the null hypothesis is true is smaller than 5% (p=0.0000 for c(1) and p=0.0292 for c(2)), so it can be stated that the null hypothesis is rejected and the only accepted true hypothesis is the alternative H_1 (c(1) ≠ 0, and c(2) ≠ 0).

To measure the intensity of the relationship between the two variables we set the determination coefficient. At the level of the sample between the two variables considered there is link of average intensity. To determine whether this intensity is maintained at the level of total population or not, we used Fisher's exact test. Since F_{calc} = 5.409940 > F_{tab} = 3.15 it results that the it is rejected the null hypothesis according to which there is no correlation between variables, so the influence of exogenous variable GDP on endogenous variable Renewable Energy is significant.

Table 3: Testing the basic hypotheses regarding the random variable ω_t

Dependent Variable: LOG(RENEWABLE ENERGY)-(0.74*(LOG(RENEWABLE ENERGY(-1)))) *Method: Least Squares* *Included observation: 25 after adjustments* LOG(RENEWABLE ENERGY)-(0.74*(LOG(RENEWABLE ENERGY(-1)))) = C(1)*(1-0.74)+C(2)*(LOG(GDP)-0.74*(LOG(GDP(-1))))		
1. Independence of errors (Durbin Watson Test)		
	DW_{calc}	1.760032*
2. Homoscedasticity of errors (White Test)		
	F_{calc}	2.256610 (Prob=0.1284)
3. Normality of errors (Jarque Bera Test)		
	JB_{calc}	0.241124 (Prob=0.886422)

* Working with a significance level of α= 0.05, the number of exogenous variables is k=1, and the number of observations is T=25, from the Durbin-Watson distribution table we find the following values: d1 = 1.28 and d2 = 1.45.
Source: authors' estimates using Eviews

As to what the testing of the fundamental hypothesis referring to the random ω_t variable is concerned for the new model, we have reached the following conclusions:
-*the independence hypothesis* of the values of the residual variable ω_t is confirmed this time, because the Durbin-Watson statistic is equal to 1.760032, so that $d_2 = 1.45 < DW_{calc} = 1.760032 < 4-d_2 = 2.55$, meaning the errors of the model are independent;
-*the homoscedasticity hypothesis* of the residual variable ω_t is confirmed, because, as the data from Table 3 shows, the probability related to the Fisher exact test is higher than 5%, which determines the acceptance of the H_0 hypothesis as being true.
-*the normality hypothesis* of the random variable ω_t is confirmed. One way to check the normality of errors hypothesis is the Jarque-Berra test, which is an asymptotic test, usable in the case of a large volume sample, which follows a chi-squared distribution with two degrees of freedom (Meșter, 2012: p.150). Because the related probability of accepting the null hypothesis as being true (Prob=0.886422) is higher than 5%, we can state that the normality of errors hypothesis cannot be rejected for the level of the entire population, the errors being normally distributed.

5. Conclusions

In conclusion, we wish to emphasize that currently it is neither the terrorism, nor hunger, not even the infernal race for economic and military supremacy the major problem of the mankind, but the survival of humanity and the possibility of future generations to meet their needs and to maintaining earth's ecosystem and preserving its biodiversity which are endangered by environmental pollution. Therefore, an evidenced based and actually implemented approach on sustainable development in all fields of human activity is or should be a top priority nowadays.

Moreover as we have shown in this paper, increasing the amount of alternative energy leads to an increase in GDP as in some cases i.e. China, but we strongly believe that the link between the GDP level and the amount of green energy produced is a mutual and dependant relationship.
In this paper we intended to analyze this relation in the case of Romania. Through an econometric model we demonstrated that the GDP influence on the amount of renewable energy produced is significant. In other words, GDP growth will stimulate the production of energy from non-polluting alternative sources which means less fossil fuel burned.

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DISCUSS THE RELATIONSHIP BETWEEN UNEMPLOYMENT AND LEVEL OF EDUCATION IN PALESTINE

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Abstract: *This paper discusses the relationship between unemployment and level of education in Palestine between 2005 and 2015. The aim of this paper is to understand the relationship between unemployment and education level in Palestine. Education outputs in Palestine day by day increase in all levels, however, Palestine facing an increase in unemployment over time, which became one of the challengeable cases in the country. The question is, what is the relationship between unemployment and education level?. To answer this question, we examined four education levels (1 to 6 years of schooling, 7 to 9 years of schooling, 10 to 12 years of schooling and 13 and more years of schooling) regarding unemployment rate between 2005 and 2015 according to the Palestinian Central Bureau of Statistics (PCBS, 2006-2016) labour force surveys and annual reports from 2005 to 2015. The results indicate that, there is a negative relationship between unemployment rate and education levels (1 to 6 years of schooling, 7 to 9 years of schooling, 10 to 12 years of schooling and 13 and more years of schooling from 2005 to 2010, while this relationship has changed since 2010. Since 2011, individuals who have (13 and more years of schooling) become the highest unemployment among the other levels. The results also showed that there is gender difference of unemployment rate among all four education levels (1 to 6 years of schooling, 7 to 9 years of schooling, 10 to 12 years of schooling, and 13 and more years of schooling).The difference between the two genders of the unemployment rate was 17.4 % difference in case of (1 to 6 years of schooling), 29.4% difference for (13 and more years of schooling), 7.1% difference in (7 to 9 years of schooling) and 1.9% difference among (10 to 12 years of schooling) in 2015. There is a difference between West Bank and Gaza Strip regarding unemployment rate among all four levels of education. These findings can help to identify the roots of unemployment in connection with education outputs.*

Keywords: unemployment; Palestine; education; schooling; West Bank; Gaza Strip.

JEL classification: *E24; F66.*

1. Introduction

Unemployment is one of the serious challenges in some countries around the world. People invest in education to get better opportunities in their future life. The biggest challenge when an educated person becomes unemployed. Palestine as a developing country facing the challenge of unemployment among its citizens, while the education level in Palestine has a good level and among people(15 years and more) with 96.7 % literacy rate in 2015 (Literacy Rate,(PCBS), 2015). Nowadays Palestine population around 4.8 million, 2.9 million in West Bank and around 1.9 million in Gaza strip (Palestinian Central Bureau of Statistics, (PCBS), 2016a). In the 4th quarter 2016, the participation rate in labour force in Palestine among persons

15 years and more is 45.5% (Labour Force Survey, PCBS, 2017). According to Labour Force Survey, PCBS (2017) unemployment rate in the 4th quarter 2016 in Palestine is 25.7%, 202,900 unemployed who covered by Gaza Strip and more than half of this number in West Bank (143,100 unemployed). The rate of unemployment in Gaza Strip is 40.6%, while its only 16.9% in West Bank and among unemployed persons, 21.0 % are males and 43.9% are covered by females (Labour Force Survey, PCBS, 2017). More unemployment exists among youth especially between 20-24 years by 41.6 % (Labour Force Survey, PCBS, 2017). The education inputs (students) and outputs (graduates) also increasing, where in the academic year 2000/2001 the number of students who attending Universities, University Colleges and Community Colleges was 80,543 students, while 15 years later, the students number has been increased around three times more to reach 221,395 students in the academic year 2014/2015. The number of graduates in the academic year 2000/2001 was 13,151 graduates and after 15 years this number increased more than three times and became 43,544 graduates in the academic year 2014/2015 (Palestinian Central Bureau of Statistics, (PCBS), 2016b). Both students and graduates numbers are increasing continuously, which put more pressure on the government of Palestine for future employment. Level of education in Palestine getting increased, but unfortunately, the unemployment rate among people getting increase as well, especially in graduates (university degree holders) who need to wait for months to get jobs, but the waiting also not guarantee to get job at the end in particular, if the skills of graduates persons do not match with labour market needs. The question is "what is the relationship between unemployment and level of education?"The answer can be found by testing unemployment among education system in Palestine, which consists of 12 years in schools before you head up to university, 6 years elementary schools, 3 years middle schools and 3 years secondary schools. In this paper, we will discuss the relationship between unemployment and level of education in Palestine and try to understand the relationship between unemployment and education.

2. Literature Review

Many studies have been conducted to understand the relationship between the level of education and unemployment and the effect of education on unemployment. In his study, Bairagya (2015) stated that, as the level of education increase, the unemployment probability decrease, but this can be in developed countries, while in developing countries, as the level of education grows up, the unemployment grows up as well (Bairagya, 2015). Afolabi (2013) indicated that the more growth of education compared to economy growth is one of the primary causes for unemployment due to the job supply cannot fulfill graduates demand. Biagi and Lucifora (2008) found that there is a negative relationship between the unemployment rate and people who have more than obligatory education. Diawara and Mughal (2011) indicated that the likelihood to be self-employed is less than the likelihood to be employed in public sector for both secondary and university education holders. In his study about Romania, Diaconu (2014) found that the likelihood of employment increases with the increase of education level. The findings of Ionescu (2012) highlight that, the probability of employment increases with the increase of education level. Moreover, the increase of education level sustain individual job during labour market crisis (Ionescu ,2012). In his study about

Netherlands Wolbers (2000) pointed out that more unemployment among people with low education level than higher education level. In addition to that, he mentioned that vocational graduate's people have less unemployment danger than people who graduates from university (Wolbers, 2000).
Most of the studies that we mentioned claimed that as the level of education increase, the unemployment decrease and according to that, we formed our hypotheses as:

H1: As level of education increase, unemployment rate decrease between 2005 and 2015.

H2: As level of education increase, unemployment rate increase between 2005 and 2015.

3. Method

According to the Palestinian Central Bureau of Statistics (PCBS, 2006-2016) labour force surveys and annual reports from 2005 to 2015, eleven years will be analyzed regarding unemployment rate and years of schooling (level of education) in Palestine from 2005 to 2015 to examine the relationship between the unemployment rate and level of education during this period. The division of education level (years of schooling) of individuals will be as it been used by (PCBS) labour force surveys and annual reports from 2005 to 2015, which are 1 to 6 years of schooling, 7 to 9 years of schooling, 10 to 12 years of schooling, and 13 and more years of schooling. After looking at the relations between the unemployment rate and education level (years of schooling), the gender difference will be tested and at the end, a comparison will be made between the West Bank and Gaza strip regarding unemployment rate and years of schooling (level of education) relationship.

4. Results

4.1. The Relationship between Unemployment and Years of Schooling

There is a difference of the unemployment rate among all education levels (Figure 1). The unemployment rate of persons who have 13 and more years of schooling increasing and reached it maximum percentage in 2014 with 31.6%, while in 2005 this percentage was only 21.8%. During 11 years, the unemployment has been increased by 8.1%. In contrast, the unemployment rate of persons who have between 1 and 6 years of schooling not changing much with time and reached it minimum percentage in 2011 with 19.7 %, while the percentage was 26.2% in 2005, and unemployment decreased by 1.2 % between 2005 and 2015.

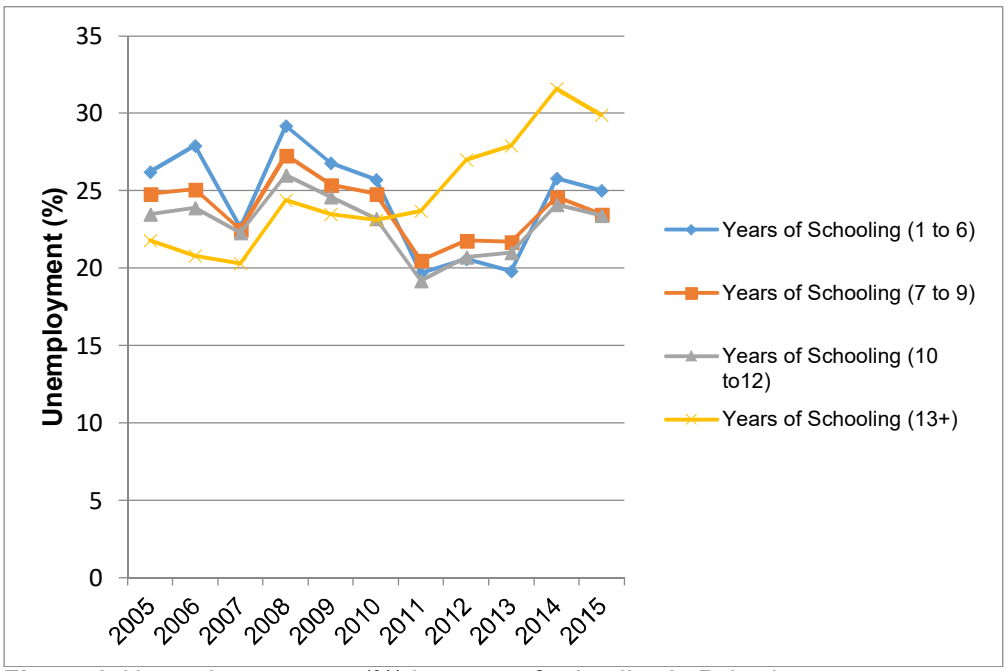

Figure 1: Unemployment rate (%) by years of schooling in Palestine.
Source: author development based on Data from (Palestinian Central Bureau of Statistics, (PCBS). Labour Force Surveys: Annual Reports: 2005-2015).

The maximum percentage of the unemployment rate of persons who have 7 to 9 years of schooling was 27.3 % in 2008 and the minimum percentage was 20.5% in 2011. Persons who have 10 to 12 years of schooling faced almost no change if we compare 2005 and 2015, which began with 23.5% in 2005 and ended up with 23.4% in 2015 and the maximum percentage, was in 2008 with 26% and the minimum was in 2011 with 19.2%.

4.2. Gender Difference Among all Four Levels of Education (1 to 6 Years of Schooling, 7 to 9 Years of Schooling, 10 to 12 Years of Schooling, and 13 and More Years of Schooling).

Figure 2 shows that the gender difference of unemployment rate among all four levels of education (1 to 6 years of schooling, 7 to 9 years of schooling, 10 to 12 years of schooling, and 13 and more years of schooling). There is a big gap between unemployment of males and females of (1 to 6 years of schooling) between 2005 and 2015. The maximum unemployment rate in males was in 2008 with 33% and it starts with 28.8% in 2005 and decreased to 27.1% in 2015, which mean 1.7% decrease in unemployment rate. On other side, females started with 7.8% of the unemployment rate in 2005 and reached its maximum in 2015 with 9.7% and its minimum in 2013 with 2.8%. This indicates 1.9 % increase in the unemployment rate between 2005 and 2015. The difference between the two genders of unemployment rate started with 21% difference in 2005 and closed in 17.4% difference in 2015(Figure 3). There is a big gap as well between unemployment of males and females of (13 and more years of schooling). Females reached it maximum

unemployment rate with 50.6 % in 2014 and ended with 48% in 2015, while in 2005 the rate was 32.5%, which mean 15.5 % increase in unemployment between 2005 and 2015. In contrast, males started with 16.6% of the unemployment rate in 2005 and reached the maximum in 2014 with 19.1%. The difference between the two genders of unemployment was 15.9% in 2005 and ended by 29.4% difference in 2015(Figure 3). Unemployment of males and females of (7 to 9 years of schooling) has a gap as well. The unemployment rate of males starts with 26% in 2005 and close at 24.1% in 2015, which mean 1.9% decrease in unemployment rate. The maximum unemployment rate for males was in 2008 with 29% and reached its minimum in 2011 with 21.5 %. On other side, females started with 11.3% of the unemployment rate in 2005 and reached its minimum in 2007 with 6.3% and ended up with 17 % in 2015, which indicates 5.7 % increase in the unemployment rate between 2005 and 2015. The difference between the two genders of unemployment rate started with 14.7% difference in 2005 and closed in 7.1 % difference in 2015(Figure 3). A gap between unemployment of males and females can be found in (10 to 12 years of schooling). Males reached it maximum unemployment rate with 27.4 % in 2008 and ended with 23.2% in 2015, while in 2005 the unemployment rate was 24.1%, which mean 0.9% decrease in unemployment between 2005 and 2015. In contrast, females started with 17.2% of the unemployment rate in 2005 and ended up with 25.1 % in 2015. The difference between the two genders of unemployment rate was 6.9% in 2005 and ended with 1.9% difference in 2015 (Figure 3).

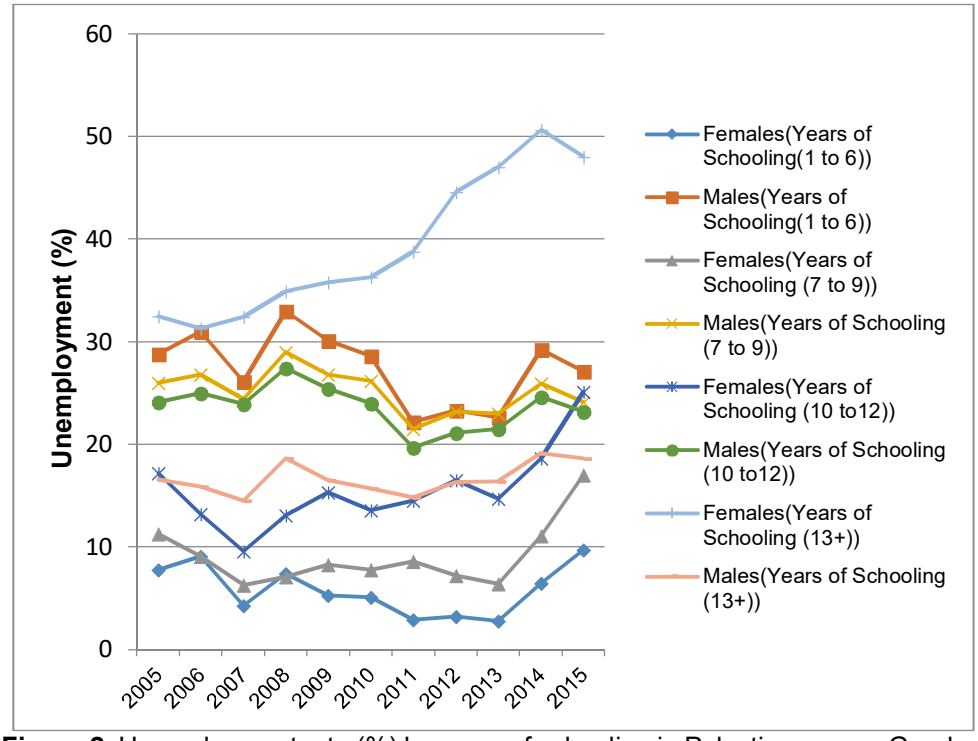

Figure 2: Unemployment rate (%) by years of schooling in Palestine among Gender. Source: author development based on Data from (Palestinian Central Bureau of Statistics, (PCBS). Labour Force Surveys: Annual Reports: 2005-2015).

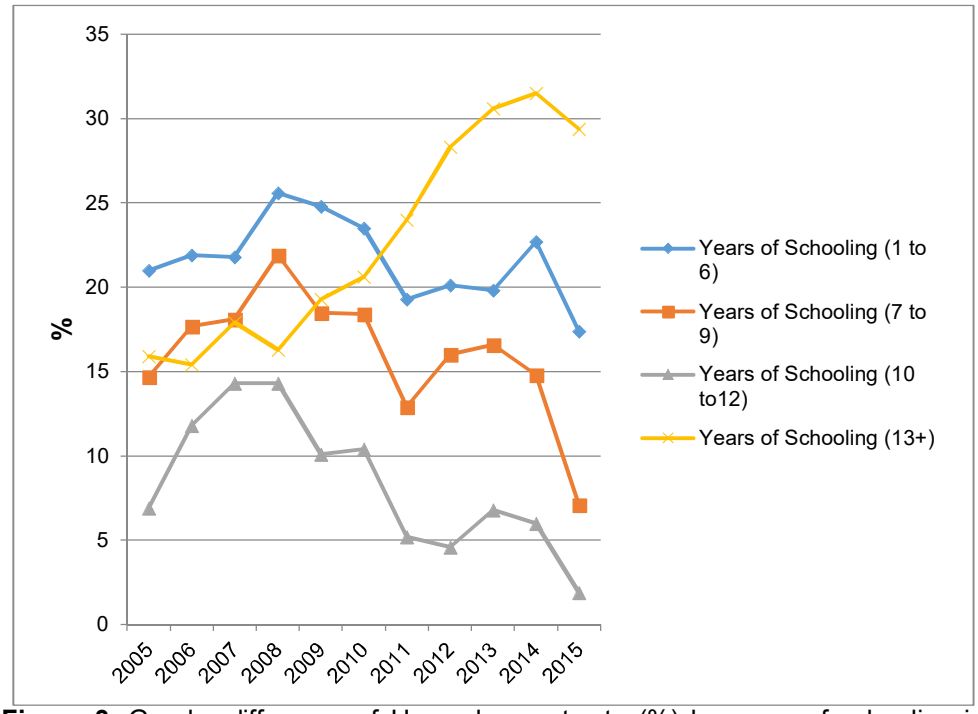

Figure 3: Gender difference of Unemployment rate (%) by years of schooling in Palestine.
Source: author development based on Data from (Palestinian Central Bureau of Statistics, (PCBS). Labour Force Surveys: Annual Reports: 2005-2015).

4.3. Comparison of Unemployment Rate (%) Among Education Levels by Location (West Bank and Gaza Strip)

Figure 4 shows that, unemployment rate and education level (years of schooling) in West Bank between 2011 and 2015. Individuals who have (1 to 6) years of schooling have the minimum unemployment rate during this period and the maximum unemployment rate among individuals who have (13+) years of schooling. During this period, the unemployment rate of Individuals who have (1 to 6) years of schooling fluctuating with time, where it begins with 15% in 2011 and ended with 15.1% in 2015, while who have (7 to 9) years of schooling also fluctuating as well ,where starts with 17.6% in 2011 and decline to 15.5% in 2015. In contrast, the unemployment rate of Individuals who have (10 to 12) years of schooling increases from 2011 till 2012 and in 2013 decrease by 0.3% comparing to 2012 and reached 15.8% in 2015. The unemployment rate of Individuals who have (13+) years of schooling increases between 2011 and 2014 and decrease in 2015 by 2.1% comparing to 2014 (Figure 4).

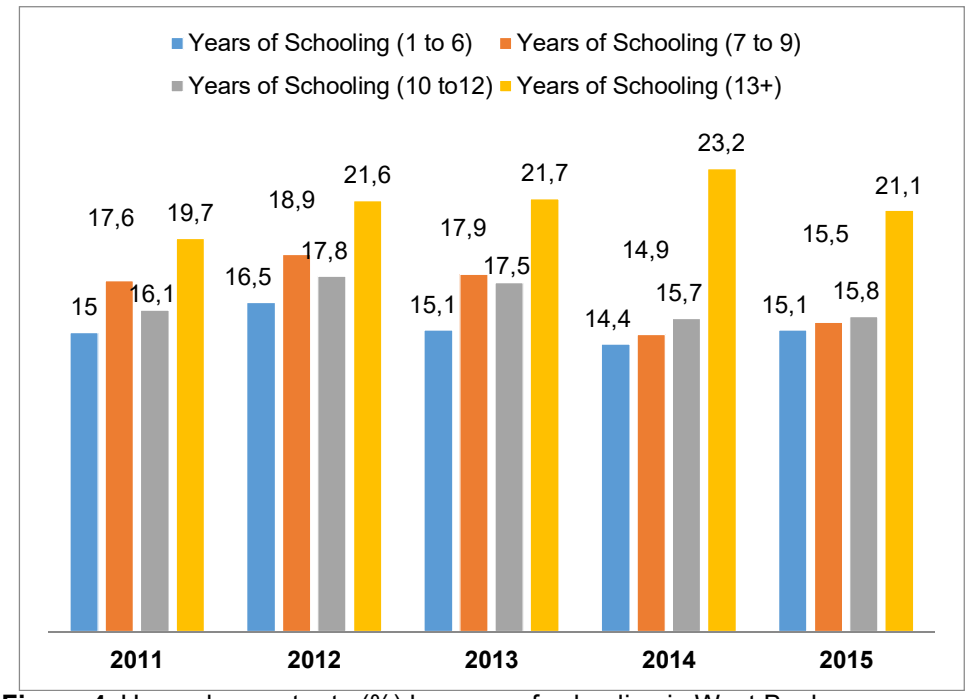

Figure 4: Unemployment rate (%) by years of schooling in West Bank.
Source: author development based on Data from (Palestinian Central Bureau of Statistics, (PCBS). Labour Force Survey: Annual Reports: 2011-2015).

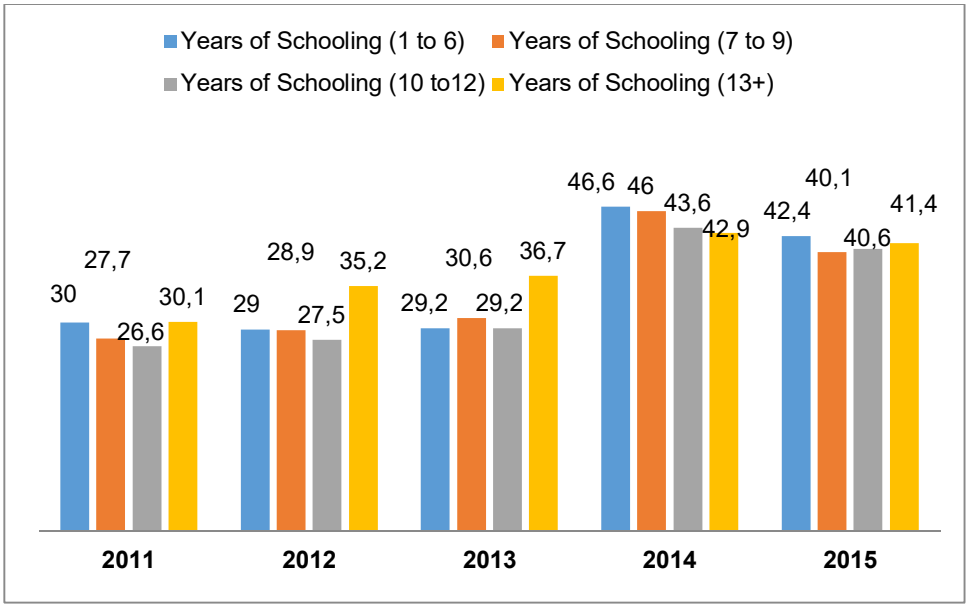

Figure 5: Unemployment rate (%) by years of schooling in Gaza Strip.
Source: author development based on Data from (Palestinian Central Bureau of Statistics, (PCBS). Labour Force Survey: Annual Reports: 2011-2015).

Figure 5 shows that, unemployment rate and education level (years of schooling) in Gaza Strip from 2011 to 2015. During this period, the unemployment rate of persons who have (1 to 6) years of schooling begins with 30% in 2011 and ended with 42.4% in 2015, while who have (7 to 9) years of schooling starts with 27.7 % in 2011 and increase to 40.1 % in 2015. In contrast, the unemployment rate of persons who have (10 to 12) years of schooling starts with 26.6% in 2011 and close at 40.6% in 2015. The unemployment rate of persons who have (13+) years of schooling increases between 2011 and 2014 and decrease in 2015 by 1.5 % comparing to 2014 (Figure 5).

5. Discussion

Four education levels (1 to 6 years of schooling, 7 to 9 years of schooling, 10 to 12 years of schooling and 13 and more years of schooling) are tested regarding unemployment rate. According to the results, the first hypothesis is accepted and the second hypothesis is rejected from 2005 to 2010. In another word, as the person become more educated, he become less unemployed. From 2011 to 2015, the results are complicated and high level of schooling (13 and more years of schooling) is increasing and become highest of unemployment rate among all levels of education but why the unemployment rate of low levels of schooling (1 to 6 years of schooling and 7 to 9 years of schooling) is fluctuating and why high level of schooling (13 and more years of schooling) is increasing over time from 2011 to 2015?. In the period from 2005 to 2010 the people with (1 to 6 years of schooling and 7 to 9 years of schooling) have more unemployment than (13 and more years of schooling), but from 2011 to 2015, the unemployment of (13 and more years of schooling) started to become more than the unemployment of (1 to 6 years of schooling and 7 to 9 years of schooling). The reasons maybe because in the first period 2005 to 2010, the labour market can still absorb people with (13 and more years of schooling), but cant absorb more people with (1 to 6 years of schooling and 7 to 9 years of schooling) and unemployment among these levels(1 to 6 years of schooling and 7 to 9 years of schooling) is depended on the availability of jobs which not stable that's why the unemployment among these people is fluctuating. In contrast, the reason for the increasing of unemployment among the high level of education (13 and more years of schooling) is the rapidly increase in graduates. The number of graduates in the academic year 2000/2001 was 13151 graduates and after 15 years this number increased more than three times and became 43544 graduates in the academic year 2014/2015 (Palestinian Central Bureau of Statistics, (PCBS)., 2016b). Not only the graduates increased, but also the market became more competitive, but also can be true that schools do not supply the skills that needed by employers in the labour market. Gender difference appeared among all the levels of education(years of schooling) (Figure 3), which needs further research to discover the reasons for that but, some reasons may lead the two genders to be outside the labour force, like studying for both genders and housework for females. There is a considerable difference between West Bank and Gaza Strip regarding unemployment rate among all four levels of education (Figure 4, Figure 5), which can be because of the different of labour market situation in West Bank and Gaza Strip.

6. Conclusion

In this paper, we discussed the relationship between unemployment rate and level of education in Palestine. We examined four of education levels (1 to 6 years of schooling, 7 to 9 years of schooling, 10 to 12 years of schooling and 13 and more years of schooling) regarding unemployment rate. High unemployment among the low levels of education(1 to 6 years of schooling, 7 to 9 years of schooling), while low unemployment rate among the high levels of education(10 to 12 years of schooling and 13 and more years of schooling) from 2005 to 2010. In addition to that, there is gender difference regarding unemployment rate among all four levels of education. The difference was 17.4 % difference in case of (1 to 6 years of schooling), 29.4% difference for (13 and more years of schooling), 7.1% difference in (7 to 9 years of schooling) and 1.9% difference among (10 to 12 years of schooling) in 2015. The unemployment rate increases among 13 and more years of schooling) holders, but not neglect that unemployment rate in the first two levels (1 to 6 years of schooling, 7 to 9 years of schooling) are fluctuating with time (Figure 1) and beside all of that, there are some reasons that may made some individuals outside the employment, which should be considered in future research to understand the employment and unemployment in Palestine plainly.

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EMPIRICAL RESEARCH REGARDING THE FACTORS THAT INFLUENCE FOREIGN PARTICIPATION IN THE SHARE CAPITAL OF ROMANIAN COMPANIES

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Abstract: *Foreign investment represents an important variable of economic development at global level. According to Romanian National Trade Register Office statistics (ONRC, 2017), the value of subscribed capital (initial registration) in companies with foreign participation in Romania had an oscillatory evolution during 1991 and 2016. It recorded relative small values during 90's and increased slowly from 2001, reaching a peak in 2008 when the value of subscribed capital was 5924,8 million USD. Economic and financial conditions at the global level were reflected in a decrease of the value of subscribed capital due to the lack of financing and restricted access to credit and lack of liquidity. The lowest value recorded from 2001 until present was registered in 2015, i.e. 1428,5 million USD. In terms of number of companies with foreign participation registered, there was an increase from 5.499 in 1991 to 15.720 in 2007, when the highest number was recorded. From 2008 until present, the number of companies with foreign participation registered annually decreased and reached 5.348 in 2016, which represented a level below that of 1991. However, in recent years the mean value of subscriptions has increased compared to the one specific to the period between 1991 and 2004.The aim of this research is to analyze the influence of several factors on the value of subscribed capital in companies with foreign participation in the share capital in Romania, between 1991 and 2015. Using simple regression models, the study reveals that factors such as gross domestic product (GDP), research & development expenditure, exchange rate, labour cost and infrastructure have an important role in explaining the value of subscribed capital in companies with foreign participation in Romania, trade openness has a moderate influence on the value of subscribed capital, while the number of graduates has a weak influence. Between the value of subscribed capital in companies with foreign participation in Romania and research&development, trade openness, infrastructure, GDP, exchange rate, respectively graduates, there is a direct and linear correlation and between the value of subscribed capital (initial registration) and labour cost there is an inverse linear correlation.*

Keywords: *foreign subscribed capital; companies; Romania.*

JEL classification: *F21.*

1. Introduction and theoretical framework

Foreign direct investment (FDI) represents an important variable of economic development at global level, and also a subject that has aroused the interest of many researchers. In this paper we intend to analyze the factors that favour the registration of companies with foreign participation in the share capital in Romania, as a part of FDI inflows to Romania. We believe that this study is relevant because it reflects the

first step of foreign investors regarding investment in Romanian companies. Thus, we won't take into consideration reinvested earnings and other capital (mainly intra-company loans).
According to Romanian National Trade Register Office, the company with foreign participation in the share capital is the company established, partially or fully, with the participation of individuals or legal entities with permanent residence or headquartered outside Romania (ONRC, 2017).
Figure 1 shows the evolution of the value of subscribed capital (initial registration) in companies with foreign participation in Romania and of the number of registrations of companies with foreign participation, during 1991-2016, as shown by Romanian National Trade Register Office statistics.

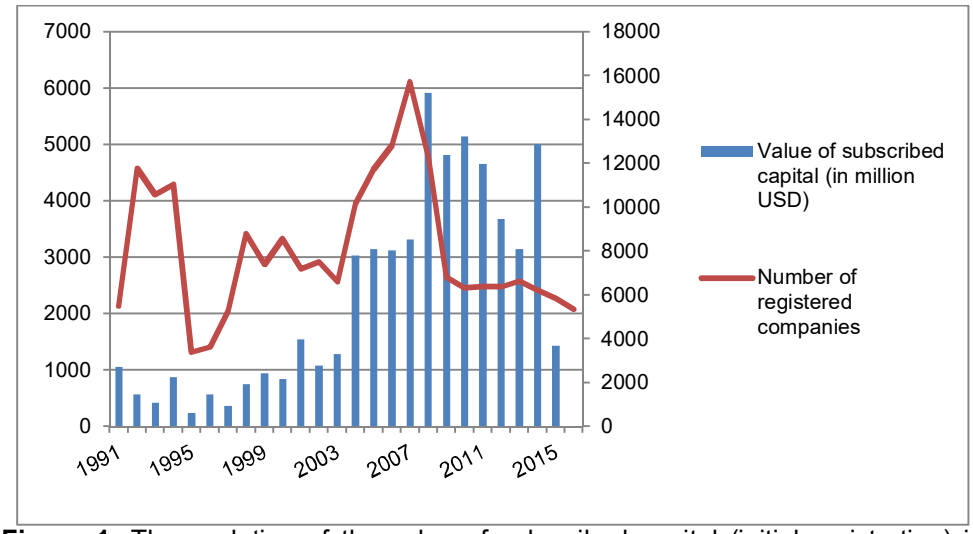


Figure 1: The evolution of the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania and of the number of registrations of companies with foreign participation between 1991 and 2016**.**
Source: realized by the author based on statistical reports of Romanian National Trade Register Office statistics, [Online], Available: http://www.onrc.ro/index.php/ro/statistici?id=254.

According to Romanian National Trade Register Office statistics (ONRC, 2017), the value of subscribed capital had an oscillatory evolution during 1991 and 2016. It recorded relative small values during 90's and increased slowly from 2001, reaching a peak in 2008 when the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania was 5924,8 million USD. Economic and financial conditions at the global level were reflected in a decrease of the value of subscribed capital due to the lack of financing and restricted access to credit and lack of liquidity. However, in 2010 and 2014 the values registered exceeded 5000 million USD. The lowest value recorded from 2001 until present was registered in 2015, i.e. 1428,5 million USD.
In terms of number of companies with foreign participation registered annually, their number increased from 5.499 in 1991 to 15.720 in 2007, when the highest number

was recorded. From 2008 until present, the number of companies with foreign participation registered annually decreased and reached 5.348 in 2016, which represented a level below that of 1991.
However, if we make a correlation between the amount of capital subscribed in recent years and the number of registrations, we find that, although the number of registrations decreased, the mean value of subscriptions is much higher compared to the one specific to the period between 1991 and 2004.
The foreign investment theme has an important place in the field literature. Many researches have focused on finding the determinants of FDI and their results revealed a variety of factors. Beer and Cory (1996) identified that market size, growth rate, labor cost, export flows or taxes, influenced FDI of United States in the EU. On the other hand, Bevan and Estrin (2004) found that unit labour costs, gravity factors, market size and proximity influence FDI from Western countries, mainly in the European Union (EU), to Central and Eastern European ones.
Holland et al. (2000) found as driving forces of FDI in Central and Eastern Europe, factors like market size and growth and also stated that factor-cost advantages play a significant role. Sethi et al. (2003) also found that low wage levels represent an attraction factor for foreign investments. Market size, country risk of host economy, labour cost and trade openness were found factors of influence for FDI inflows in CEECs countries (Janicki and Wunnava, 2004). Vijayakumar et al. (2010) showed that variables like market size, labour cost, infrastructure, currency value and gross Capital formation represent potential determinants of FDI inflows of BRICS countries. Mateev (2012) identified a set of traditional variables like population, trade and infrastructure as attraction factors for foreign investments, while credit risk, labour cost, geographical proximity are important factors for certain group of countries. In a recent research, Sehleanu (2016) analyzed the determinants of FDI inflows to Romanian, revealing as influence factors gross fixed capital formation, gross domestic product, exchange rate, inflation rate, trade openness and labour cost. Research&development represents an important variable of FDI as shown by Lansbury et al. (1996) or Goschin et al. (2013). Infrastructure is another factor analyzed in the field literature as determinant of FDI and, in this regard, we can mention the researches of Erdal and Tatoglu (2002), Ang (2008), Dauti (2009) or Ranjan and Agrawal (2011). Aigheyisi (2016), using data from 1981 to 2014 regarding Nigeria, found that net inflow of FDI, domestic investment and stock market development affected in a positive a significant manner economic growth in Nigeria, instead, the effect of the interaction between stock market development and FDI on economic growth is negative and significant.
The aim of this research is to analyze the influence of several factors on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania between 1991 and 2015. In this regard we considered factors such as: infrastructure, proxied by the number of kilometres of modernized road; market size, measured by gross domestic product (GDP) nominal value, research&development expenditure by sectors of performance, labour cost, trade openness, number of graduates (percentage of total) and exchange rate. Section 2 of the paper presents the data and the methodology used, section 3 comprises the results of the econometric modelling and the last section of the paper provides the conclusions of the research.

2. Variables, data and research methodology

The aim of our study is to study the correlation between the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania and some factors of influence.

In order to achieve our purpose, we have collected annual data regarding Romania, over the period 1991 – 2015. We considered the following variables as factors of influence for the endogenous variable, the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania (expressed in thousands of lei):

- Infrastructure, proxied by the number of kilometres of modernized road;
- Market size, measured by nominal GDP value expressed in millions of lei, current prices;
- Research&Development expenditure by sectors of performance, expressed in millions of lei;
- Labour cost, expressed as the percentage change of average annual net wage;
- Trade openness, expressed as the sum of exports and imports of goods and services measured as a share of GDP;
- Number of graduates (as a proxy for human capital) expressed as percentage of total graduates who have successfully completed secondary upper (upper secondary and vocational) and bachelor studies;
- Average exchange rate, RON/ USD.

Infrastructure is considered to be an important determinant of the foreign firms' initiative to invest in Romania. A good infrastructure facilitates the activity of firms and allows processes to unfold easier, in shorter time and with lower costs. Thus, infrastructure, proxied by the number of kilometres of modernized road, is expected to have a positive effect on the value of subscribed capital (initial registration) in companies with foreign participation in Romania. GDP measures the size of the economy and because companies are interested in greater potential consumption and new opportunities for trade that lead to greater potential profitability, we expect to find a significant influence of this variable. Research&development expenditure reflects the level of technological evolution. Research&development lead to the creation of important intangible assets which represents an attraction factor for foreign firms. Labour costs is an important component of the cost of production and lower values should increase the value of subscribed capital (initial registration) in companies with foreign participation in Romania. The willingness of foreign firms to subscribe to the capital of Romanian firms is expected to be positively influenced by trade openness because this reflects potential new business opportunities. The number of graduates reflects the human capital available as workforce for investors. We are referring to people available to perform activities that require training at a high level or not necessarily. Exchange rate can be a factor that attracts foreign subscription to the capital of Romanian companies because, if the domestic currency is depreciated, then subscriptions made by firms from countries with a stronger currency will reflect a lower cost of capital for them.

Data regarding the endogenous variable, subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania, was collected from Romanian National Trade Register Office statistics. Data regarding de variables infrastructure, proxied by the number of kilometres of modernized road, respectively

the number of graduates, were collected from the website of Romanian National Institute of Statistics, TEMPO Online Database. We have calculated the percentage of total graduates who have successfully completed secondary upper (upper secondary and vocational) and bachelor studies, separately for each year. The annual values of GDP and R&D expenditure by sectors of performance were collected from Eurostat. The percentage change of average net wage was calculated separately for each year based on the data collected from the website of Romanian National Institute of Statistics, TEMPO Online Database. Data regarding the variable trade openness was collected from the website of World Bank, the World Development Indicators. Finally, data regarding average exchange rate RON/ USD was collected from the Interactive Database of the National Bank of Romania's website.

The following hypotheses will be tested with the purpose of verifying the correlation between the endogenous variable and the exogenous ones, presented above:

H1: Infrastructure has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.

H2: Market size, reflected by Gross Domestic Product, has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.

H3: Research&development expenditure has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.

H4: Lower labour cost has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.

H5: Higher openness to trade has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.

H6: Increased number of graduates has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.

H7: The depreciation of domestic currency has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.

The hypotheses mentioned above will be validated based on the results of simple regression models elaborated using the Eviews software.

3. Empirical results

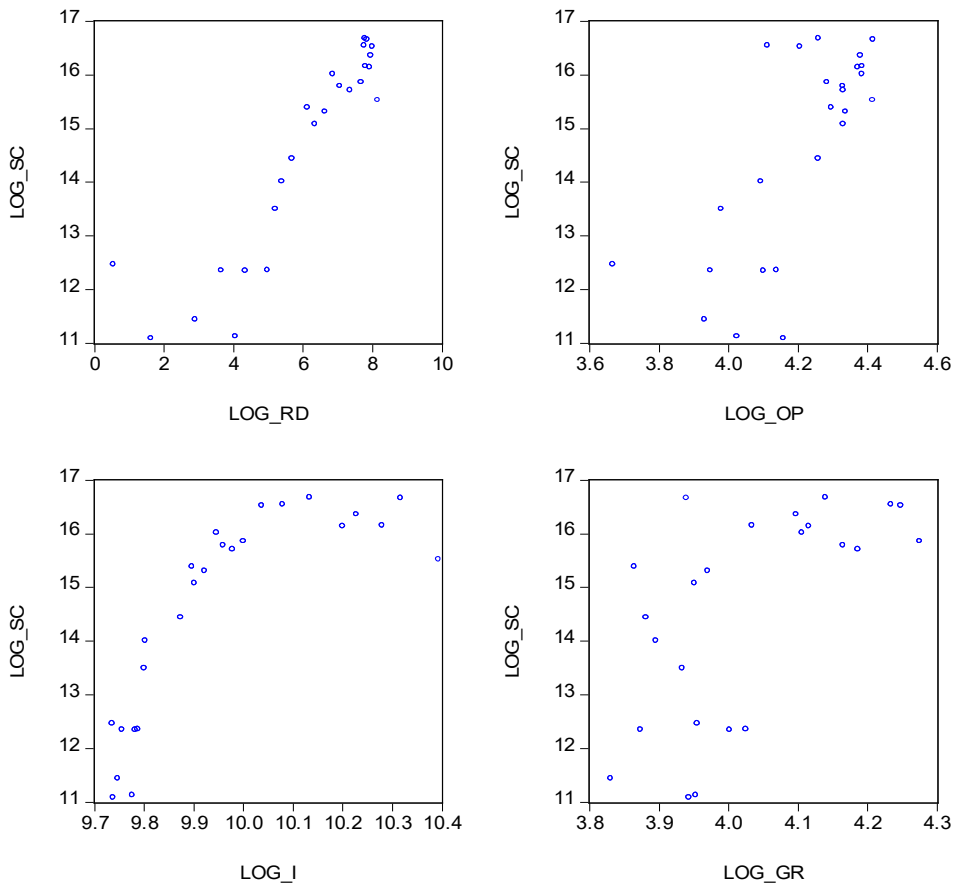
The aim of our research will be achieved by using simple regression models. In this way, we can identify the correlation between the variables described above, we can determine the intensity of the correlation and its shape, we can determine the model parameters, test the hypotheses and thus, we will be able to confirm their validity.

Taking into consideration the exponential evolution of the variables chosen, we transformed the numerical values by logarithm. Table 1 shows the symbol of the new variables, after their logarithms.

Table 1: Variables used and their symbol

Name of the initial variable	Symbol for the initial data series	Symbol for the transformed variable
Value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	SC	LOG_SC
Infrastructure	I	LOG_I
GDP	GDP	LOG_GDP
R&D expenditure by sectors of performance	RD	LOG_RD
Labour cost	LC	LOG_LC
Trade openness	OP	LOG_OP
Graduates	GR	LOG_GR
Exchange rate RON/USD	ER	LOG_ER

Source: realized by the author



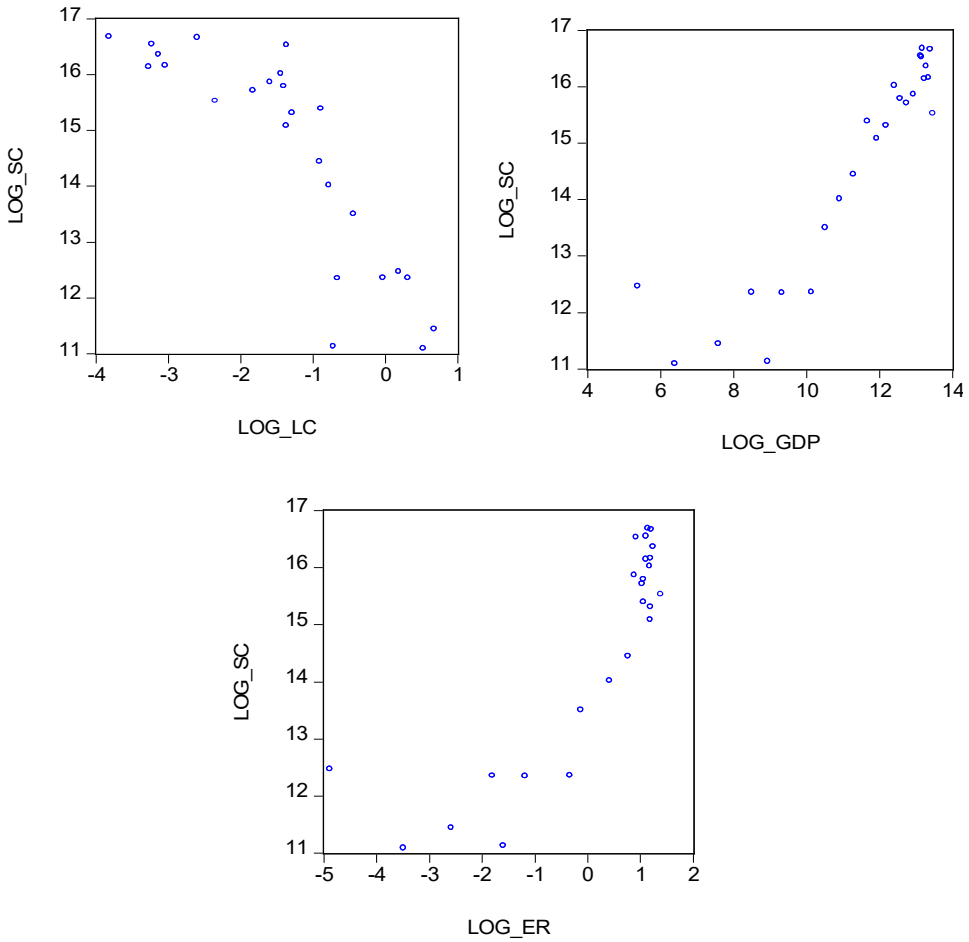


Figure 2: The scatter plot between the value of subscribed capital in companies with foreign participation in the share capital in Romania and the exogenous variables
Source: author calculus using Eviews

The correlation between the endogenous variable, LOG_SC, and the exogenous variables is described by the scatter plot.
Based on the graphical representations, we can state that between the value of subscribed capital (initial registration) in companies with foreign participation in Romania and the variables research&development, trade openness, infrastructure, GDP, exchange rate, respectively graduates, there is a direct and linear correlation and between the value of subscribed capital (initial registration) and labour cost there is an inverse linear correlation.
Next, we will use econometric modelling in order to confirm the research hypothesis mentioned above. Thus, simple linear regression models will be developed between the variable subscribed capital in companies with foreign participation in Romania and the chosen exogenous variables, all the variables being considered in the logarithmic form. The table below presents some of the estimation results:

Table 2: Estimation results of linear simple regression model between the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania and the exogenous variables

Exogenous variable	R-squared $\hat{\bar{R}}^2$	Fisher statistic F_{calc}	P	Coefficient of exogenous variable	t Statistic	P
LOG_I	0.632	39.53	0.000002	7.6654	6.2879	0.00
LOG_GDP	0.844	124.43	0.00	0.7494	11.1550	0.00
LOG_RD	0.825	108.80	0.00	0.8176	10.4307	0.00
LOG_LC	0.719	59.02	0.00	-1..2731	-7.6826	0.00
LOG_OP	0.539	26.92	0.000029	7.4778	5.1886	0.00
LOG_GR	0.381	13.56	0.001304	9.1175	3.6824	0.0013
LOG_ER	0.727	61.38	0.00	0.9578	7.8346	0.00

Source: author calculus using Eviews

The correlation coefficient (R-squared) expresses the intensity of the influence that each exogenous variable has on the endogenous variable LOG_SC. The correlation between de variables is stronger when the value of R-squared is closer to 1. With one exception, it can be observed that the correlation reports are statistically significant.

As we can see in Table 2, the intensity of the correlation regarding the sample of 25 observations is strong and statistically significant between LOG_SC and the variables LOG_GDP, LOG_RD, LOG_ER, LOG_LC and LOG_I. The intensity of the correlation between LOG_SC and the variable LOG_OP is medium the sample level but is statistically significant at population level, while the correlation between LOG_SC and the variable LOG_GR is weak. It is a direct correlation from the LOG_GDP, LOG_RD, LOG_ER, LOG_I, LOG_OP, LOG_GR and reverse from LOG_LC.

Regarding the significance of the coefficients, it can be seen that all of them are significantly different from 0, the probability that they are null featuring in the last column of the table 2 (it can be seen that it is zero in most cases, the only exception is in the case of the variable LOG_GR). The coefficient of labour cost is negative, and this means that a raise of its value has a negative impact on the value of subscribed capital (initial registration) in companies with foreign participation in Romania.

The models are valid and were confirmed by the tests relating to residual variable ε_t. Thus, White test confirmed the homoscedasticity of the errors, Durbin Watson confirmed the independence and Jarque Berra confirmed the normality of errors.

Based on the results that we have obtained by using econometric modelling, we can take the following decisions regarding our research hypotheses:

Table 3: Research propositions and related decisions

Research propositions	Decision
H1: Infrastructure has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	Validated
H2: Market size, reflected by Gross Domestic Product, has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	Validated
H3: Research&development expenditure has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	Validated
H4: Lower labour cost has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	Validated
H5: Higher openness to trade has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	Validated
H6: Increased number of graduates has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	Validated, weak correlation
H7: The depreciation of domestic currency has a positive influence on the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania.	Validated

Source: author results using Eviews

4. Conclusion

This empirical research reveals that factors such as gross domestic product (GDP), research&development expenditure, exchange rate, labour cost and infrastructure have an important role in explaining the value of subscribed capital (initial registration) in companies with foreign participation in the share capital in Romania, trade openness has a moderate influence on the value of subscribed capital, while the number of graduates has a weak influence. Between the value of subscribed capital in companies with foreign participation in Romania and GDP, research&development expenditure, exchange rate, infrastructure, trade openness, respectively graduates there is a direct and linear correlation and between the value of subscribed capital in companies with foreign participation in Romania and labour cost, there is an inverse linear correlation.

Our study emphasizes that foreign investors are interested in the evolution of economic factors and in the infrastructure in Romania, and that is why policy maker's efforts should be directed towards improving the level of these variables of influence. It seems that human capital, proxied by the number of graduates, doesn't represent an important attraction factor for foreign investors whom are interested more in the economic factors that can lead to obtaining a competitive advantage. Of course, infrastructure is very important, and has also economic consequences, as it facilitates the transport between the production area and the sales area.

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SECTION: *FINANCE, BANKING, ACCOUNTING AND AUDIT*

FINANCIAL PERFORMANCE ANALYSIS IN LISTED COMPANIES

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Abstract: *The financial crisis which caused numerous bankruptcies is phenomenon that can repeat itself in the ensuing period. One of the causes that generated the phenomenon was, along with the mortgage-back securities, the insufficient attention devoted to industrial production in general and to profit in particular. The literature in the field points to the fact that companies' managers need to take into account the means of obtaining profit as well as liquidity and leverage. This is why in this paper we focus on the profitability of the oil and gas companies which have been affected by the financial crisis. Profit and loss account comprises two components: the operating and financial flows of an enterprise over a period of time, usually the financial year. We can evidence the results of a company based on the annual reports during the fiscal period such as financial position, performance and cash flow. The paper conducts a comparative analysis of performance between two companies operating in the energy industry, OMV Petrom SA and ROMGAZ SA.*

Keywords: *Assets; Equity; Funds; Earnings; Sales;*

JEL classification: *G32; M41;*

1. Literature Review

In the economic literature, there is a diversity opinions regarding the performance. Thus, Banerjee (Banerjee, 2015: 171-179) said that the profit in general refers to "the difference between the total revenue accruing from the sales of a commodity and the total cost incurred in producing it. On the other hand the terms profitability implies the extent of capacity of earning profit. In an abstract sense, it may be defined as the quality of being profitable". Holz analyzed China's industrial state-owned enterprises (SOEs) and observed that a low-profitability of these enterprises tend have a high liability–asset ratio (Holz, 2002: 1–26).

Another paper aims to "investigate the predictability of Australian industrial stock returns in a Bayesian dynamic forecasting model. When the industry momentum is examined, the results show that a group-rotation strategy can enhance the portfolio performance" (Yao and Alles, 2006: 122–141).

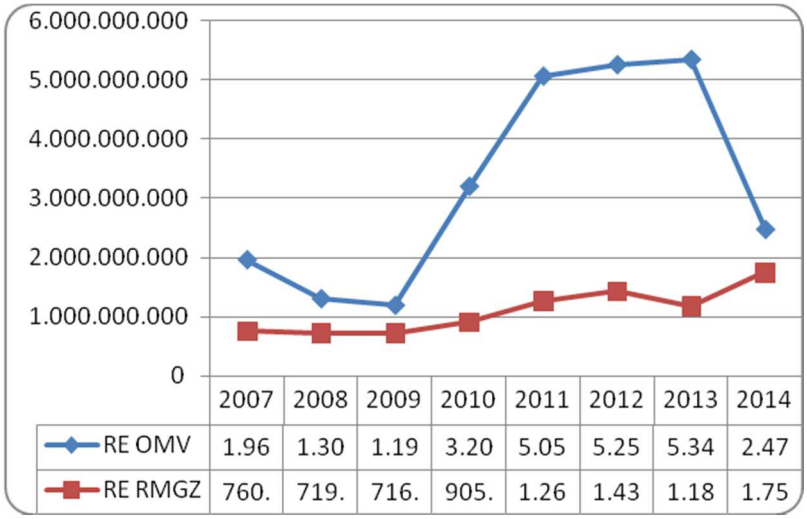
In Finland, the weak profitability, liquidity and solvency of "harvesting contractors and the consequent difficulty in hiring qualified machine operators make networking and enterprise growth a complicated process. Analyzing the year 2007 the authors get that net profit was about 6%, credit share of turnover over 50% and median financial reserve €18,000. High machine depreciation and interest expenses together with low solidity make it difficult for small enterprises to absorb seasonal variations and to cope with recessions. Profitability varies considerably amongst smallest enterprises, which most often are sole-operator enterprises. Moreover, even the median profit of the smallest enterprises tends to be negative, which means that enterprise capital will be consumed and many enterprises are at risk of failure. Larger enterprises are

more likely to be limited liability companies. Their median profit is clearly positive and the profit varies relative little between enterprises" (Mikkola, et al, 2011: 211-229).
Another paper analyses the relation between "working capital management and profitability for small and medium-sized enterprises (SMEs) by controlling for unobservable heterogeneity and possible endogeneity. The results show that there is a non-monotonic (concave) relationship between working capital level and firm profitability, which indicates that SMEs have an optimal working capital level that maximizes their profitability. In addition, a robustness check of our results confirms that firms' profitability decreases as they move away from their optimal level" (Baños-Caballero, et al, 2012: 517-529).
In another model are evaluated "four wintering strategies in the context of the whole farm system and compare them in terms of profitability and the variability of profit under different climate years, and to identify the key drivers of profitability for each strategy" (Beukes, et al, 2011: 541–550).
A group of researchers studies the impact of two reverse logistics business strategies on profitability of the firm through operations management (OM) in the steel industry. The first strategy is production mix efficiency (PME), which is involved in the process of producing goods. The second strategy is product route efficiency (PRE), which engages in the transportation of goods. The authors finding indicates that OM alone does not have a positive impact on profitability but the two strategies have a positive effect on profitability" (Weeks, et al, 2010: 1087-1104).
From other point of view the performance of an enterprise "depends largely on its financial structure that is how much of its activity is financed by equity and how much by debt. The authors tried to see if in the companies in Romania there is a significant link between their performance measured by ROE and ROA and leverage (as a measure of company's exposure and hence as indirect measure of the company's financial structure) and their liquidity" (Csegedi, et al, 2012: 195-198).
Investors are interested by "the company's ability to generate, sustain and increase profit. That is why, profitability can be measured in some different ways, but interdependent. A profitability measurement is based on the link between the company's costs and sales. Earnings are generated especially by the ability of controlling the costs compared to obtained revenues" (Moscviciov, et al, 2010: 122 – 127).
An important tool in performance analysis is "the ratio method which can be used both in trend and static analysis. As accounting ratio is an expression relating two figures or accounts or two sets of account heads or group contain in the financial statements. Ratio is work out to analyze the following aspects of business organization such as: solvency, stability, profitability, etc." (Moscviciov, et al, 2010: 600 – 603). Managerial or financial analysis methods of risk "allow measuring past performance of the company, informing at a small extent on its future. As a response to these practical requirements, the risk of failure diagnosis has undergone a significant development due to the use of statistical methods for analyzing the financial situation from a set of rates" (Bătrâncea, 2011: 393 – 399; Bătrâncea M., Bătrâncea L., 2006: 23).
Modern and efficient management of an entity "must be evaluated using financial performance criteria, covering on one side operational activity and on the other side the actual financial activity conducted over a period of time determined usually by the financial exercise" (Csegedi, et al, 2011: 341-347).

2. Method and Results

The performance analysis undertaken for the two energy companies based on profit and loss, and the dynamic component has a static component and a component based on financial performance rates.

A first dimension of analysis is based on interim results of performance development, namely: the operating result, the financial result, the gross result and net result.



	2007	2008	2009	2010	2011	2012	2013	2014
RE OMV	1.96	1.30	1.19	3.20	5.05	5.25	5.34	2.47
RE RMGZ	760.	719.	716.	905.	1.26	1.43	1.18	1.75

Figure 1 The operational profit evolution at these companies
Source: Own calculus

From the above representation the operating profit shows the same trend during the crisis 2007 - 2008 and a different pattern in rest period. Thus, during post crisis (2010 - 2013) OMV operating profit significantly increased, reaching a peak in 2013, after which, due to lower stock prices of oil, operating profit dramatic drop until 2010. On the other hand, ROMGAZ' operating profit increased steadily 2014, reaching a level comparable to the level recorded operating profit of OMV.

The financial activity from foreign sources was another dimension of performance. In this case the evolution of the companies was different. Thus, because of the level of long-term loans, the financial result of OMV is negative since 2011, although since 2013 there has been an increase of financial profit. Instead, the ROMGAZ financial result has a constant level compared to the level registered positive for OMV, as a result of investments made by the company to identify new sites of operation.

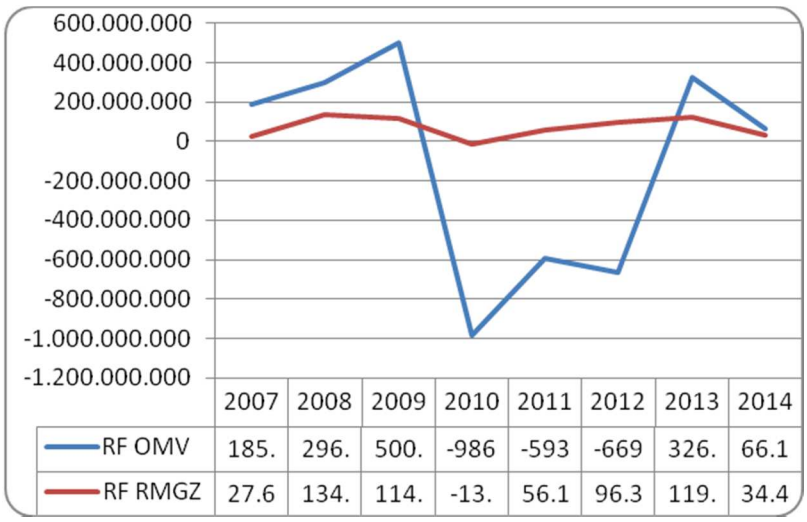


Figure 2 The financial profit evolution
Source: Own calculus

Finally evolution of gross profit on the one hand and net profit on the other hand represent new dimensions of financial analysis.

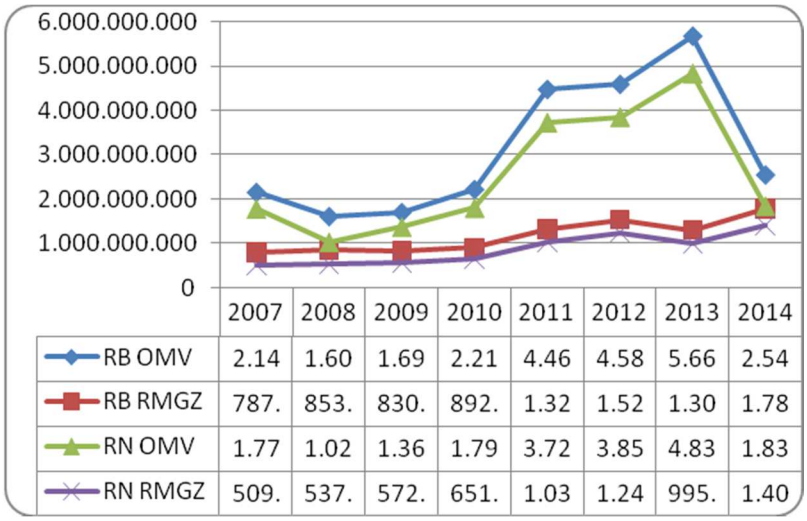


Figure 3 The gross and net profit evolution
Source: Own calculus

From the chart above we note that both gross profit and net profit have the same trend in operating profit, with a drop between 2007 - 2009 and an increase until 2013, after which the interim results of OMV significantly reduces the due to lower oil prices. However, ROMGAZ has a steady growth since 2010, between the values of the two companies there are nearby in 2014.

To analyze the factors that led to these developments, we followed the evolution of turnover of the two companies.

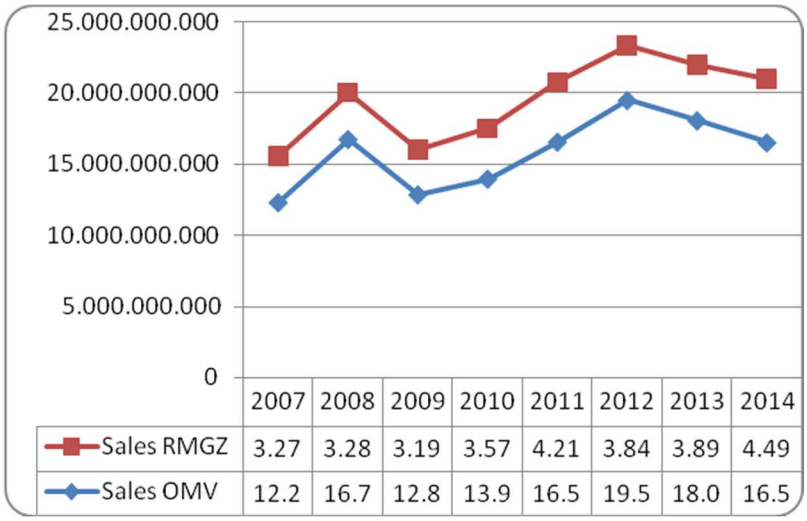


Figure 4 The sales evolution
Source: Own calculus

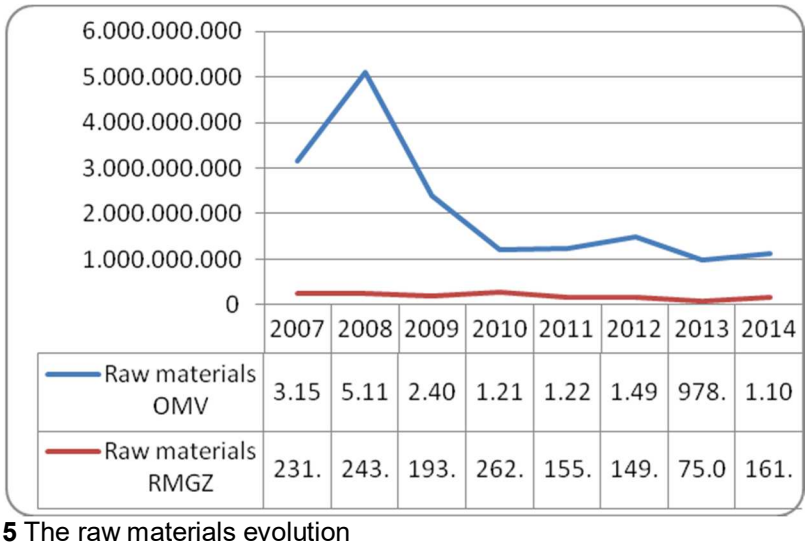
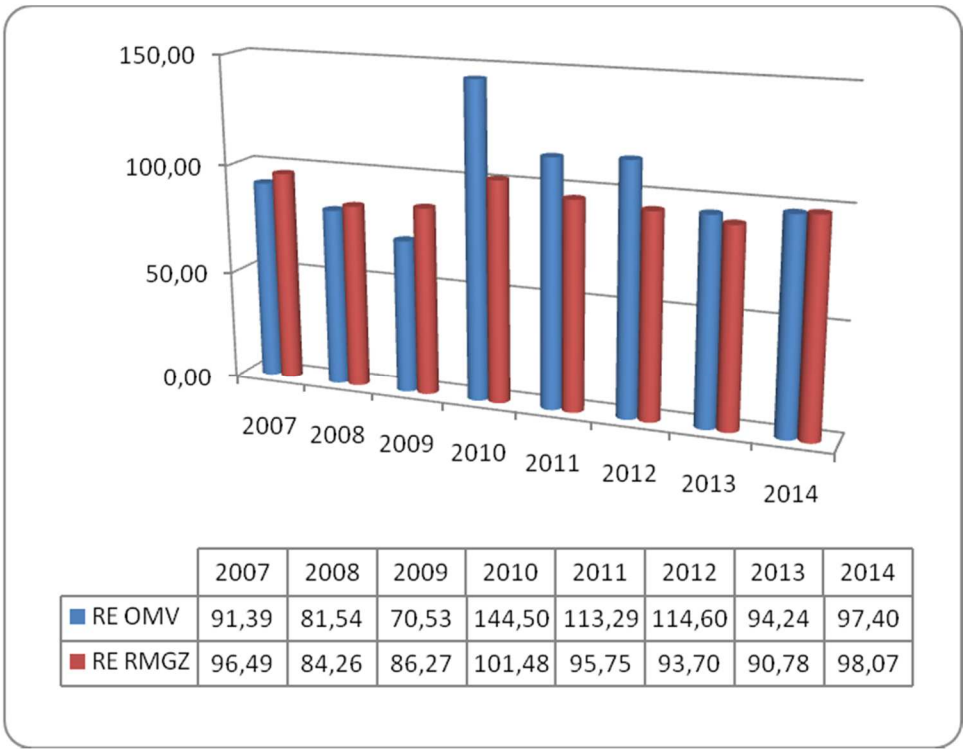


Figure 5 The raw materials evolution
Source: Own calculus

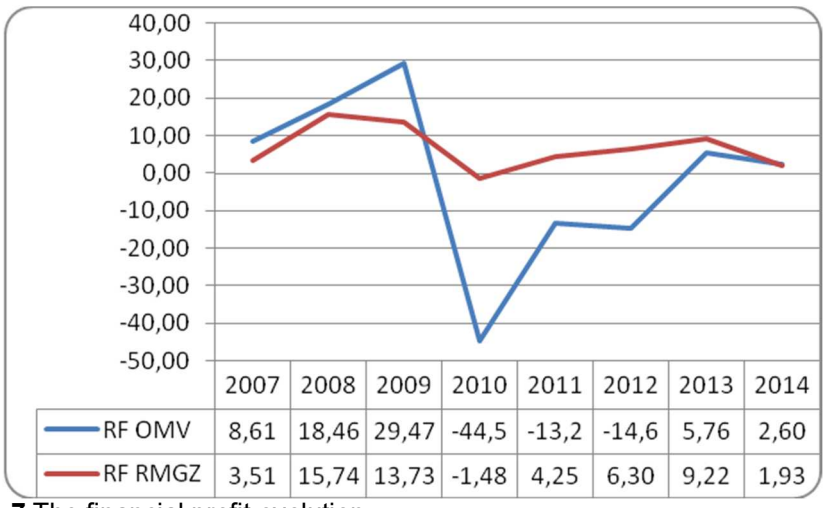
It is therefore apparent that while the price of natural gas remained at the same level worldwide, OMV, dramatically lowering the cost which reached its lowest level in 2014 resulted in a decrease and sales due to reduced sales price pump.

Analyzing the structure of interim results, we find that these are at the following levels.



	2007	2008	2009	2010	2011	2012	2013	2014
RE OMV	91,39	81,54	70,53	144,50	113,29	114,60	94,24	97,40
RE RMGZ	96,49	84,26	86,27	101,48	95,75	93,70	90,78	98,07

Figure 6 The evolution of operational profit structure
Source: Own calculus



	2007	2008	2009	2010	2011	2012	2013	2014
RF OMV	8,61	18,46	29,47	-44,5	-13,2	-14,6	5,76	2,60
RF RMGZ	3,51	15,74	13,73	-1,48	4,25	6,30	9,22	1,93

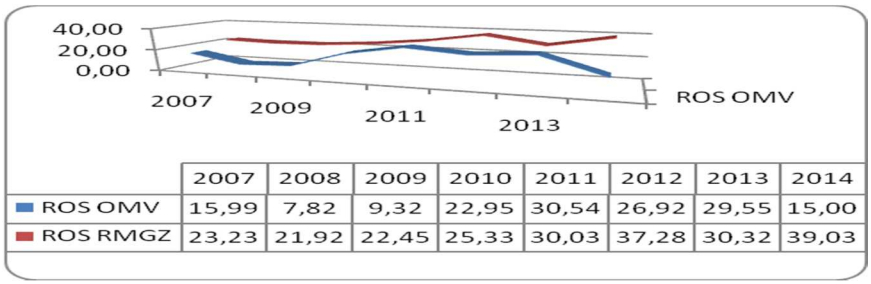
Figure 7 The financial profit evolution
Source: Own calculus

It is therefore apparent that compared to ROMGAZ company OMV losses from financial activities reflected negatively on the efforts carried out during the reporting

period from operating activities. Another component of analyzing the performance of the levels of performance concerns the returns on sales **(ROS)** and shows the capacity of self-financing entities, based on operational profit (RE) and total sales (TS), such:

$$ROS = RE/TS$$

This rate is also called net profit margin who indicates the relative effectiveness of the economic entity, after subtract the operation expenses.

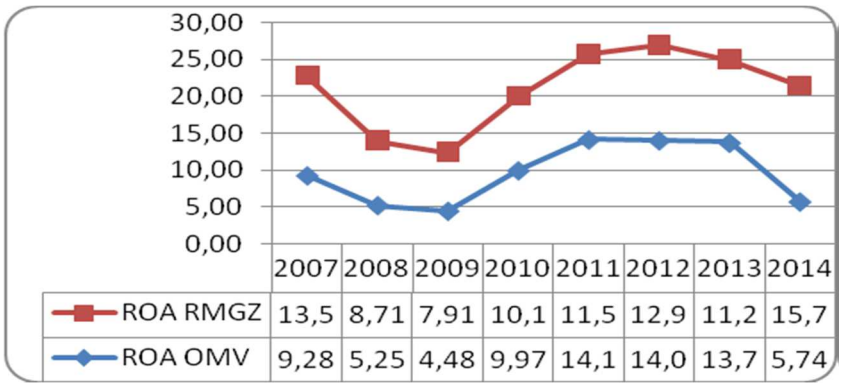


	2007	2008	2009	2010	2011	2012	2013	2014
ROS OMV	15,99	7,82	9,32	22,95	30,54	26,92	29,55	15,00
ROS RMGZ	23,23	21,92	22,45	25,33	30,03	37,28	30,32	39,03

Figure 8 The evolution of return on sales
Source: Own calculus

Comparing the company gross margin and net margin we get an indication of uninvolved in production costs and indirect costs such as administrative, financial and marketing.
Another indicator is the Return on Assets – ROA which is determined as relation between net profit (NP) and the value of the company's assets (TA). This ratio measures the return of the entire capital invested in the company:

$$ROA = NP/TA$$



	2007	2008	2009	2010	2011	2012	2013	2014
ROA RMGZ	13,5	8,71	7,91	10,1	11,5	12,9	11,2	15,7
ROA OMV	9,28	5,25	4,48	9,97	14,1	14,0	13,7	5,74

Figure 9 The evolution of ROA at the analyzed companies
Source: Own calculus

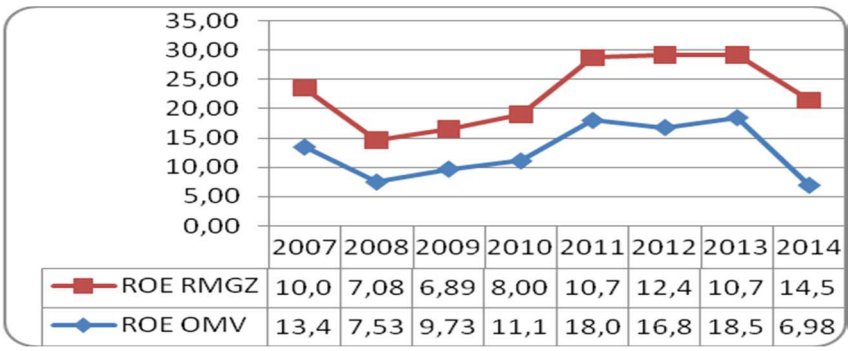


Figure 10 The evolution of ROE
Source: Own calculus

In the economic English-American literature, the indicator is called Return on Total Assets-ROA or Return on Investment-ROI). According to some American analysts the indicator is determined as relation between the operating profit and total assets. In this case, the indicator measures the efficiency in using the assets of the company in the operating activity.
The performance refers to the equity performance using the indicator Return on Equity that is determined as a ratio between net profit (NP) and equity (EQ):

$$ROE = NP/EQ$$

In the technical literature the indicator is also called Return on Common Equity ROCE and measures the profitability degree of the investments made by the shareholders both in the operating activity and in the financial one.
It is noted that the rate of return shows a fluctuating trend, followed in 2013, to have an efficient activity. We believe that sales marginally jeopardize the continuation of the operation.

3. Conclusions

Energy performance of a company is very important for the state budget and especially for domestic and industrial consumers, since it has an impact on prices and tariffs for distribution and sales.
We think that the performance analysis is particularly useful for the management of these companies as performance leaves its mark on the market value of the shares of these companies.
Last but not least, we believe that performance is a barometer of strong and dynamic that adequately reflects the rating energy companies.

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MODEL OF RATING IN ENERGY INDUSTRY

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Abstract: *The latest findings evidenced rating as an additional safety measure in the capital market. The financial crisis which affected thousands of companies and banks imposed as a necessity that as well as the annual financial reports the company's rating be a listed at the stock exchange. Although a company's rating is established in advance by rating agencies many papers try to find ways of evaluating risk by particular applicable to a certain field. The research that we have conducted aligns itself with such model of research in the field of energy. The paper presents a way of rating energy companies based on an aggregate model with three components: own model, a model of aggregate bank and a model of credit scoring aggregate. The model thus constructed was tested on two energy companies, namely: OMV Petrom SA and Romgaz SA.*

Keywords: *Rating; Scoring; Banking; Liquidity; Bankruptcy.*

JEL classification: *G24; G32; G33.*

1. Introduction

The issue of companies' rating is widely debated in the literature and is considered a central component of financial management and financial decisions based on the rating. Thus, some authors consider that "modern and efficient management of an entity must be evaluated using financial performance criteria, covering on one side operational activity and on the other side the actual financial activity conducted over a period of time determined usually by the financial exercise. With respect to this, many analysts have designed and developed an assessment model of the entity's business based on score, a model that highlights the financial standing of the entity at some point in time" (Csegedi, et al, 2011: 341-347).

Other papers show that "financial policies trigger the company's financial strategies and they are part of the general strategy of the company. Also, the financial policies are applied through decisions grouped into three categories: operational decisions, investment decisions and financing decisions. The implementation of these decisions and their consequences may track the flow of funds, which is revealed by the cash flow" (Găban, 2015: 434-439).

The rating is "connect in most of cases, in the regional analysis, by the indicators of income which reflect a certain level of income and the extent to which local and regional government holds control over regional and local revenues. These ratios can be use in the regional rating models based on the income statement" (Bătrâncea, et al, 2013: 296 – 305).

Modelling rating companies in general, and companies in the energy industry in particular is a concern especially CRA products which provide signals to investors in the capital market in the direction in which it moves energy industry and default

economy. Therefore in this paper we built a three-level aggregate rating model, own model; an aggregate banking model and an aggregate credit scoring model.

2. Literature review

In an important paper referring to financial crises it shown that "during 2007-2008, market participants relied heavily on the ratings that credit rating agencies assigned to financial instruments, including mortgage-backed securities, to determine creditworthy investment options. As mortgage holders began to default on their loans and many highly rated securities lost value, the poor quality of these ratings became apparent" (White, 2009). Csegedi (Csegedi, et al, 2012: 195-198). In another paper indicates that the performance of an enterprise is "a component of rating and depends on its financial structure and shows how much its activity is financed by equity and how much by debt"

On the other hand the rating agencies "are important components of the market competition and provide valuable credit information about 3,000 corporate most of them is located in the US. That is why some authors developed a model that tries to approximate agencies' ratings by using solely financial data. This class of models is usually called shadow rating models" (Cardoso, et al, 2013: 51 – 58).

Others researchers connect the ratings to the "Basle regulations, and consider that the rating analysis is based on some of the indicators used for the financial analysis and can determine the financial soundness of the company. The rating determined for a company, together with guarantees rating, fundaments the decision of granting a credit and its cost (interest percent). In order to be valid, the rating system has to be a unitary rating system within the group and elaborated in accordance to Basel II regulations regarding the internal approach of the rating system" (Batrancea, et al, 2007: 80-83; Bătrâncea M.,Bătrâncea L: 2006:56). An important step in building a "shadow rating model is mapping the ratings from international agencies to relevant default probabilities. That is why some authors favoured the unsecured long-term issuer ratings, since they do not take in consideration possible credit risk mitigates and are consistent with the Basel Accord II" (Cardoso, et al, 2013: 51 – 58).

Before the financial crisis, some analysts "defined credit scoring as a technique that helps credit providers to decide whether to grant credit to consumers or customers. In their model, on the one hand it illustrates the use of data mining techniques to construct credit scoring models and on the other hand it illustrates the combination of credit scoring models to give a superior final model" (Hian, et al 2006: 96-118). In the same period, in another paper it is studied "the influence of the state on the business cycle and on credit ratings based on a model of rating that takes into account some factors which measure the business and financial risks of firms, and in addition to macroeconomic conditions" (Amatoa and Furfineb, 2004: 2641–2677).

3. Methodology and Results

In the construction of the aggregate rating model we considered three levels of rating:

- ► own rating model with a share of 30% in the final rating;
- ► an aggregated model-based bank rating methodology: BCR - ERSTE, Transylvania Bank and BRD - GSG, with a share of 35% in the final rating and

► an aggregate scoring model based methodologies: Altman, Stickney and Ivoniciu and with a share of 35% in the final rating.

The rating is based on its rates of liquidity, profitability and activities of companies. Rates method used in this model is a technical financial analysis of companies and is used most often in the analysis of financial standing. Thus, some authors show that "ratio analysis is the method or process by which the relationship of items or group of items in the financial statement are computed, determined and presented. Ratio analysis can be used both in trend and static analysis" (Moscviciov, et al, 2010: 600 – 603). Other researchers consider that the "investors are concerned about the company's ability to generate, maintain and increase profits, and that is why rates are useful tools of analysis that summarize large amounts of data in a form easier to understand, interpret and compare" (Bătrâncea, et al, 2013: 846 – 856). An important role in building financial returns rates has the informational system which needs to "ensure also the evaluation of the company's liquidity, which depends on the cash-on-hand resources and on the cash-on-hand which will be generated by the operational cycle of the company. The company's ability of repeating this cycle depends on its short-term liquidity and on its capacity of generating cash-in-hand, which represents its working capital" (Bătrâncea, et al, 2010: 54 - 59).

Relying on rates method, we awarded five grades A, B, C, D and E by reasoning own and provisions BNR regulations, as follows: "Very Good" and "Good" grade A "Above average" and "Average" grade B "Below average" rating C, "Poor " rating D and "Very poor " grade E. Thus, our rating model has seven financial ratios presented below:

- Quick ratio = (Current assets – Inventories) / Current debts * 100;
- Solvency Ratio = Total assets / Total Liabilities * 100;
- Debt Ratio = Total debts / (Total debts + Equity) * 100
- Return on Equity= Net profit / Equity * 100
- Return on Assets = Net profit / Total assets * 100
- Gross Return on Sales = Gross profit / Net sales* 100
- Days of collection= receivables / net sales * 360

Among the bank rating models we selected the following banks: BCR- Erste Bank, Transylvania Bank and BRD-GSG Bank because they are within the top 3 in Romania in terms of the value of bank assets. Also, we chose the scoring models: Altman, Stickney and Ivoniciu which are representative for the energy industry.

The credit scoring method aims to "provide predictive models for assessing risk of failure of an enterprise and is based on statistical techniques of discriminate analysis of information provided by the transformation of economic and financial indicators in a score able to predict the success or failure of a business. The scoring function obtained allows the issuance of a value judgment which estimates the likelihood of risk occurrence in the analyzed firms, allowing distinguishing the healthy firms from the ones in difficulty" (Bătrâncea, 2011).

Then we shall Romgaz and OMV Petrom rating companies through the three models and finally we aggregate the results to get the rating for each analyzed year.

In our model scores are awarded for each financial rate based on a confidence interval of each financial ratio, as shown in the table below.

Table 1. Assigning scores in their rating model

Ratings	A	B	C	D	E
Indicators/ Points	**5**	**4**	**3**	**2**	**1**
Quick ratio	**>130%**	**>100%**	**>75%**	**>50%**	**<50%**
Solvency ratio	**>300%**	**>250%**	**>200%**	**>150%**	**<150%**
Debt ratio	**<20%**	**<30%**	**<50%**	**>50%**	**>70%**
Return on Equity	**>17%**	**11-17%**	**6-10%**	**0-5%**	**<0**
Return on Assets	**>11%**	**8-11%**	**4-7%**	**0-3%**	**<0**
Gross profit on sales	**>18%**	**13-18%**	**9-13%**	**5-9%**	**0-5%**
Days of collection	**<30**	**30-45**	**45-60**	**60-90**	**>90**
Scoring (points)	**28-35**	**21-27**	**14-20**	**8-13**	**<=7**

Source: Own calculus

After applying our rating model, the situation of the companies is as follows:

Table 2. The scoring based on the own model

Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014
OMV Petrom								
Points	26	22	21	22	25	26	29	22
Ratings	**B**	**B**	**B**	**B**	**B**	**B**	**A**	**B**
Romgaz								
Points	30	28	27	27	28	30	28	30
Ratings	**A**	**A**	**B**	**B**	**A**	**A**	**A**	**A**

Source: Own calculus

The aggregate bank model generated is presented below.

Table 3. The evolution of the ratings-based on banking models

Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014
OMV Petrom								
BCR –Erste								
Points	0,79	0,79	0,79	0,85	0,79	0,85	0,79	0,79
Ratings	B	B	B	C	B	C	B	B
Transylvania Bank								
Points	33	32	32	33	32	33	35	34
Ratings	B	B	B	B	B	B	B	B
BRD –GSG								
Points	46,00	43,00	40,00	43,00	48,00	43,00	46,00	46,00
Ratings	A	A	B	A	A	A	A	A
Total points	13	13	12	12	13	12	12	12
OMV-Petrom SA Banking Ratings	A	A	B	B	A	B	B	B
Romgaz								
BCR –Erste								
Points	0,51	0,51	0,51	0,51	0,51	0,51	0,51	0,51
Ratings	A	A	A	A	A	A	A	A
Transylvania Bank								

Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014
Points	44	39	37	35	36	35	36	38
Ratings	A	B	B	B	B	B	B	B
BRD –GSG								
Points	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00
Ratings	A	A	A	A	A	A	A	A
Total points	15	14	14	14	14	14	14	14
ROMGAZ Banking Ratings	A	A	A	A	A	A	A	A

Source: Own calculus

The aggregate credit scoring for Romgaz and OMV Petrom is described below.

Table 4. The evolution of credit ratings based on scoring

Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014
OMV Petrom								
Altman Model								
Points	2,43	1,90	1,35	1,31	1,95	1,97	2,37	1,65
Ratings	B	B	C	C	B	B	B	C
Stickney Model								
Points	1,3908	0,8153	0,1095	-0,2814	-1,2683	-0,5883	-0,0672	-0,5259
Bankruptcy Probability	0,25398	0,34713	0,4788	0,55428	0,72762	0,61201	0,51301	0,60047
Ratings	B	C	C	D	E	D	D	D
Ivoniciu Model								
Points	5,7861	5,2388	5,0934	5,3618	6,5604	5,8231	6,6984	6,0329
Ratings	B	B	B	B	A	B	A	A
Total points	12	11	10	10	10	10	11	10
OMV Petrom SA credit scoring ratings	B	B	B	B	B	B	B	B
Romgaz SA								
Altman Model								
Points	4,13	3,56	3,49	3,63	3,11	3,49	2,98	3,71
Ratings	A	A	A	A	A	A	A	A
Stickney Model								
Points	14,4368	15,3059	13,5952	12,4937	6,6119	9,0955	9,6026	10,6807
Bankruptcy Probability	0,00001	0,00001	0,00003	0,00006	0,00593	0,00087	0,00059	0,00025
Ratings	A	A	A	A	A	A	A	A
Ivoniciu Model								
Points	13,6469	13,5205	12,3695	11,7580	11,4504	13,3477	12,9003	14,2630
Ratings	A	A	A	A	A	A	A	A
Total points	15	15	15	15	15	15	15	15
ROMGAZ SA Credit scoring ratings	A	A	A	A	A	A	A	A

Source: Own calculus

Next, we proceeded to the classification of each grade from three models labeled A to E, a rating category, with scores shown in the table below.

Table 5. Ratings and scores models

Rating Models	Ratings and scores				
1. Own Model	A	B	C	D	E
Scores assigned its own model	15-13	12-9	8-6	5-3	< 3
2. Banking model	A	B	C	D	E
Scores assigned banking model	15-13	12-9	8-6	5-3	< 3
BCR –Erste model	5	4	3	2	1
Transylvania Bank model	5	4	3	2	1
BRD-GSG model	5	4	3	2	1
3. Credit scoring model	A	B	C	D	E
Scores assigned credit scoring model	15-13	12-9	8-6	5-3	< 3
Altman model	5	4	3	2	1
Stickney model	5	4	3	2	1
Ivoniciu model	5	4	3	2	1

Source: Own calculus

Ratings graded from A to E of the three partial models are weighed in the general model, with 30% for own model, 35% for banking model and 35% for credit scoring model, as follows:

Table 6. Ratings and rating models adjusted scores

Rating models and weights	Ratings and scores				
Own Model	A	B	C	D	E
Scores of ratings	5	4	3	2	1
Scores adjusted by 30%	1,50	1,20	0,90	0,60	0,30
Banking model	A	B	C	D	E
Scores of ratings	5	4	3	2	1
Scores adjusted by 35%	1,75	1,40	1,05	0,70	0,35
Credit scoring model	A	B	C	D	E
Scores of ratings	5	4	3	2	1
Scores adjusted by 35%	1,75	1,40	1,05	0,70	0,35

Source: Own calculus

Based on the scores obtained we have assigned the following ratings:

Table 7. Aggregate rating scale model

Scoring	Rating
5 – 4,75	AAA
4,50 – 4,74	AA+
4,49 – 4,00	AA-
3,99 – 3,75	A
3,74 – 3,50	BBB
3,49 – 3,00	BB-
2,99 – 2,75	BB+

Scoring	Rating
2,74 – 2,50	BB-
2,49 – 2,00	CCC
1,99 – 1,75	CC
1,74 – 1,50	C
1,49 – 1,00	D
< 1,00	E

Source: Own calculus

Following the calculations aggregate the rating for OMV Petrom SA is as follows:

Table 8. The aggregate rating of OMV Petrom SA

Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014
Own model	B	B	B	B	B	B	A	B
Points	4	4	4	4	4	4	5	4
Pointsx30%	1,20	1,20	1,20	1,20	1,20	1,20	1,50	1,20
Banking model	A	A	B	B	A	B	B	B
Points	5	5	4	4	5	4	4	4
Pointsx35%	1,75	1,75	1,40	1,40	1,75	1,40	1,40	1,40
Credit scoring model	B	B	B	B	B	B	B	B
Points	4	4	4	4	4	4	4	4
Pointsx35%	1,40	1,40	1,40	1,40	1,40	1,40	1,40	1,40
Total scores	4,35	4,35	4,00	4,00	4,35	4,00	4,30	4,00
OMV Petrom SA Ratings	AA-	AA-	AA-	AA-	AA-	AA-	AA-	AA-

Source: Own calculus

On the other hand, the aggregate rating for Romgaz SA is as described below.

Table 9. The aggregate rating of ROMGAZ SA

Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014
Own model	A	A	B	B	A	A	A	A
Points	5	5	4	4	5	5	5	5
Pointsx30%	1,50	1,50	1,20	1,20	1,50	1,50	1,50	1,50
Banking model	A	A	A	A	A	A	A	A
Points	5	5	5	5	5	5	5	5
Pointsx35%	1,75	1,75	1,75	1,75	1,75	1,75	1,75	1,75
Credit scoring model	A	A	A	A	A	A	A	A
Points	5	5	5	5	5	5	5	5
Pointsx35%	1,75	1,75	1,75	1,75	1,75	1,75	1,75	1 ,75
Total scores	5,00	5,00	4,70	4,70	5,00	5,00	5,00	5,00
ROMGAZ SA Ratings	AAA	AAA	AA+	AA+	AAA	AAA	AAA	AAA

Source: Own calculus

The summary of the results in tables 8 and 9 indicates the following:

Table 10. Summary results

Ratings	2007	2008	2009	2010	2011	2012	2013	2014
OMV-Petrom SA Ratings	AA-	AA-	AA-	AA-	AA-	AA-	AA-	AA-
ROMGAZ SA Ratings	AAA	AAA	AA+	AA+	AAA	AAA	AAA	AAA

Source: Own calculus

We note therefore that the rating aggregate for OMV Petrom is constant throughout the program period, while ROMGAZ, during the financial crisis, marks a decrease in the rating class from AAA to AA + and then starting with 2011 the rating returns to the AAA rating.
We find that although there are similarities in the marks obtained by various models, is remarkable and significant differences. Thus, the BRD model is rated A and B, while the model Stickney registered low ratings ranging from D and E for OMV Petrom SA. In total OMV Petrom SA has recorded eight AA- ratings. Analyzing the three models we see that ROMGAZ get 6 ratings AAA and two AA + ratings.

4. Conclusions and limitations of model rating

From the ratings presented in the modules above we note both similarities and differences between the analyzed companies. Thus from the rating models we find that in the evolution and structure of assets, OMV Petrom recorded a more favourable situation, with a higher value of total assets compared to ROMGAZ and has an accelerated growth rate. In the case of OMV the structure assets is of approximately 80% fixed assets, while Romgaz has only 60% of current assets.
The equity of the companies has an upward trend during period and the share of capital in total resources is 85-90% for OMV and 90% for Romgaz.
Also liquidity, solvency and performance have an impact on the ratings of the two companies. All these factors measured by financial ratios reflect positively or negatively on the rating of the two leading energy companies during the analyzed period, ROMGAZ having a constant evolution, as seen in the light of the criteria used in the financial model components of aggregate rating.

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USING AUDIT METHODS IN THE AUDITING OF NON-CURRENT ASSETS OF THE MUNICIPALITY

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Abstract: *The paper deals with using audit methods in the audit of non-current assets of the municipality. Due the fact that surveyed area is audit of the municipal assets, we made a literature review in this area. Each municipality in Slovakia has legal obligation of audit of its financial statements. Audit in the municipality contains a high detection risk because the independent auditor cannot reveal always so-called hidden ownership or family ties. High detection risk may lead to failure of the auditor. Due to avoid of possible auditor's failure, he or she needs to know the pitfalls accompanying audit engagement. The main objective of this paper is setting methods for the audit of non-current assets in respect of which audit risk is reducing. In the first part we have introduced a brief development of audit in Slovakia from 1989 to the present days. This part of the paper is devoted to the history of the audit and its current legislative framework. In Slovakia, international standards on auditing are applying for over ten years, and the Code of Ethics for auditors as well. Three components of audit risk affecting the overall audit risk are presented in the second part. This section lists the pitfalls in the audit of non-current assets of the municipality and suggested audit procedures, how to avoid them. Examined issue was applied on the example of the audit of non-current assets in municipality of Slovakia. Recognizing the potential audit pitfalls leads the auditor to reduce the overall audit risk. The auditor must follow the objectivity and independence from the audited entity, to recognize transactions with related parties especially in the municipality, and avoid failures in the design and the performance of appropriate audit procedures. Proper setup of the audit methods leads auditor to minimize audit risks to an acceptable rate and to formulate audit opinion. Conclusion of the article contains a risk assessment, audit planning and solving of audit pitfalls in the area of non-current assets.*

Keywords: *Auditing; Non-Current Assets; Municipality; Financial Statements.*

JEL classification: M41; M42; H83.

Introduction

The municipality in Slovak Republic is a legal person which according to law manages its own income and property. It is an independent administrative and self-governing territorial unit of the Slovak Republic. The municipality unites persons having their permanent residence. Fundamental role of the municipality in the performance of self-government is considered the care for the needs of its people and development of its territory. The management of the municipality independently manages and realizes all the tasks related to its self-administration. Law on Municipalities (1990) is the highest legal standard for the management of the

municipality. Compliance with all governing laws is part of the audit of public administration. System of control in public administration in Slovak Republic has undergone a number of organizational and competence changes since 1990 (Kočiš, 2007). However that audit is considered more like verifying activity than control, it is considered as an undetectable part of control of public administration units. Audit helps to fulfil the economy, efficiency and effectiveness of activities of public administration entities. It also provides a systematic approach to improve the efficiency of their financial management. Audit verifies and evaluates the risk management system of public administration entities, and it identifies and assesses possible risks related to financial management. According Law on Financial Control and Auditing (2015), audit verifies the accuracy and verifiability of carrying out of financial operations; and it verifies and evaluates the reliability of reporting. It also verifies the completeness and correctness of accounting of public administration entity. In principle, audit is a tool at preventing and detecting accounting errors and property fraud.

1. Literature review

An overview of the governmental accounting status quo in Europe by analysing the public sector accounting, budgeting and auditing systems in fourteen European countries wrote Brusca et al. (2015). Authors have described challenges faced by European countries as they move towards adoption of the European Public Sector Accounting Standards (EPSAS). Handzic et al. (2008) have proposed a knowledge management audit model to assist organisations to obtain an accurate picture of their knowledge-based assets and the strategies used to manage that knowledge across the organisations. The model also serves as a mean for assessing how well the identified assets and strategies meet organisational business goals and strategies. Authors illustrated model in the local government environment with implication of such an audit. Many countries are reforming their accounting systems and are using, or are planning to use, accrual based accounting (Lande and Rocher, 2011). Their article explains what needs to be considered to apply accrual accounting successfully in the public sector. These authors highlighted the issues that international accounting bodies need to address (e.g. taxation and intangible assets). Phelps (2010, 2011) has explored the link between rationale, practice and outcomes in municipal property asset management and through this to gain an improved understanding of the emerging discipline of public sector asset management. This author has developed analytical framework comprising models to measure why councils carry out asset management – rationale; how they do it – practice and what outcomes they achieved. He found recognizable link between rationale and practice, but the link between practice and outcomes was unproven. Critical success factors for effective asset management were strategic focus, organisation will, portfolio intelligence and an entrepreneurial culture. Thus, the effective asset management remains a problematic area requiring further research. The author concludes his work by stating that property asset management is a discipline of growing significance for local government across the world. Sharma et al. (2008) has described an asset level of service determination methodology, which could be integrated with decision support systems as a performance indicator. Proposed asset level of service is a composite level of service for different users of the infrastructure system. The developed framework includes accounting for

qualitative factors, such as neighbourhood, safety and aesthetics. Bogdan (2016) has shown a quantum approach to reduce the risk of error in the accounting estimates and judgments and managerial decision.

2. Research and results

2.1. Historical background of audit

History of audit is connected with the need to inspect commercial transactions in ancient Egypt, where the individual accounting cases were writing down on clay plate. Public accountants were selected by a lot to manage and control public finances in Greece (Kareš, 2015). North Italy cities were considered as predecessors of state control authorities in area of transactions verifying. In 1581 in Venice was established professional association of auditors which dealt with verification of the accounting transactions. Verification was conducted by a qualified person, and thus it became the fixed component of the Italian economy. Companies Act from 1884 in Britain created a modern form of legislation related to the audit. Under this Act, one or more shareholders were involved in verification of the correctness of the balance sheet of the company compiled by management. Shareholders were also authorized to verify accounting and books of companies. Balance sheets and the applied reports were distributed to shareholders and archived in the register of joint-stock company (Kareš, 2015).

Situation in USA was similar with the meaning of that a publication “Memorandum of Auditing of the Balance Sheet” or “Unified Accounting” was published in the report of Federal Reserve in 1917. The meaning of financial statements was emphasized in 1929, when the report of Verification of Financial Statements dealt with the Income Statement. US companies which fulfil certain conditions are required to audit their financial statements, according the Law on Securities and Exchange Commission from 1934. These companies must submit a report to the Securities and Exchange Commission. American Institute of Certified Public Accountants issued Generally Accepted Auditing Standards (GAAS) in accordance with which the audit must be conducted (Kareš, 2010).

2.2. Audit in Slovakia

In 1989, Federal Ministry of Finance approved the Decree on the verifiers and their activities. According the Decree, first verifiers had audited the financial statements for the 1989 year. This Decree was replaced by the Act no. 73/1992 Coll. on Auditors and the Slovak Chamber of Auditors (SKAU), which adopted the Slovak National Council. In 2007 came into force Act no. 540/2007 Coll. on Auditors, Audit and Supervision of Auditing (Kašiarová, et al., 2015). The Act no. 423/2015 Coll. on Statutory Audit was adopted in 2015 year. The audit in Slovak Republic is thus subject to its own legal norms of national legislation, norms adopted by SKAU, international documents and standards adopted by EU (Bráníková, et al., 2011). The General Assembly of Slovak Chamber of Auditors declared resolution valid from 2005, according to which the audit must be conducted in compliance with international auditing standards issued by the International Federation of Accountants. Auditors in Slovakia must perform their activities in accordance with the Code of Ethics adopted by SKAU, which determines all activities undertaken by auditors (Maděra, 2014). When we sum up, the audit is a systematic and objective

process of assessment and obtaining evidence containing information on economic events and activities, in order to assess the scope of the conformity between the conditions and the detected information and notify outcome to relevant stakeholders (Hakalová, 2010).

2.3. Compiling and audit of financial statements of public sector entities

Public administration entities in Slovak republic (cities, municipalities, and higher territorial units, contributory and budgetary organizations) are required to compile the individual financial statements under the Accounting Act no. 431/2002 Coll. Their individual financial statements (except contributory and budgetary organizations) must be verified by the auditor. These entities have also the obligation to issue an annual report which conformity with the individual financial statements must be verified by the auditor. Audit of the individual financial statements of the entity of public administration differs from the audit of financial statements of the business entity. It is mainly due the framework of financial reporting and regulatory environment of management and operation of the entity (Bráníková, et al., 2011). The influence of institutions in reducing-control corruption in the state of EU analysed Gherai et al. (2016).

2.4. Methods

The aim of the paper is to recognize the audit pitfalls in the audit of the non-current assets of the municipality. This section lists the pitfalls and suggests audit procedures how to avoid them. Process of audit of financial statements consists of several phases. These phases we could specify in framework as follows:

- Work carried out before the conclusion of the contract. At this stage auditor assesses the risks of the contract and set up the conditions of the contract.
- Preliminary planning activities include acquaintance with the client's business. It includes acquaintance with the control system and accounting system, and performing of preliminary analytical activities.
- Setting the audit plan covers the determination of the level of materiality for planning and risk assessment. Part of this stage is planning of tests of internal control and planning of substantive tests.
- Work carried out during the audit covers tests of reliability of systems. It also covers substantive analytical procedures and tests of details. This stage ends with evaluation of the results of substantive procedures.
- Conclusion and audit report release consists of the evaluation of the financial statements, and evaluation of the follow-up events. After acquiring of the declaration of the management and summarization of conclusions of the audit, auditor can prepare audit reports.

2.5. Problem solving

The auditor should know the common audit pitfalls that could appear during audit planning and performance. Pitfalls could be characterized as follows:

- First pitfall is lack of auditor's objectivity and independence.
- Second pitfall is recognizing of transactions with related parties.
- Third is poor identification of audit risks.
- Fourth comprises poor linkage between assessed risks and the nature, extent, and timing of audit procedures.

- Fifth means failure in proper designing and performing of appropriate audit procedures.

In the following subsections we set up procedures to avoid of recognized audit pitfalls.

2.5.1. Initial audit planning

Initial audit planning involves four things, all which should be done early in the audit. First, the auditor decides whether to accept a new client or continue serving an existing one. This is typically done by an experienced auditor who is in a position to make important decisions. Second, the auditor identifies why the client needs the audit. This information is likely to affect the remaining parts of the planning process. Third, the auditor obtains an understanding with the client about the terms of the engagement to avoid misunderstandings or pitfalls. Finally, the staff for the audit is selected, including any required audit specialists (Kareš, 2015). The base objective for the auditor at this stage is to inquire about the terms of the contract and determine whether the audit process will be in accordance with all laws and standards. Incorrect acceptance or rejection of the contract can have serious effects on the course and outcome of the audit and to issue the auditor's report and therefore on its reputation (Kašiarová, et al., 2015). The auditor of the financial statements of the higher territorial unit, municipality or city is obliged to check the use of repayable sources of financing according to the rules, to check the development and status of debt, to check management and other financial resources, and also to check the compliance of the management of budgets and laws relating to financial regulation for local authorities (Bráníková, et al. 2011).

2.5.2. Preparation of the audit plan

Kareš (2010) claims properly planned audit with good strategy the auditor ensures assumptions that the audit will be carried out effectively and in accordance with International Standards on Auditing. During the formation of an audit strategy which shall include the timing of, the substantive scope and method of management audit, the auditor uses some groups of procedures. First procedure is assessment of factors that are important to the auditor during audit management, such as the use of internal audit, or entity's equity participation in the establishment of the organization. Second procedure is establishing the timetable for the various stages of the audit. Third is to determine the specifics of the audit during audit of the subject of public administration, respectively municipalities, and higher territorial units. Fourth procedure is to evaluate the importance of the information gathered during the preliminary activities.

2.5.3. Risk assessment procedures

The auditor uses knowledge gained from the understanding of the client's activities to identify and assess the risks of material misstatement that most arise to fraud or error in the financial statements. Because the auditor has to properly assess the risks of material misstatement, he must be thoroughly familiar with the subject and its internal control environment. Analytical procedures are also an important part of testing throughout the audit (Kašiarová, et al., 2015). The appropriate auditor's response on assessed risks is to acquire adequate and sufficient audit evidence regarding the risk of material misstatement, through the implementation of audit

procedures. It means a test of the effectiveness of internal controls and use of substantive tests in verifying account balances and transactions.

2.5.4. Conclusion of the audit and the auditor's report

Auditor makes conclusions based on gathered audit documentation. Audit documentation is an essential part of every audit for effectively planning the audit, providing a record of the evidence accumulated and the results of the tests. The auditor must evaluate the situation when inappropriate and insufficient audit evidence was received or assesses the impact of material misstatement. Auditor should continually assess the sufficiency of audit evidence obtained through applied audit procedure. If the auditor concludes that the evidence is insufficient, he must procure a written declaration of the subject to support the confirmations of the findings of facts or to extend the sample of analysed realities, or to apply a substitute verification procedure. Conclusion of the audit relates summarizing of the findings during the audit, impact assessment of irregularities at the level of materiality, the confirmation of conformity of the relevant reporting framework with the financial statements, and written communications with the management of entity. The auditor forms his opinion based on an assessment of the facts arising from the findings of the audit. His opinion can be unmodified or modified:

- Unmodified (financial statements are prepared in all material respects in accordance with the applicable reporting framework).
- Modified (conditional opinion, negative or rejection of opinion) (Bráníková, 2011).

3. Discussion

Observed municipality is subject to statutory audit duties according to the Law on Municipalities. It has more than 3 000 inhabitants. The amount of assets exceeds 3 200 thousand EUR. We have established the basic audit procedures to audit of financial statements in order to fulfil the main goal of paper.

3.1. Acceptance of the contract

In order to accept the contract, upon the initial acquaintance with the municipality, must be answered the questions in Table 1. These questions assess the adequacy of acceptance of the contract. Auditor considers response on each inquiry. Correct answers to questions lead auditor to the avoidance of audit pitfalls.

Table 1: Risk assessment of accepted contract

	Evaluation of ongoing risk of contract	**Yes/No**
1.	Has auditor sufficient ability to manage client demands?	Yes
2.	Is accounting of entity conducted in accordance with law?	Yes
	Evaluation of ongoing risk of client	
3.	Has entity control or decision-making mechanism?	Yes
4.	There are no illegal activities of the management of the entity.	Yes
5.	There are no lawsuits against the client.	Yes
6.	There is no disclosure of petitions and complaints of citizens or of corruption scandals.	Yes
7.	Respects the entity laws regulators?	Yes

Unconditional requirements for performance of the contract		
8.	Did proclaim leading persons of the entity that are aware of their responsibility for the delivery of all the necessary information for preparing financial statements of the entity?	Yes
9.	Did proclaim leading persons of the entity that are aware of their responsibility for the correct implementation of internal controls?	Yes
10.	Did the management announce that the financial reporting framework is convenient?	Yes
Assessment of important ethical conditions		
11.	Does the auditor conduct sufficiently appropriate professional activities that meet professional standards?	Yes
12.	Have the auditor professional skills at the level sufficient to bring qualified professional client service?	Yes
13.	The auditor does not perform for the client other services.	Yes
14.	Court does not exist between client and auditor.	Yes
15.	Profit for the auditor for realized audit does not form a significant part of his income.	Yes
16.	The auditor does not belong to the leading persons of the entity.	Yes
17.	Long-term cooperation does not persist between client and auditor.	Yes
18.	No personal or family links exists between the client and the auditor.	Yes
19.	No business connection exists between client and auditor.	Yes
20.	Does not have the auditor a significant direct or indirect interest in the financial situation of the client?	Yes
May the contract on the audit be signed?		**Yes**

Source: own elaboration

3.2. Preparation of the audit plan

Due the fact the observed municipality is a small entity, we have implemented the appropriate audit procedures for testing types of transactions and events in the audited period; balances at the end of the period; and the presentation and disclosure. We have took take into account the management assertions of completeness (C), existence (E), accuracy (Ac) and appreciation (Ap), (see Tab. 2). The auditor's responsibility is to determine whether financial statements are materially misstated. An auditor decides early in the audit the amount of misstatements in the financial statements that would be considered material. Determining of the materiality level we set out the likely margin of error affecting users of financial statements. When the level of materiality is lower, the more needs audit testing. The Court of auditors recommends the value of 0.5 to 2%. Generally is used by 2%, thus this value has been chosen. As the basis for calculating of the absolute value was elected the total property amount, which we consider to be best suited to the nature of the entity.

Materiality in EUR = 2% of total assets

The total amount of assets in the municipality is over 3 200 thousand EUR. In this case, this means that errors above 64 000 EUR will be considered material.

According Arens et al. (2003), acceptable audit risk (AR) is a measure how willing the auditor is to accept that the financial statement may be materially misstated. Inherent risk (IR) means a measure of the auditor's assessment of the likelihood that there are material misstatements in a segment before considering the effectiveness of internal control. Control risk (KR) is a measure of the auditor's assessment that misstatements will not be prevented or detected by the internal control. Planned detection risk (DR) means that audit evidence for a segment will fail to detect misstatement exceeding a tolerable amount. Due to the fact that it is not efficient to collect all audit evidence to determine any differences and to have such 100% sure, we also decided based on the recommendation of the Court of auditors, to set 5% audit risk, which consists of inherent risk, control risk and detection risk.

$$AR = IR \times KR \times DR$$
$$DR = \frac{AR}{(IRxKR)}$$
$$DR = \frac{0,05}{(0,6x0,15)}$$
$$DR = 0,55$$

Detection risk means that auditor during the audits does not reveal deviations, and for which we determine the overall audit risk (5%), inherent (60%) and control risk (15%). The value of detection risk was calculated at 55%.

3.3. Setting of procedures and risks evaluation

Considering the limited scale of article we establish procedures for the audit only in area of non-current assets. During verifying of non-current assets (NA) it is not necessary to examine its undervaluation, it will be reviewed by other accounts (revenues from activation or purchase commitments), but it is important to detect errors which could lead to an overestimation of non-current assets (Kareš, 2010). Asset could be incorrect overvalued due their undervalued depreciation or disposals. When non-current assets are auditing, it is necessary to establish the existence of significant financial lease contracts and restrictions on disposal of property. Also, verify the existence, ownership rights (contracts of sale, documents) and property insurance. Summary of findings is in Table 2.

Table 2: Auditing procedure of non-current assets (NA)

	Auditing procedure	Assertions	Findings
1.	Reported NA items agree with the general ledger.	C, E	Yes
2.	Opening balances of NA ledger are the same as closing balances from the previous year.	C, E, Ac	Yes
3.	Changes in TA from the previous period are explained.	C, Ac	Yes
4.	Register with an initial value of NA, its cost, accumulated depreciation, and final value of items from the list of assets in use is conducted properly.	C, E, Ac, Ap	Yes

5.	An itemized list of additions at cost to date of putting into use and depreciation groups is free of material misstatement.	C, E, Ac	Yes
6.	An itemized list of NA decreases with the residual value, the method of disposal and sale price in the event of a sale of assets is free of material misstatement.	C, E, Ac	Yes
7.	An itemized list of accounts of assets in the acquisition process and advances paid for acquisition of property is free of material misstatement.	C, E, Ac	Yes
8.	Property rights with NA are verified.	E	Yes
9.	Existence of NA is verified.	E	Yes
10.	The cost of purchased NA agrees with supporting documentation.	Ac	Yes
11.	Purchases of NA are properly classified as capital expenditure.	E, Ac	Yes
12.	Disposal of NA has been approved, implemented and properly accounted for.	C, E, Ac	Yes
13.	Documents recording the loss of NA and liquidation reports, register of NA are properly maintained.	C, E, Ac	Yes
14.	An itemized inventory list of NA in the acquisition process agrees with the general ledger.	C, E	Yes
15.	Documentation of the existence and valuation of NA is correct.	E, Ap	Yes
16.	NA in testing is not used or depreciated.	Ac	Yes
	Account balances of non-current assets in the balance sheet gives a true and fair view.		**Yes**

Source: own elaboration

It is necessary to verify in the following procedures that:

- Non-current assets purchased by municipality are properly valued at cost for which the assets were acquired and the costs related to their acquisition.
- Non-current assets created by entity are valued at own costs.
- Non-current assets acquired free of charge are valued at fair value.
- Depreciation method of non-current fixed assets is identical to the depreciation plan.
- Change in accumulated depreciation is related to the amount of annual depreciation.
- Differences in accounting are explained by relevant person.

3.4. Summarization of auditor's evidence, conclusion of the audit and the auditor's report

Observed municipality has a functioning internal control system. The main controller of the municipality carries out continuous control under the Act on Financial Control and Internal Audit. The activity of the municipality is during the year also controlled by the municipal council. During the audit of the individual financial statements of

observed municipality in 2015 were identified no material deficiencies in the accounting system. The entity complies with the accounting rules and accounting policies and applies them consistently. All financial documents such as general ledger, all statistical reports, the book of incoming invoices, book of sent invoices, lists of each items, cash book, diary and others, fulfil all the formalities in accordance with the Law on Accounting. For all items was verified continuity of transfer of closing balances from previous financial year for the initial balances of the period under review. Closing balances were reviewed physical and book inventory and then compared with the ending balances to the general ledger. Individual transactions were correctly valued, recognized and classified. There were no significant misstatements. Changes in individual items compared to last year were sufficiently explained. On the basis of the audit procedures and findings resulting therefrom, it can be stated that the items of non-current assets in the balance sheet provide in every case true and fair view on subject of accounting.

During the audit were not identified any trends suggesting fraud in the entity and also has not identified circumstances or events threatening the ability of an entity to perform continuously its activities.

During the audit, some errors were found which not deemed material, but we recommend municipality to correct them in the foreseeable future:

- For a number of invoices it is not clear who the inventory ordered, we found missing orders, and also lacking the purpose of ordering. We found missing signature on receipts by competent persons who took the inventory delivery. We also noted the absence of approval from a superior officer for payment of invoices.

Recommendation: to add the purpose of the order to invoices, indicate the person the inventory ordered, as well as the approval of superiors for the payment of invoices.

- Missing assignment the budgetary chapter on the cash expenditure receipt when payment of invoices in cash, since the expenditure was charged before posting invoices.

Recommendation: except for incorrect posting there is a problem to determine in advance sufficient cash to be able to cover such unforeseen expenditure; we propose the complete cancel of payments of invoices in cash.

Based on the findings resulting from the audit procedures performed, we concluded that the auditor may issue an unmodified audit report without reservation.

3.5. Solving audit pitfalls in area of non-current assets of the observed municipality

After audit planning and setup of procedures, the auditor may conclude that audit pitfalls in the area of non-current assets were recognized and solved. We can summarize the auditor's considerations and solutions in the following Table 3.

Table 3: Solving audit pitfalls in area of non-current assets

	Audit pitfall	Solution
1.	Lack of auditor's objectivity and independence.	Positive answers 11.-20. on inquiries from Tab.1
2.	Recognizing of transactions with related parties.	Positive answers 4.-7. on inquiries from Tab.1

3.	Poor identification of audit risks.	Recognizing audit risks, set up level of materiality
4.	Poor linkage between assessed risks and the nature, extent, and timing of audit procedures.	Correct set up auditing procedures from Tab.2
5.	Failure in proper designing and performing of appropriate audit procedures.	Recognizing audit assertions from Tab.2

Source: own elaboration

4. Conclusion

The main objective of this paper was setting methods for the audit of non-current assets with aim to reduce audit risks and audit pitfalls. Process of the audit work can be divided into five phases, which consist of acceptance of the contract, formulating of strategy and audit plan, procedures of risk assessment of audit, summarization of evidence, and the auditor's report. Each section contains one specific audit procedures to be carried out to obtain the sufficient appropriate audit evidence to formulate findings, which are part of the audit documentation, based on which the auditor formulates its opinion.

Audit of the financial statements of the observed municipality in 2015 consists of an acquaintance with the functioning of the municipality, its control and accounting system, then, after considering the factors for acceptance, acceptance of a contract. After signing the contract was made a plan and audit strategy comprising calculating audit risk, materiality and audit plan. Due to the limited extent of the contribution were documented audit procedures in area of non-current assets.

The final part of the paper includes a summary of audit findings and recommendations drawn up for the municipality. This part contains proposals to solve audit pitfalls in area of non-current assets. During the audit were not disclosed significant irregularities, so the recommendations for municipality dealt with replenishment of missing cash receipt, cancellation of invoices for reimbursement in cash and amendments purpose of the order, the identification of person required to present the inventory delivery, as well as the approval of superiors for the payment of invoices. On the basis of the audit procedures and findings derived from them, the auditor may issue an unmodified audit report without reservation.

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ACTUARIAL ESTIMATION OF TECHNICAL RESERVES IN INSURANCE COMPANIES. BASIC CHAIN LADDER METHOD

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Abstract: *A major concern for insurance companies is to keep achieving financial stability of the insurance business which it carries. They must work in order to fully cover the expense of premiums collected, assumed obligations to policyholders. Otherwise, get in position to not fulfil these obligations due to insufficient insurance reserves established. Unfavourable balance emerged between the compensation, due first, to be covered from other resources. If this state of balance is maintained and becomes an alarming extent, the insurer may get unable to pay. To avoid such a situation there is required the insurer to accurately determine the level of insurance premiums to collect from insurers, and technical reserves required to fulfil. But is this is the case in reality? To estimate the total reserves to be made for the entire portfolio of damage unsettled can be used several methods including The Chain Ladder Method. This paper, is about the results of applying The Chain Ladder Method in insurance companies and also about the limits of it. The validation process applies to both the quantitative and the qualitative is not limited to the comparison between estimates and results. It should include qualitative aspects such as evaluation mechanisms control, documentation, interpretation and communication of results. This method is used by insurers to predict the amount of reserves to be established to cover future damage. This actuarial method is one of the most used for grounding reserves. The method is based on the assumption that existing patterns of claims in the past will continue in the future. As this assumption to be valid the data should be accurate in the past. But several factors can affect the accuracy of data, including changes in insurance products offered, changes in legislation, many times with claims for compensation, or changes in the approval process of compensation for damages. Insurance companies must maintain a share premium of the insurance premiums to pay claims that may arise in the future.*

Keywords: *claims; chain-ladder method; damages; premium rates.*

JEL Classification: *G22.*

1. Introduction

Actuarial analysis helps decision-making in an insurance company as the basis to determine the size and value risk (risk premium), which is considered an essential element of both life insurance and general insurance. Professionalism in determining the risk depends mostly financial result of the insurer.

To meet obligations, past and future insurance company must establish and maintain technical reserves. Past obligations refer to those arising from the insured risk that may occur in the future.

The estimation of technical reserves has a particular importance for insurers as related funds are invested and the earnings are an important source of income. The

calculation is performed by means of technical statistical and mathematical undervalued and distort or over-activity of insurers. Such reserves overstatement leads to reduced solvency margin and the company may be unable to meet its obligations at a time and undervaluation affect profits and taxes paid can be higher. Insurers should consider whether deterministic or stochastic method is suitable to model uncertainty biometric risk factors.
For it must take into account the duration obligations when assessing whether a method that omits the estimated future changes of risk factors is biometric appropriate, especially in the evaluation of the result of the error introduced by the method.
It should also ensure that the method is on the assumption that the biometric risk factors are independent of any other variable is adequate and that the special risk factors are taken into account.
To this end, assessing the level of correlation should be based on historical data and reasoning qualified.

2. Using Chain Ladder Method for estimating reserves for unsettled claims

In the case of general insurance damage reserve is estimated based on actuarial techniques such as the method Chain Ladder (Harnek, 1966), the method Bornhuetter Ferguson (Bornhuetter and Ferguson, 1972) and the method of Taylor separation (Taylor, 1977).
The best known and used method is the Chain Ladder model. The principle of the method is that the available information about compensation paid in the past for such damages is viewed in a table called triangle of evolution - run off, the line is the year of origin (accident damage), and the column is the year of evolution, developmental delay. Chain -Ladder method uses the data in a two - dimensional array representing the emergence and evolution of compensation (Benţe and Gavriletea, 2015).
To exemplify the application of this method step by step, we present the claims paid and accumulating during 2012 - 2017 the insurance company Groupama.
Typically, claims losses settled for each claims occurrence year are not paid on one date but rather over a number of years (or time periods). The insurer's data for the claims loss settlement amounts might be expanded to show the years in which the amounts were settled as in Table 1.
The data in Table 1 can be presented as cumulative claims losses settled. For each claims occurrence year the incremental claims loss settled for a particular development year is the amount settled in that development year. The cumulative claims losses settled is the total amount settled up to that development year, i.e. it is the sum of the incremental claims losses settled up to that date. The cumulative claims losses settled for the worked example are presented in table 2. This table is obtained by adding up all claims paid out so far, including those relating to the calculation year.

Table 1. Incremental claims loss settlement data presented as a run-off triangle during 2012 - 2017 (thousand euros)

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	8.234	6.432	4.987	3.621	2.577	2.110
2013	7.481	4.301	3.789	3.123	2.3694	
2014	8.515	4.989	3.601	2.853		
2015	7.139	4.785	3.315			
2016	7.799	4.468				
2017	8.104					

Source: Processed by author

Table 2. Cumulative development table (thousand euros)

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	8.234	14.666	19.653	23.274	25.851	27.960
2013	7.481	11.782	15.571	18.694	21.088	$C_{13,5}$
2014	8.515	13.504	17.105	19.958	$C_{14,4}$	$C_{14,5}$
2015	7.139	11.934	15.249	$C_{15,3}$	$C_{15,4}$	$C_{15,5}$
2016	7.799	12.267	$C_{16,2}$	$C_{16,3}$	$C_{16,4}$	$C_{16,5}$
2017	8.104	$C_{17,1}$	$C_{17,2}$	$C_{17,3}$	$C_{17,4}$	$C_{17,5}$

Source: Processed by author

Table 3. Determining the estimated cumulative claims loss settlements in future periods

Claims occurrence year	Development period					
	0	1	2	3	4	5
2012	8.234	14.666	19.653	23.274	25.851	27.960
2013	7.481	11.782	15.571	18.694	21.088	22.796,128
2014	8.515	13.504	17.105	19.958	22.313,044	24.120,4005
2015	7.139	11.934	15.249	18.039,567	20.168,2359	21.801,8630
2016	7.799	12.267	15.506,7147	18.344,434	20.509,0878	22.170,3239
2017	8.104	13.272,7314	16.778,0595	19.848,4444	22.190,5608	22.796,128

Source: Processed by author

The recorded value of unsettled claims reserve was calculated without taking into account inflation.

The underlying assumption for the CLM is that the cumulative claims loss settlement factor for a specific development year is assumed to be the same for all claims occurrence years. The CLM estimator for each of the factors is based on the cumulative settlement data for as many claims occurrence years as possible. This is demonstrated in Table 3 for the factors for development.

The final step in the use of run-off triangles is to group the estimated incremental claims loss settlement amounts by the years in which they will be settled. These predicted cash flows can then be discounted to determine the technical provisions.

RDN2017 = (22.796,128 - 8.140) + (22.170,3239 - 12.267) + (21.801,8630 - 15.249) + (24.120,4005 - 19.958) + (22.796,128 - 21.088) = 36.991,4468

3. Conclusions and recommendations

Actuarial techniques in insurance helps to reinforce prudentially insurance supervision, quality improvement and financial responsibilities of insurers and other professional participants of the financial market, increasing the role of risk management in insurance, strengthening the capacity of interdependence between auditors and actuaries in insurance, increase customer confidence, market development and compliance with European standards.

Actuarial analysis helps decision-making in an insurance company as the basis to determine the size and value risk (risk premium), which is considered an essential element of both life insurance and general insurance.

In terms of determining methodologies applied, insurance and reinsurance companies should ensure that the actuarial function considers the relationship

between the findings of the analysis and selection of data quality methodologies to be used in the valuation of technical provisions.
They should ensure that the actuarial function examines whether the data used are adequate to support the assumptions underlying methodologies used in the valuation of technical provisions. If data is not appropriate methodologies, then the company should select an alternative methodology.
When assessing completeness of data, companies should ensure that the actuarial function determines whether the number of observations and the granularity of data available is sufficient and appropriate to meet the requirement of input information for the methodology.
Insurance and reinsurance companies should require actuarial function to consider the source and intended use of the data in the data validation.
They should ensure that the use of judgment qualified assessment of the accuracy, adequacy and completeness of the data used in their calculation does not replace the collection, processing and analysis of appropriate data, but complement them where necessary.
Insurers should ensure that the actuarial function, within the mandate to coordinate the calculation of technical, also coordinates evaluation and validation of relevant data used in the evaluation process.
The task of coordination should include at least:
a) selecting data used in the evaluation, considering the criteria of accuracy, adequacy and completeness of the data and determine the most appropriate methodology to be applied to the calculation. To this end, the relevant instruments should be used to verify the significant differences that may occur in the data for one year and within other relevant analysis;
b) reporting on the implementation of recommendations to optimize internal procedures, which are considered relevant to improve compliance with the criteria referred to above;
c) identifying where additional external data is required;
d) assessing the quality of external data, conducted similar evaluation of internal data, highlighting the need for market data or situations when they should be used to optimize the quality of internal data and whether and how to apply optimizations question on data available;
e) evaluating the need to adjust the data available within the actuarial best practices to optimize adaptation and reliability of estimates derived from actuarial and statistical methodologies establishing reserves based on these data;
f) registration of the relevant prospects acquired in the evaluation and validation, which may become relevant for other stage of calculating technical reserves which refers to understanding the underlying risks and also to determine the quality and limitations of the available data.
Insurance and reinsurance companies should ensure that the actuarial function evaluate the accuracy, completeness and appropriateness of the data to identify significant data limitations. If the identified significant limitations should also identified sources of limitations.
To identify and assess the impact of possible deficiencies that could affect compliance with data quality assurance and reinsurance companies should ensure that the actuarial function examines relevant documents available on the processes and procedures for collecting, storing and validating the data used to assess

technical and, if necessary, should seek specific information by contacting personnel involved in these processes.
In addition, companies should ensure that the actuarial function coordinates the relevant duties may be performed to assess the impact of the deficiencies identified from the available data used to calculate technical provisions, in order to ascertain whether the data available should be used purpose or whether data should be sought alternatives.
If deficiencies are identified data, insurance and reinsurance undertakings should ensure that the actuarial function, given its purpose, assess whether the adjustment or supplement data quality can be optimized.
Insurance and reinsurance companies should ensure that they put in appropriate measures to overcome data limitations resulting from exchange of information with business partners.
Companies should decide whether it is possible to adjust the data to overcome weaknesses in data quality and, where appropriate, the specific adjustments should be introduced.
Companies should ensure that adjustments are limited to what is strictly necessary to improve the criteria set out in recommendation past and does not distort identify trends and other characteristics with reflected the risks inherent in the data.
Insurance and reinsurance companies should ensure that the function actuarial formulate and submit recommendations to the governing body with on procedures that could be followed to improve the quality and the amount of data available. To fulfil this task, function actuary should identify sources of significant limitations and propose possible solutions, taking into account their effectiveness and time needed to implement them.
If there are significant limitations of the data, which cannot be remedied with highly complex measures, insurance and reinsurance should ensure that qualified reasoning used to overcome these limitations in order to ensure that technical reserves are calculated accordingly. Calculation of technical provisions should not be affected by inaccurate or incomplete data.
Insurance and reinsurance companies should ensure that the function actuarial document data limitations, including at least:
(A) Description of shortcomings, including their causes and references to other documents that have been identified;
(B) Concise explanation of the impact of the deficiencies in the coverage of calculation of technical provisions, regarding the significance of it and how it affects the process;
(C) A description of actions taken by the actuarial function to detect shortcomings, complementary or other sources and documents;
(D) A description of how such situations can be remedied in a term short for purpose and relevant recommendations to be applied to optimize data quality in the future.
If the calculation of technical provisions require entering data external sources of insurance and reinsurance companies should be able to demonstrate that external data are more appropriate than data domestic purpose. Companies should sport must ensure that data provided by third parties or external market data complements internal data available.
Without prejudice to the level of dependence obligations conditions market or the level of quality on the data available domestic companies it should take into account

relevant external benchmarks as appropriate. External data should be subject to analysis to evaluate compliance general requirements for data quality.
To carry out the assessment level of accuracy, adequacy and completeness of external data, insurance and reinsurance undertakings should ensure that the actuarial function know and consider when analyzing the reliability of information sources, ensuring consistency and stability of data collection and disclosure time.
Moreover, companies should ensure that the actuarial function realistic assumptions and analyses relevant methodologies applied to get data, including adjustments and simplifications applied to the raw data.
Actuarial function should be informed about the changes that were applied while external data and to consider whether these changes refer to the assumptions and methodologies associated or other procedures for external data collection. Moreover, whenever it is available and appropriate, companies should to ensure that the actuarial function determines the quality of available data context of technical analysis in relation to data available field or in the market that are considered comparable.
The actuarial function should identify and understand all violations significant. This analysis might refer to the specific groups specific homogeneous risks are assessed.

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APPLYING MPCA ANALYSIS TO EVALUATE FINANCIAL PERFORMANCE OF ROMANIAN LISTED COMPANIES

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Abstract: *The paper aims to investigate the main determinants of financial performance of Romanian companies using principal component analysis technique (PCA) for the year 2015 by constructing a composite index of financial performance and revealing also the main groups of companies according to their performance using cluster analysis technique. For this, the methodology of building composite indices proposed by the OECD (2008) will be applied. Furthermore, the sample used in the analysis covers a number of 57 companies from 8 economic sectors at the level of 2015. The analysis used 11 financial accounting indicators: market value added (MVA), added liquid value / credit valuation adjustment (CVA), weighted average cost of capital (WACC), earnings per share (EPS), price earnings ratio (PER), dividend per share (DPS), return on assets (ROA), return on equity (ROE), share of intangible assets (intangible investments) in total turnover (ITO), global solvency (SOL) and current liquidity (CL). Data was collected from the annual financial statements published on the websites of the sampled companies or through the BSE website. The empirical results of MPCA analysis revealed that the financial indicators such as return on assets, share of intangible assets (intangible investments) in total turnover, added market value and global solvency as well as current liquidity are the main determinants of financial performance of Romanian companies. Analyzing the main groups of companies according with their financial performance for the year 2015, the cluster analysis pointed out the existence of two main poles of financial performance: S.N.T.G.N. TRANSGAZ and PETROLEXPORTIMPORT, leaders in their sectors.*

Keywords: *financial performance; business reporting; Romanian listed companies; indicators; cluster analysis.*

JEL classification: *M41; C38; G31; L25.*

1. Introduction

In recent years, the analysis of financial reporting practices of listed companies tends not only to identify the main factors that influence the quantity and quality of information disclosed in the annual reports but also to the classification of factors that determine the financial and non-financial performance of companies. Beattie, McInnes and Fearnley (2004) noted that there is a consensus that the business reporting model needs to expand to serve the changing information needs of the market and provide the information required for enhanced corporate transparency and accountability. The main objective of recent research undertaken in the area of financial reporting is to measure the degree of disclosure of different categories of

information and the correlation of measurements with the quality of reporting. In our approach we started from the comprehensive financial reporting model proposed by AICPA (1994), also known as the Jenkins report, which supported the publication of quite extensive and integrated information grouped into 8 categories: financial data, operating data, management analysis, forward-looking information, information about management and shareholders, objectives and strategy, description of business and industry structure. We also considered the main features of corporate reporting presented in the OECD Corporate Governance Principles (2004). Thus, most authors were interested in measuring the corporate reporting index or voluntary disclosure index, suggesting in the researches carried out different methods of measuring and classification of the companies analyzed according to the obtained values (Healy and Palepu, 2001; Aksu and Kosedag, 2006; Lang and Ludholm, 2000; Botosan and Plumlee, 2002; Chen et al, 2007; Cheung et al, 2010; Hassan, 2010, 2012, etc.). The objective of our analysis was to measure the financial performance of listed companies in the private sector of the Romanian economy and to recognize those companies that stand out from the perspective of the financial performance and the determinants that influence it. The measurement was made by constructing a composite financial performance index based on 11 financial indicators presented below, in the section explaining the methodology used. The indicators used to construct the composite index were determined on the basis of the information gathered manually from the financial statements of the sampled companies published in their annual reports. After computing the composite financial performance index to continue the analysis, performance clusters were created and the results were interpreted. Two relevant contributions bring our study, the determination of the composite index of financial performance for the Romanian companies listed on BVB, and the cluster analysis of companies classified according to the composite index. The conclusions and limitations of this study are outlined in the last section together with future issues to be considered in order to improve the research in the field of financial performance reporting.

2. Previous research on financial performance of listed companies

It is well known that, performance is a difficult concept, in terms of definition and measurement and as Almajali, Alamro and Al-Soub (2012) noted can been defined as the result of activity, and also, the appropriate measure selected to assess corporate performance is considered to depend on the type of the entity and the objectives to be achieved. Generally, when we consider an entity's performance, we refer to financial performance and non-financial performance. Our study relates only to financial performance. Several authors (Havnes and Senneseth 2001; Oerlemans et al. 2001; Hagedoorn and Cloodt 2003; Knobena and Oerlemans, 2006) believe that financial performance is often expressed in terms of growth of sales, turnover, employment, or stock prices, whereas innovative performance is generally expressed in terms of expenditures, patents, percentage of innovative sales, or self-reported innovations. In terms of financial performance measurement methods there are known various ways of evaluation and different ratios are used depending on the objectives that are pursuit. Traditionally, the most widely used ratios are turnover, total assets, average number of employees and net profit. In Almajali, Alamro and Al-Soub (2012) opinion, the primary ratios used for analyzing the performance of a company can be categorized into five groups: liquidity ratios, asset management

ratios, debt management ratios, profitability ratios and market value ratios. Another classification of the indicators used to measure the financial performance is proposed by Yalcin, Bayrakdaroglu and Kahraman (2012), as a mixture of traditional and modern financial ratios that are known to be as AFP (accounting financial performance) measures and VFP (value based financial performance) measures. In their study concerning the application of fuzzy multi-criteria decision making methods for financial performance evaluation of Turkish manufacturing industries, Yalcin, Bayrakdaroglu and Kahraman (2012), used four traditional measures of financial performance as, return on assets (ROA), return on equity (ROE), earning per share (EPS) and price/earnings ratio (P/E) and also, four modern measures of financial performance: Added (EVA), Market Value Added (MVA), Cash Flow Return on Investment (CFROI) and Cash Value Added (CVA). Using MCDM (Multi-criteria decision making) and FAHP (fuzzy analytic hierarchy process) Yalcin, Bayrakdaroglu and Kahraman (2012) built a hierarchical financial performance evaluation model based on the AFP and VFP main-criteria and their sub-criteria and are ranked the companies according to their own manufacturing sector by using TOPSIS and VIKOR comparatively. According to the ranking obtained results, the best company is the same with regard to both methods in five Turkish investigated sectors (Yalcin, Bayrakdaroglu and Kahraman, 2012). Using DEA (data envelopment analysis), in order to determine a multi-factor financial performance model which recognizes trade-offs among various financial measures, Zhu (2000), investigated the multidimensional financial performance of the Fortune 500 companies, and found that revenue-top-ranked companies do not necessarily have top-ranked performance in terms of profitability and (stock) marketability. DaSilva and Leal (2005) conducting a panel data analysis explored the relationship between the quality of a firm's corporate governance practices and its valuation and performance through the construction of a broad firm-specific corporate governance index for Brazilian listed companies. DaSilva and Leal (2005)'s results showed that less than 4% of Brazilian firms present "good" corporate governance practices and that firms with better corporate governance have significantly higher performance (measured through, return on assets). Abdullah and Ismail (2008) examined the extent of voluntary accounting ratio disclosures in corporate annual reports of Malaysian listed companies, analyzing for each sampled company the disclosure of the following ratios: profitability, investment, liquidity, leverage and efficiency. Results of Abdullah and Ismail (2008)'s study showed that on average Malaysian listed companies disclose between 3 to 4 types of accounting ratios and the highest number of ratios disclosed is 14 and as a conclusion is observed that there is a lack of effort and interest in using financial ratios to explain their financial results in their corporate annual reports. As regard the studies conducted by Romanian authors investigating the performance and reporting disclosure practices of Romanian listed companies we observed that most of them are interested in analyzing transparency and disclosure through annual reports and its relevance for companies' performance in the context of IFRS implementation (Fekete, Tiron Tudor, Mutiu, 2009; Tiron Tudor, 2006; Ionascu & Ionascu, 2012; Mironiuc, Carp, Chersan, 2015; Neag, 2014). Only a few studies are oriented towards the investigation and analysis of main determinants of Romanian companies' financial performance (Pantea, Gligor, Anis, 2014; Burca and Batrinca, 2014; Filip and Raffournier, 2010). Taken into account previous studies conducted on financial performance and accounting ratios we have built our own group of selected accounting ratios based upon the tradition of

Romanian companies in the use of indicators that measure, interpret and analyze financial performance.

Table no. 1 Selected and proposed financial performance ratios

Measurement indicators of financial performance	Selected and used financial ratios
1. profitability ratios	EPS, DPS
2. value added and market ratios	WACC, MVA, CVA, PER
5. other financial ratios	ROA, ROE, ITO, SOL, CL

Source: own proposal

3. Data and methodology

The purpose of this paper is to identify the determinants of the performance of the companies in the sample considered in the analysis based on the financial-accounting indicators gathered from the financial statements, building a synthetic performance index of the companies and highlighting the most important classes of companies according to their performances. For this, the company's composite performance index will be determined on the basis of the relevant financial-accounting indicators registered in 2015 using the principal component analysis and highlighting the main classes of companies according to performance will be carried out on the basis of cluster analysis. The usefulness of the composite index lies in the fact that it aggregates several individual indicators to provide a synthetic measure (a summary statistic) of a complex, multidimensional, and significant subject. Since most of the time the variables included in the analysis have different units of measurement and they will be combined in a synthetic indicator, in constructing the composite index, standardization is one of the fundamental operations, which involves the transformation of the variables into scores z bringing the indicators on a common scale with average 0 and standard deviation 1. The principal component analysis is a technique that involves reducing the larger number of indicators of a set of data into a smaller set of uncorrelated factors (main components) to recover as much as possible of the variation of the original variables, so that the loss of information is minimal. The purpose of the analysis is to reduce the data set by identifying the main components uncorrelated between them that should recover as much as possible from the original variables. Once the main components that capture the latent hidden information in the set of initial indices are identified, the construction of the composite index takes into account the weights obtained from the principal component analysis, using the proportion of the recovered variant of each main component in the total of recovered variant as the weights of the scores of factors to determine the non-standardized index. To facilitate the interpretation, the composite index will be scaled to take values between 0 and 100, where the highest performing company takes value 100, and at the opposite end the less performing company takes 0. Once identified the determinants of the performance of the sampled companies in 2015, the cluster analysis leads to the classification of the companies based on relevant indicators in a much smaller number of homogeneous classes so that the entities belonging to the same class are more similar to each other by the values of their variables (that is, to be similar) while the constituent classes are as different as possible. In the analysis, at the level of 2015, it will be considered a sample of 57 companies from 8 economic sectors using 11 financial-

accounting indicators: market value added (MVA), added liquid value / credit valuation adjustment (CVA), weighted average cost of capital (WACC), earnings per share (EPS), price earnings ratio (PER), dividend per share (DPS), return on assets (ROA), return on equity (ROE), share of intangible assets (intangible investments) in total turnover (ITO), global solvency (SOL), current liquidity (CL). The data was collected from the annual financial statements published on the websites of the sampled companies or through the BSE website. In order to identify the most important factors for assessing the performances of the companies in the considered sample, it will be taken into account the problem of the different measurement units of the 11 financial indicators on the basis of which this index will be constructed, so it is necessary to apply a data normalization technique. The company performance index has been achieved with the use of the statistical software SPSS 24.

4. Discussion of results

The empirical results of the principal component analysis highlight the existence of four main components, extracted using the Kaiser criterion, which stipulates the choice of the main components above or very close to the value 1, which recovers a total of 82% of the variant of the original variables.

Table no. 2 PCA's Own Values and Own Vectors

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.849	34.992	34.992	3.849	34.992	34.992	3.649	33.174	33.174
2	2.391	21.736	56.728	2.391	21.736	56.728	2.450	22.277	55.450
3	1.637	14.884	71.611	1.637	14.884	71.611	1.705	15.501	70.951
4	1.144	10.396	82.007	1.144	10.396	82.007	1.216	11.056	82.007
5	.982	8.924	90.931						
6	.351	3.190	94.121						
7	.260	2.363	96.484						
8	.233	2.117	98.601						
9	.131	1.187	99.788						
10	.022	.204	99.992						
11	.001	.008	100.000						

Extraction Method: Principal Component Analysis.

Source: own processing of the data

Analyzing the results from Table 2, we can say that the first component λ 1= 3,849 explains approximately 34,99% of the original data version, while the second component λ_2= 2,391 recovers 21,736% of the total version, totalling together 56,72%. The third component λ_3 =1,637 recovers a total of 14,88% of the total version while the fourth component λ_4 =1,144 adds more than 10,39% of the original indicators. For the interpretation of the main components in terms of the original indicators, we will analyze the correlation coefficients calculated between the two main components and the main financial variables so that a main component can be

interpreted by the initial variable for which the correlation coefficient is maximum but, at the same time, the initial variable has low correlation coefficients with the other main components. To facilitate the interpretation, it is recommended to rotate the axes using the Varimax technique to obtain the lowest correlation coefficients on one or two main components.

Table no. 3 Rotated Main Component Matrix

Rotated Component Matrix[a]

	Component			
	1	2	3	4
Zscore: Valoarea de piaţă adăugată (MVA)	-.067	.005	.088	.943
Zscore: Valoarea lichidă adăugată (CVA)	-.093	-.793	-.080	-.462
Zscore: Costul Mediu al Capitalului (CMPC)	.978	.063	.046	.050
Zscore: Rezultat net pe acţiune (EPS)	.974	.144	.011	.007
Zscore: Coeficient de capitalizare bursieră (PER)	-.072	.043	.279	-.240
Zscore: Dividend pe acţiune (DPS)	.042	.942	.100	-.048
Zscore: Rentabilitatea activelor (ROA)	.977	.065	.060	.050
Zscore: Rata rentabilităţii financiare (ROE)	-.857	.074	-.108	.086
Zscore: Ponderea activelor necorporale (investiţiilor nemateriale) în total cifra de afaceri (ITO)	.040	.939	-.025	-.175
Zscore: Solvabilitatea globală (SOL)	.152	-.042	.899	.069
Zscore: Lichiditate curentă (CR)	.097	.119	.881	.079

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Source: own processing of the data

Analyzing the correlation coefficients closest to the +1 or -1 values, we can state that the first main component can be interpreted in terms of return on assets ROA (0,977), Weighted Average Cost of Capital (0,978) or earnings per share (0,974). The second component is strongly correlated with the dividend per share (0,942) and the share of intangible assets (intangible investments) in total turnover (ITO) (0,939). The third factor is dominated by variables such as global solvency (0,899) and current liquidity (0,881). The last component is interpreted in terms of market value added MVA (0,943). To evaluate the quality of the results obtained by the PCA analysis, the tests KMO and Bartlett's test of sphericity have been applied. KMO

measures the sample's suitability and must exceed the threshold of 0,5 for a satisfactory analysis to be achieved. In our case, the KMO value exceeds this threshold, so we can assume that the analysis may be appropriate. Also, the Bartlett test is statistically significant, the associated probability being less than 0,05 (Approx Chi-Sq=589,711).

Table no. 4 Results of KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.695
Bartlett's Test of Sphericity	Approx. Chi-Square	589.711
	df	55
	Sig.	.000

Source: own processing of the data

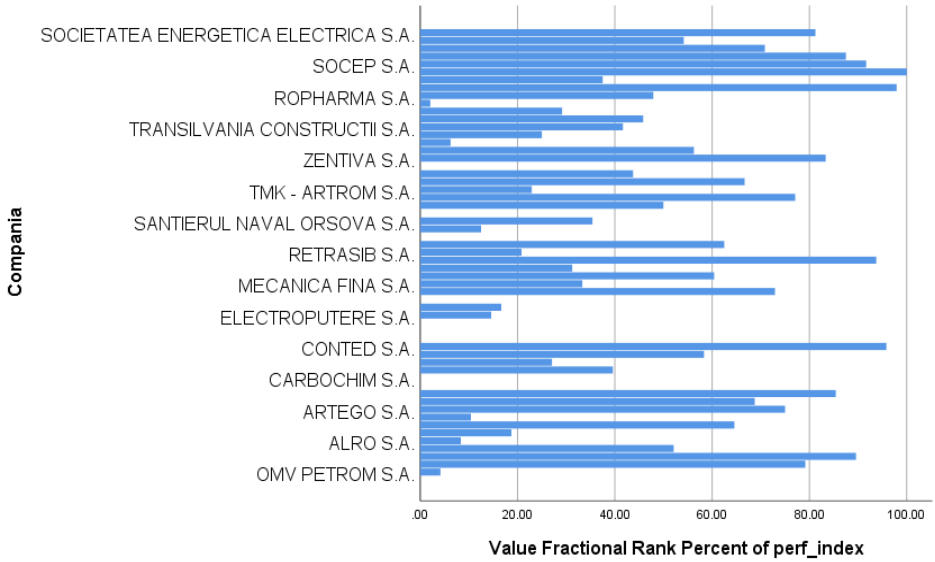

Figure no. 1. Financial Performance Index of Sampled Companies in 2015
Source: own processing of the data

For the construction of the composite index we take into account the proportion recovered by each main component in the total of the initial factors version. Thus, the company's financial performance index is determined as follows:

$$Fin\_perf\_index = \frac{34.99}{82.00} \cdot PC1 + \frac{21.73}{82.00} \cdot PC2 + \frac{14.88}{82.00} \cdot PC3 + \frac{10.89}{82.00} \cdot PC4$$

This index is scaled later to take values between 0 (lowest performance level) and 100 (highest performance level) using the percentile rank. A value of 50 is average performance. Analyzing the performance of companies in the sample at the level of 2015, it can be seen that the companies with the highest level of performance are Conted, Prodplast, Conpet, Transgaz and Socep.

Considering that the first two main components recover more than half (56,72%) of the original variables, classifying the companies according to these the following classes of companies are highlighted:

- the first class made of PETROLEXPORTIMPORT S.A. with poor scores on both components;
- the second class made of the company S.N.T.G.N. TRANSGAZ S.A. with good scores on both components;
- and the rest of the low-scoring companies on the first component and a poor score on the second component.

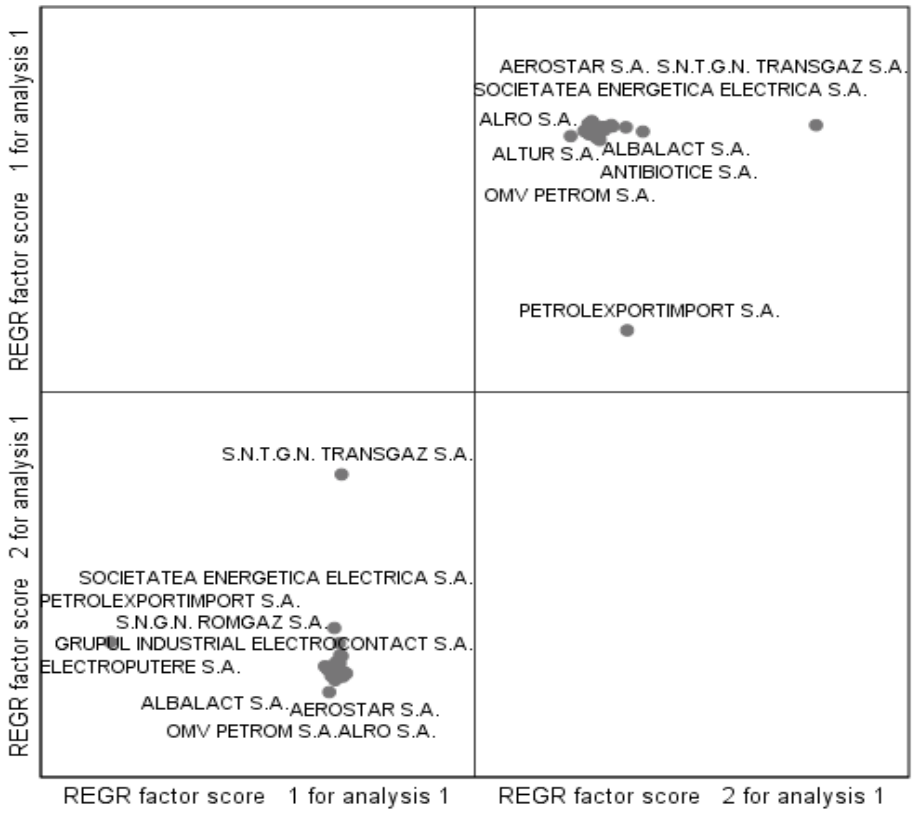

Figure no. 2 Distribution of companies in the space of the two main components (Return on assets and share of intangible assets (intangible investments) in total turnover)
Source: own processing of the data

By completing this analysis, taking into account this time all four main components, we will perform the classification of companies according to the performance in 2015 using the cluster analysis. The analysis assumes that each company is created in one class and then the most similar two classes group together resulting in a cluster that contains both companies. The criterion behind this analysis is the distance. In the cluster analysis we used the Euclidean square distance and the classification method based on the centroid method. The empirical results of the dendrogram revealed the existence of three classes of companies:

- class 1 formed of PETROLEXPORTIMPORT S.A;
- class 2 formed of S.N.T.G.N. TRANSGAZ;
- the rest of the companies.

Analyzing the results comparatively, it can be argued that the two companies, PETROLEXPORTIMPORT S.A and S.N.T.G.N. TRANSGAZ, represent financial performance poles at the level of 2015 year in areas such as wholesale and retail, and transportation and warehousing.

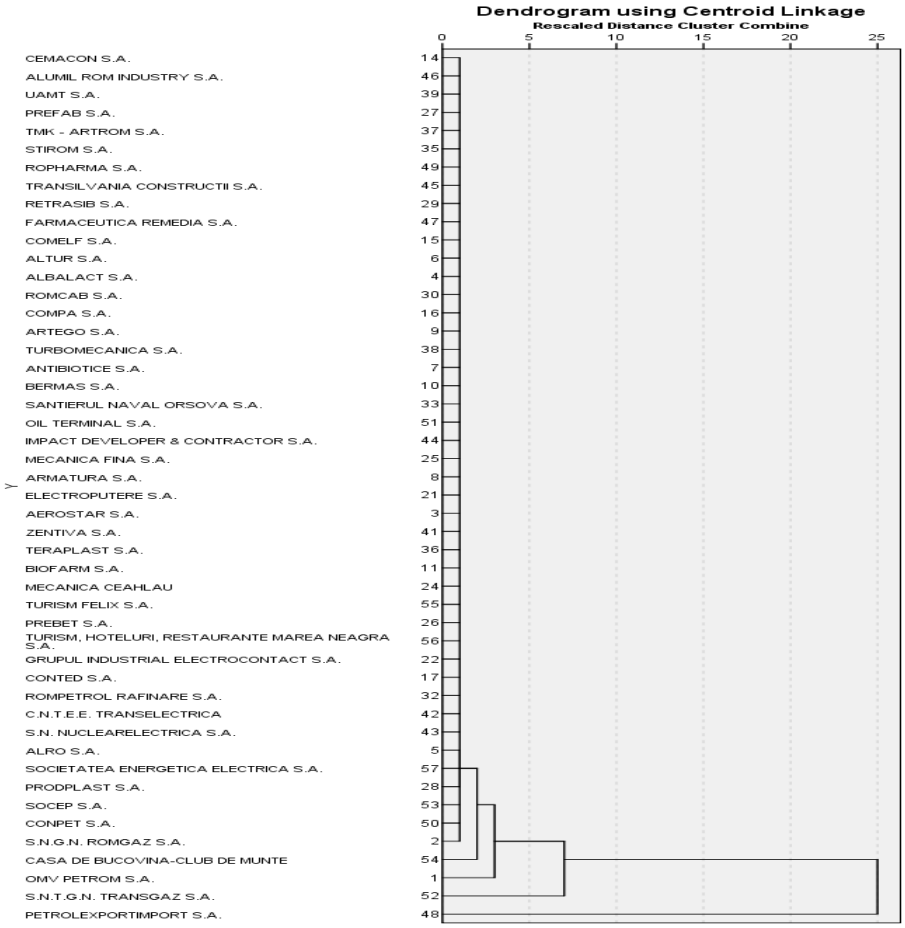

Figure no. 3. Cluster Analysis Dendrogram
Source: own processing of the data

5. Conclusion, limits and further research

This study focused on the analysis of financial performance of Romanian sampled listed companies with the help of building the composite financial performance index. Also, the paper aimed at identifying the most relevant factors of the company's financial performance and classifying the companies from eight economic sectors according to their performance in the year 2015, using the principal component analysis and cluster analysis as well as multidimensional data analysis techniques. The empirical results have highlighted return on assets (ROA), share of intangible assets in total turnover (ITO), added market value (MVA) and global solvency (SOL) as well as current liquidity (CL) as the key determinants of the financial performance of investigated Romanian listed companies. The results of the cluster analysis revealed that there are two poles of financial performance at the level of 2015, S.N.T.G.N. TRANSGAZ and PETROLEXPORTIMPORT, leaders in their sectors. As regard the limits of the study, these are mainly found in the formation of the sampled analyzed companies and the selection of the indicators for building the composite index of financial performance. Future research will pursue the identification and application of modern methods in order to evaluate financial and non-financial performance of listed companies, and the investigation of the existing correlations between reporting disclosure indexes, performance and several disclosed accounting variables.

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ANALYSIS OF CONCEPTUAL AND TECHNICAL (IN)CONSISTENCIES IN THE IFRS 16 "LEASES" ACCOUNTING MODEL

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Abstract: *The purpose of this research is to identify a set of viable arguments for a critical analysis of the new standard in terms of the needs of users of financial statements, but also to clarify a number of conceptual and technical issues that we will have to take into account in the future, while implementing it. IFRS 16 solves the conceptual dilemmas for the lessee, but not for the lessor. It is obviously an unfinished project which requires further conceptual clarification along with consistent and less expensive technical solutions. We have seen that preparers are rather willing to accept conceptually unsubstantiated solutions if they bring cost savings. They are blaming IASB for taking no account of the different business models which, in their opinion, account for the fact that not all lease contracts are financing for the lessee (a dual model would be more appropriate). Unlike them, auditors, academics, and EFRAG consider it absolutely necessary that IASB solutions should be in accordance with the international conceptual framework and that both the lessee and the lessor should apply a single accounting model based on the right-of-use asset theory.*

Keywords: *lease; right-of-use asset theory; off-balance sheet financing; lease capitalisation; discount rate.*

JEL classification: *M41.*

1. Introduction

Recent years have seen an increasing concern of both IASB and all stakeholders for revising the accounting model for lease contract representation in accordance with IAS 17. Objections raised to this standard included a lack of conceptual consistency, poor clarity of classification criteria which motivated certain managers to abusively structure the contracts in order to benefit from certain desired effects in financial statements, different and questionable valuation rules, lack of relevant information which investors and financial analysts had to reconstruct through expensive adjustments, etc.

In order to ensure consistency with the international conceptual framework, IASB proposed to replace the models based on the theory of risks and benefits transfer with models based on the right-of-use asset theory. Stakeholders considered that in the case of the lessee the benefits exceeded the costs, but also expressed concern for the way this theory was applied for the lessor. The high complexity of recognition and valuation rules, as well as the ambiguity of certain concepts and information caused IASB to postpone the accounting change for the lessor.

Entities based in Romania should measure the impact of the transition to IFRS 16 and prepare for the application of the new rules. This preparation takes time and costs. Academics and professional organizations (CECCAR: The Body of Expert and

Licensed Accountants of Romania and CAFR: Chamber of Financial Auditors of Romania) must prepare to train students, accounting professionals and auditors, but also company managers in order to understand and apply IFRS 16. Changes are also expected for regulators and tax authorities. Given this context, we considered useful to undertake a research identifying the strengths and weaknesses of the new lease accounting model, both in conceptual and in technical terms. The analysis has not lost sight of the interest of external users in useful decision-making information, as well as the assessment of the new rules in terms of costs and benefits.

2. Research methodology

We intend to conduct a qualitative research in order to identify to what extent the proposals put forward by the consulted parties can be found in the final product represented by standard IFRS 16 "Leases". The purpose of this research is to identify a set of viable arguments for a critical analysis of the new standard in terms of the needs of users of financial statements, but also to clarify a number of conceptual and technical issues that we will have to take into account in the future, while implementing it.

Our analysis integrates the following sources of information:

(i) the comment letters received by IASB and FASB to the proposals included in the ED/2013/6;

From a total of 641 comment letters we considered relevant for our research the opinions of some auditors, the opinions of some entities having the lease as a business model or heavily using leased assets, and the opinion of EFRAG (European Financial Reporting Advisory Group).

Our decision is mainly based on the following arguments:

-entities with a lease business model or entities heavily using leased assets are those that implemented IAS 17 and will implement IFRS 16 (we expect them to signal the rather technical issues and special aspects of certain contracts which elude the current standard);

We have selected for analysis the comments made by companies operating businesses in Romania, such as: Deutsche Telekom, Societe Generale Group, IBM, Lafarge, Apple, McDonalds, and Nestle.

-the auditors are those who were able to carry out surveys and to conduct studies on the behaviour of reporting entities' management in implementing the current standard (they will have to audit the financial statements which will be impacted by implementation of the new standard);

Since, in Romania, most entities implementing IFRS are audited by Big Four, we were interested to primarily examine their perception. We have extended the analysis to the comments of offices such as Mazars, BDO, and RSM, as their portfolio also includes relevant entities for the Romanian business environment which implement IFRS.

-EFRAG (European Financial Reporting Advisory Group) is the technical component of the European Commission which decides on the terms and timing of application of the new standard in the European Area (although the application term of IFRS is 2019, EFRAG may decide to postpone its application by European companies if it finds that there are significant risks involved or that jurisdictions are not ready to make the transition);

(ii) relatively recent studies on the impact of operating lease capitalisation in terms of transition to the new standard;
These studies may provide empirical evidence of the limitations of IAS 17, but may also clarify the actual impact of implementing the new accounting model desired by IASB.
(iii) IASB products concerning the lease (provisions of IAS 17, with its corresponding interpretations, provisions of IFRS 16, the conclusion bases of IAS 17 and IFRS 16, the international conceptual framework, the analysis of benefits expected from the application of the new standard).
These products allow an analysis of the internal consistency of the new standard and of its external consistency with the international conceptual framework and with other related standards (IAS 16, IAS 36, IAS 38, IFRS 15, etc.).

3. Literature review

Entities can conceal liabilities of thousands of dollars and can raise profits and profitability ratios by classifying the lease as operating lease (Duke et al., 2009).
There have long been concerns for measuring the impact of operating lease capitalisation. Most of these studies confirm the fact that recognition of the operating lease in the balance sheet will have a significant impact, even a considerable impact in certain industries (Fübier et al., 2008; Duke et al., 2009; Whong and Joshi, 2015; De Villiers and Middelberg, 2013).
Ratios such as D/E (total debt/total equity) or D/A (total debt/total assets) will increase significantly. As regards the impact on profitability ratios, there are some studies indicating that in certain industries this impact will be minor (Fübier et al., 2008), while others identify significant differences, sometimes in opposite directions (De Villiers and Middelberg, 2013). ROA (operating income before interest expense but after taxes/average total assets) will decrease more, ROE (net income/average shareholders' equity) will either increase or decrease, the decrease ranging between slight and significant.
Other ratios that will decrease are EPS (earning per share) and interest cover rate.
There are studies indicating that there is a positive correlation between the size of an entity and the impact of operating lease capitalisation (Fito et al., 2013). Off-balance sheet liabilities will improve the leverage ratio, but will not fool the rating agencies (Cotton et al., 2013).
Some believe that there is no need to extend balance sheet recognition of assets and liabilities to operating lease contracts because there is no difference for the market between recognised information and information disclosed in the notes. The notes are sufficient for the market needs.
There are also studies showing that, regardless whether or not the lease is capitalised, capital market participants use the information in the notes. Information requirements are the same for finance lease and operating lease. Therefore, investors will capitalise on the information in a similar way, whether or not the lease was recognised in the balance sheet (Bratten et al., 2013).
Conversely, others believe that stock market participants identify the economic substance of assets and liabilities in the lease regardless of the accounting treatment used for such contracts (Dhaliwal et al., 2011). Their conclusion is that all leases should be capitalised because investors perceive both the operating risks and financial risks related to the operating lease.

Company managers have no preference for a certain type of lease (Beattie et al., 2006). However, the importance of operating lease has increased in recent years.
For auditors, operating lease is positively and significantly correlated with the audit fee. Finance lease is not. For the going concern decision, auditors believe that operating lease obligations are real liabilities (Krishnan & Sengupta, 2011).
Regarding the comment letters to the IASB lease project, almost half of the respondents were from the USA, and the rest from Continental Europe, Africa, Latin America, Canada, Australia, and Asia. The majority of them did not agree with the project proposals, and some even thought that amending IAS 17 was unnecessary (Barone et al., 2014).

4. Discussion

4.1. About conceptual vulnerabilities…

The conceptual basis of standard IAS 17 is the theory of economic risks and benefits transfer from lessor to lessee. This theory is derived from the concept of asset defined in the international conceptual framework. An asset is viewed as an economic resource controlled by an entity. Control is most often explained by the transfer of economic risks and benefits associated with ownership of the economic resource. If by acquiring an economic resource the entity also receives the economic risks and benefits associated with ownership, then the resource is deemed controlled, and if the conditions for recognition are also satisfied, then it will be recognised as an asset in the balance sheet. In the case of lease contracts represented in accordance with IAS 17, the economic resource is controlled by the entity holding the majority of the economic risks and benefits associated with ownership. If their majority is held by the lessee, then control is exercised by the latter and the consequence will be the recognition of the resource as an asset in the lessee's balance sheet. If, however, the majority of the economic risks and benefits stay with the lessor, then control is not transferred to the lessee and the resource is retained as an asset in the lessor's balance sheet.
The consequence of the above principle is that, in the case of finance lease contracts, the lessee recognises the asset and the liability in the balance sheet, while in the case of operating leases neither asset nor liability are recognised. The limitation of this dual representation is given by the fact that, even in the case of operating leases there is a present obligation which will generate outflows of economic resources for its settlement, but it is not recognised in the balance sheet because it represents the counterpart of a resource which is not an asset. Therefore, the obligations associated with operating lease contracts, although they satisfy the criteria for recognition of the liability defined in the international conceptual framework, are disclosed in the notes, as most users of financial statements consider them off-balance sheet financing.
To facilitate determining real short-term and long-term leverage, IAS 17 requires the disclosure in the notes of the amounts payable for operating leases, with a maturity breakdown: amounts payable up to one year, amounts payable between one and five years, and amounts payable in over five years. In reality, users of financial statements have no choice but to make their own adjustments to bring these values to values comparable to those presented in the balance sheet for finance lease contracts. Certain situations are identified where reporting entities refuse to specify

in detail the amounts payable for operating leases in the notes. In other situations, the lessees, although they wish to use a good in the long term, they conclude a short-term contract and conceal their intention to renew it, so that they may disclose amounts payable with shorter maturities in the notes.
The fact that IAS 17 provides no threshold against which to determine whether or not the economic risks and benefits are being transferred to the lessee generates, in most cases, a different classification of similar contracts, which results in the non-recognition of the asset by either party or a simultaneous recognition of the asset in both parties' balance sheets.
Furthermore, another element which makes contract classification even more vulnerable, in accordance with IAS 17, is the emphasis on risks in determining control transfer. The risks associated to a lease contract are various and may be divided between the lessee and the lessor. In such cases, what are the criteria to be used in assessing which party holds the majority of risks or the significant risks?

4.2. …and removing some of them

The standpoints expressed in the public consultation process ranged from total scepticism towards the project put forward by IASB to accepting that amending the lease accounting model is necessary. A prevailing trend of opinion emerged, but it was visible that the arguments used by the consulted parties were somewhat different.
Let us summarize the different perspectives of some respondents before addressing the common views.
Some auditors (e.g., Mazars) considered that IAS 17 did not generate significant differences in practice and that, in time, requests for interpretation issued by IASB were rather few. The current standard seems easy to understand both by entities and by external users. Such users would rather be interested in the improvement of IAS 17 than in having a new standard issued, because such change would not bring more relevant information. It is believed that the benefits of the project will not exceed the high costs of its implementation and that it does not reduce the opportunities for structuring lease contracts.
An opposite view is that of Deloitte which claims that many users of financial statements make adjustments on operating lease liabilities using their own assumptions and models, and that a dual model only maintains the complexity and structuring opportunities of the lease contracts. They insist on the need for a single accounting model for leases (all leases should be recognised in the balance sheet). Others believe that a dual model is justified since not all the leases are financing, but their distinction based on "more than insignificant consumption of a party" will be difficult to achieve in practice (e.g., RSM).
There have also been respondents who qualified as dangerous the lack of consistency with the general conceptual framework of some project proposals (e.g., KPMG and EFRAG). Such vulnerability will affect IASB in future decisions on revising other standards, which will generate further inconsistencies.
IASB proposes recognition of the right-of-use as an identified tangible asset relying on the notion that an asset is an amount of rights. This notion has not been sufficiently debated in conceptual terms. The existence of exceptions from balance sheet recognition of the rights of use and the option to use fair value in certain situations will create difficulties for users in determining which rights are being recognised and how they are measured (EFRAG).

Some considered that the lack of symmetry in the lessee and lessor accounting models is a project limitation which will upset users (e.g., KPMG and Deloitte). If we accept that for the lessee the lease is always financing and that there must be a single accounting model, then we will have to do the same for the lessor. The latter will have to use a single model, symmetrical with the model used by the lessee (e.g., BDO).
It is believed that the asymmetry given by type-B contracts requiring the lessor to retain the asset in the balance sheet and the lessee to recognise the right of use is not coherent with the right-of-use model (e.g., Societe Generale Group).
Others consider that symmetry should not be an objective and that its provision is unnecessary if a consistent conceptual model can be applied for the lessee and for the lessor and if more useful information is obtained for user decision-making (e.g., Ernst&Young).
While some argue that the definition of the lease is sufficiently clear and that it incorporates clarifications from IFRIC 4 (e.g., RSM), others believe that confusion will be created between the right to control the use of the asset and the right to control the economic benefits generated by the use of the asset (e.g., Ernst&Young). Others, again, consider that the definition does not provide sufficient clarification to enable a distinction between lease contracts and some services (e.g., KPMG).
There are preparers who believe that the right-of-use model should be abandoned because not all leases consist in the financing of the purchase of an asset. In many cases the objective pursued is not the acquisition of an asset, but operating flexibility (e.g., Societe Generale Group).
Deutsche Telekom considers that reference to fair value in IAS 17 should be maintained in the initial assessment of the asset and liability for the lessee. The company advances the following case:
“For example, if the leasing contract for a tower with a remaining 5 year economic life is for a 10 year lease term (5 year non-cancellable with 1 x 5 year optional extension period because there is a significant economic incentive to exercise), then it is clear that the tower site operator will have to replace the current tower with a new tower to fulfil its contract with the lessee. If the right-of-use asset is meant to represent the underlying asset, then there should be a cap of the amount capitalised that should not be more than the fair value of the underlying asset with a 5 year economic life. Otherwise, the amount recognised is overstated and multiple assets (still to be constructed) may be capitalised”.
Given the specifics of the business model, the German group believes that the A-type model is appropriate for leases concerning assets, and the B-type model for leases concerning services.
Some preparers perceive that the objective pursued by IASB in revising the lease standard is a purely accounting one, that is, to limit “balance-sheet management”. They state that entities manage their lease contracts not for accounting purposes, but to optimize resources (e.g., Lafarge).
The idea of a single model is not approved of because the economic substance of lease contracts may vary considerably (McDonalds):
"We believe that the characteristics and strategic intent of a 20-year property lease are very different than a 3-year copier lease; and, therefore, different accounting treatment is appropriate."

Nestle believes that the main advantage of IASB proposals is the elimination of the operating lease category for the lessee and that the same approach should be appropriate for the lessor.
The same conclusion has been reached by IBM, which believes that replacing the IAS 17 dual model by another, far more complex, dual model is not a desirable solution for users of financial statements. The company considers that the right of use is not consistent with the concept of assets in the conceptual framework if it includes renewal options.
Apple is in favour of accepting recognition of the expenses related to assets and liabilities recognised according to the B-type model on a linear basis because it would lead to substantial reduction of implementation costs. Auditors do not agree with this solution because it is not conceptually consistent with the provisions of other standards.
The prevailing trend of opinion which resulted in changing the representation model of lease contracts for the lessee in the new IFRS 16 standard has been that, regardless of the terms agreed upon between the parties, the lessee pays for the control of the legal right-of-use of the underlying asset of a contract, and not for its actual control. Therefore, the lessor should invariably recognise an asset called right-of-use asset and a counterpart liability.
IASB has complied with the criticism of the dual capitalisation model of the lease defined in the 2013 ED and eliminated the different representation in the lessees' financial statements of the effects of lease contracts depending on how the future economic benefits associated with the underlying asset were expected to be consumed. If it is accepted that the lease is financing for the lessee, then the representation of its consequences in the statement of financial position, in the statement of comprehensive income, and in the statement of cash flows should be the same. Users of financial statements would obtain more relevant and more comparable information.
IFRS 16 sets forth two exceptions to the balance sheet recognition of lease contracts for the lessee. The lessee has the possibility not to recognise asset and liability in the balance sheet for short-term leases, as well as for leases of low-value assets. These exceptions are not consistent with the concepts of asset and liability in the conceptual framework, their justification being rather based on avoiding the excessively high costs of applying the assessment rules required by the standard compared to the poor benefits in terms of relevant information for users.
The decision whether the fair value of the underlying asset is small may be quite subjective. IASB itself recognises the need for a materiality threshold; this is why it recommends the value of $5,000 in the conclusion base, although it is obvious that auditors will adjust this threshold according to transaction volumes, business models, etc.
The standard also provides for recognition on an aggregate basis of certain leases of assets with a low fair value, but highly dependent on, or highly interrelated with other underlying assets.
The opponents of these exceptions argue that there is no consistency in applying the criteria for recognition of liabilities. Why do liabilities to suppliers or liabilities to employees up to $5,000 have to be recognised in the balance sheet and lease liabilities do not?

If we can consider the representation of leases in the case of the lessee to be conceptually consistent, we may not claim the same thing about the model applied to the lessor.
The majority of those who sent comment letters to IASB on the 2013 ED aggressively criticised the proposals concerning the lease accounting for the lessor. The main complaints were:
-complexity of representation of A-type contracts (those where the lessee consumes more than an insignificant part of the economic benefits associated with the underlying asset), which will result in high implementation costs;
-recognition of a residual asset difficult to understand by external users;
-initial assessment of the residual asset according to the rules for financial assets although it is considered a non-financial asset which will be disclosed along with other non-financial assets assessed according to other rules;
-difficulty of the subsequent assessment of the receivable and the residual asset;
-the lack of symmetry in the case of B-type contracts (it is not perceived as logical that the lessee should recognise the contract payments as liability, and the lessor should not recognise the proceeds as receivables) is considered to be conceptually inconsistent.
IASB recognises that the receipts from the lessee and the rights retained over the underlying asset comply with the definition of asset in the conceptual framework, but also that the proposed model involves excessively high costs and that, from the point of view of most users, the model laid down in IAS 17 can be considered still viable (BC 57, BC 58).
Criticism has prompted IASB to postpone changing the accounting model for the lessor pending further conceptual clarification, and to retain the provisions of IAS 17. Accordingly, standard IFRS 17 stipulates that the lessor must classify lease contracts into one of the two categories (finance lease or operating lease).
This compromise was viewed with concern by some external users and by auditors. Two theories are identified in the new standard: the right-of-use theory applied by the lessee and the theory of risks and benefits transfer applied by the lessor. Why is it that the two of them should use different theories to categorise the same contract? It appears that what the lessor grants is not what the lessee receives. The lessor assigns the economic risks and benefits associated with the underlying asset (hence, control over the underlying asset), and the lessee receives the right of use over the underlying asset (i.e., control over the legal right of use).
It is still not understood why the amount recognised as liability at the lessee is not recognised as receivable at the lessor. Why is no longer relevant for the lessee how the economic benefits associated with the asset are consumed when the contract is recognised, whereas at the lessor this consumption remains the basic criterion in recognising the contract?
Some do not consider it justified that a loan granted as cash should be represented differently in the financial statements from a loan granted as a non-monetary asset. A loan granted as cash is always recognised as a financial asset whatever the size of the benefits obtained by the recipient of the loan from using such amount. Why is it that where a loan is granted as a non-monetary asset (land, building, equipment, etc.) no financial asset is recognised if the recipient of the loan obtains only insignificant benefits?
Another argument advanced by IASB to justify the dual lessor model is that most users of financial statements do not currently adjust lessors' financial statements for

the effects of leases—indicating that the lessor accounting model in IAS 17 already provides users of financial statements with the information that they need. In addition, investors generally analyse the financial statements of individual entities (and not a lessee and lessor of the same underlying asset). Accordingly, it is not essential that the lessee and lessor accounting models are symmetrical (BC 61).

4.3. Technical difficulties inherent to the assessment process

An important issue in our view is that IFRS 16 eliminates reference to the fair value where the lessee capitalises the lease contract at the time of its initial recognition. Fair value measurement was only justified if the lease asset was new and the lessor ensured that he would recover from the lessee the asset's fair value or almost all of the fair value. Sometimes the lessee takes on lease an asset which is no longer new. Its value is low on the market, but the lessee is willing to pay well above this value to the lessor because he expects to obtain high economic benefits (certain assets may be very productive for lessees even though their market worth is low). In such a situation, recognising the initial liability at fair value (lower than the present value of the lease payments) will cause the inclusion in the cost of financing of a portion of the principal. Besides, identifying the fair value of certain assets which are no longer new may become quite subjective.

This drawback has been removed by the new standard, which stipulates that the initial assessment of the lease liability is always made at the present value of the lease payments.

Another element of difficulty is given by determining the discount rate of the lease payments. This can be either the interest rate implicit in the lease, or the lessee's incremental borrowing rate.

As regards the interest rate implicit in the lease, the new standard has eliminated the possibility to include in the lease payments some contingent rentals based on the asset's performance for the lessee. Only payments based on the trends of certain indicators can be added to the lease payments.

Payments based on the asset's performance reputedly fail to satisfy the criteria for recognition of the liability at the time of the initial recognition of the contract. They depend on future events which, even though they may be very likely, cannot always be controlled by the lessee.

Where the interest rate implicit in the lease cannot be determined or is not considered relevant, the lessee's incremental borrowing rate is being used. If the lessor is a leasing entity, the lessee receives the payment schedule from the lessor and the interest rate implicit in the lease is known. A real difficulty in the application of the new standard will be the capitalisation of lease contracts which are currently recognised as operating leases. The lessee often receives invoices stipulating only the payment to be made, but he does not have an interest rate implicit in the lease. He will have to capitalise lease payments with an incremental borrowing rate. Obtaining this rate will generate costs for the lessees because it must be provided by an independent valuation expert or an actuary.

4.4. What are the expected effects of implementing the new lease standard?

In order to identify the effects of applying IFRS 16 we have conducted an analysis of the studies made by IASB. We have compared the effects identified in these studies with those identified by PWC, but also with some effects identified in comment letters.

Our findings lead us to conclude that there are no significant differences in the impact of the new rules on financial statements and financial analysis ratios, or on cost items associated with the implementation of the standard, but there are different perceptions of the possible benefits expected for users of financial statements.
A list of identified costs of implementing the new standard, at inception and thereafter, includes:
a) costs for adapting IT systems and internal processes, personnel training costs (such costs will be lower for entities with more financial lease, and higher for entities with more operating lease);
b) costs for determining the discount rates;
c) costs for communicating the changes in the reported information to external parties;
d) costs for identification of the lease (the more complex the contracts, the higher the costs);
f) costs of applying the leases disclosure requirements);
g) costs for regulators and tax authorities.
Cost savings will be achieved from implementing exceptions (short-term lease and leases of low-value assets) and from classifying contracts for the lessee, but also from giving up adjustments by analysists and investors to the values disclosed by the entities.
As regards the industries which are likely to be affected, IASB's ranking is somewhat different than the ranking of PWC. IASB mentions among the most affected industries Airlines, Retailers, Travel and leisure, Transport, Telecommunication. PWC considers that the highest impact will be on industries of Retail, Airlines, Health Care, Textile and Apparel, Wholesale, Transport and infrastructure.
We have identified two relevant sources for these two differences. Firstly, the PWC study eliminates the USA from the sample, whereas the IASB study is significantly based on American companies. The second reason is given by different research methodologies.
The benefits of implementing the new standard are expressed rather in IASB expectations than in concrete values:
(i) improved quality of financial reporting
IFRS 16 is expected to reduce the need for investors and financial analysts to make adjustments in order to provide more useful information than is available as a result of applying IAS 17. Such adjustments are coarse and, depending on the methodology used, determines much higher values as compared to those that would be obtained if IFRS 16 was applied.
However, IASB recognises that users of financial statements will make further adjustments to the information obtained from the application of IFRS 16 in order to obtain useful information, but it expects such adjustments to have lower costs.
The lessor is required to disclose additional information about how it manages the risks related to its residual interest in assets subject to leases.
For some it is hard to believe that lessors who in the past refused to disclose the detailed criteria underlying lease classification and risks related to contracts will begin to analyse the efficiency in managing such risks.
Other reservations are related to debt maturity analysis. This analysis is required by IFRS 7 and entities are expected to adopt different practices in disclosing such information.

The IFRS requirement of determining the discount rate is expected to prompt certain companies to revise the way they finance and operate their businesses.
(ii) improved comparability
It is admitted that comparability is improved for the lessee, but for the lessor, differences between companies will continue to occur in reflecting similar contracts. Differences affecting comparability may also arise in disclosure issues.

5. Conclusions

IFRS 16 solves the conceptual dilemmas for the lessee, but not for the lessor. It is obviously an unfinished project which requires further conceptual clarification along with consistent and less expensive technical solutions.
We have seen that preparers are rather willing to accept conceptually unsubstantiated solutions if they bring cost savings. They are blaming IASB for taking no account of the different business models which, in their opinion, account for the fact that not all lease contracts are financing for the lessee (a dual model would be more appropriate). Unlike them, auditors, academics, and EFRAG consider it absolutely necessary that IASB solutions should be in accordance with the international conceptual framework and that both the lessee and the lessor should apply a single accounting model based on the right-of-use asset theory.
There is no disagreement concerning the impact of the new rules on financial statements and financial ratios, there is the same perception of the main costs inherent to applying IFRS 16, but views diverge as to the benefits expected for users.
We believe that our research may be helpful to:
a) accounting professionals who need to understand and apply the new standard by exercising professional judgment (they should know the new rules, but also their advantages and limitations);
b) teachers who must explain to their students the differences between IAS 17 and IFRS 16 in terms of information quality for external users and for company management;
c) regulators and tax authorities.
National accounting regulations represented by Ministry of Public Finance Order No. 1802/2014 include texts taken over from IAS 17. The transition to IFRS 16 in Romania will lead Romanian authorities to change the lease accounting policies by taking over concepts from the new standard into the national regulations. The European Commission will not allow a situation where some companies enjoy a tax advantage only because they apply rules inspired from IAS 17, while other companies do not have this advantage because they moved to applying IFRS 16.

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ENTERPRISE RISK MANAGEMENT AND CORPORATE GOVERNANCE

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Abstract: *Enterprise risk management is a topic that converges corporate governance and risk management in a way that managers and stakeholders of the company can have a clear path to assessing dealing with risk within an appropriate corporate governance system. The present paper, while not keen to provide an introduction into the terminology, definitions or classifications – since our goal is much past this – attempts to build up a viable framework for managers to deal with enterprise risk management in their relationship with the wide array of stakeholders. Therefore, the purpose of the paper is to compact and correlate the available information from literature, policy makers, case studies, in order to achieve a considerate framework for both the needs of management and stakeholders. Without disregard to the complexity of the topic, the author attempts to summarize a basic framework that can further be expanded in accordance with the company's requirements and takes into consideration the general expectations from stakeholders that can further expand into more specific ones and then result in a tailor made plan for dealing with risk. Starting from a literature review focused on several policy maker views and experts' inputs on enterprise risk management, the papers manages to put together and create synergies between the steps that a company should take in its risk management initiatives. Without leaving aside the corporate governance principles, we make an effort to illustrate the ideas that should be at the centre of risk identification and evaluation and further we dedicate risk evaluation output – a risk report – and risk mitigation to ensuring communication with the stakeholders in a transparent and appropriate manner. Due to the fact that risk management can be viewed in a variety of ways, as companies are widely diverse, the proposed framework does not benefit from fixed measures, they have to be adapted both in terms of array of details implied as well as assigned interest and importance.*

Keywords: *enterprise risk; corporate governance; risk management.*

JEL classification: *G31; G34.*

1. Introduction

The literature reviewed for the present paper indicates a unanimously accepted approach to risk management process being split into four sequential steps: risk identification, risk analysis, risk evaluation and risk mitigation. Starting from a comprehensive selection of literature reviews, case studies and frameworks from global policy makers, the author emerges into a paper dedicated to the theoretical aspects of the correlation between corporate governance and risk management. Reviewing a significant number of literature on the topic, we have agreed on using the term enterprise risk management, as used by many peers who have studied the

exchange between the two fields. This term complies with our goal of correlating practices of corporate governance with managing risk in a company.
While being short on terms origins or definitions, since our purpose lies much past such an introductory phase, the paper could be considered a support for diving into the process of enterprise risk management. It offers to a considerate extent an ordeal of frameworks and process descriptions so that the case study represents a well-informed framework suggestions, which can be considered a centralizer for many views and approaches under the umbrella of the same goal. Many of the referenced material in the final section of the paper contain themselves a significant array of referencing to further material, the limitation of length leading to the choice of the most complex literature and studies. The reference system ranges from the ones aiming to define and display standardized measurements and actions to the opinions and recommendations expressed globally that represent the strength of the work.
Since countries' frameworks are different in their perception and application of corporate governance systems and management and stakeholders may have quite a wide array of approaches to risk management, the originality of the paper comes from the attempt to unify the views under the same framework. The output framework is adaptable and adjustable so that it can subscribe to preferences and particularities of corporate governance systems, managers and stakeholders. The adaptability lies in assigning degrees of importance and/ or excluding factors from the analysis. In an application of the theory presented, one would account for these specificities by modelling the analysis on a defined range: a corporate governance system, companies adhering to that (country's) corporate governance system, indicators relevant for the selection and an appropriate way of looking at the analysis. The way of looking at the application is, of course, from a stakeholder perspective and such choice should subscribe to the aforementioned ones.
The article is composed of a literature review comprising the most influential work for the output the author has come to, followed by a case study dedicated to presenting with the most significant details the unified framework proposed for a stakeholder view of enterprise risk management. The paper is completed with a pertinent conclusion summarizing the results and laying ground for further development of the topic, and a list of references.

2. Literature Review

Kaen Fred R (2003) connects meaningfully the concepts of risk management and corporate governance depicting that they intertwine having at center the purpose of value creation for shareholders. In the book, there is comprehensively depicted how important it is that the perspective of management does not exclude or underestimate the significance of risk management in the company's environment, for it is a contributor to correcting market imperfections caused by several factors. While confronting with asymmetric information, fluctuations in rules and regulations and discrepancies in interests of stakeholders, risk management represents for the company a mean of ensuring the proper corporate governance actions with the purpose of scrutiny, supervision and risk rewarding. The author goes one step further and draws attention to the implications of risk management as a ripple not only in the company's own environment but also in the society as a fully interconnected mechanism.

UK's Financial Reporting Council has defined in their latest corporate governance code published in 2016 the concept of corporate governance as a sum of processes and structures employed in the enhancement of shareholder value and firm performance. Having trust, transparency and accountability at the center of any corporate governance system one can turn the intersection of the concept with risk into 'risk governance', a phrase that has been used in most of the recent literature to depict the strong connection between the two concepts and avoid their divergence from the common purpose they share.

Pirtea M. and Nicolescu C. (2013) state that "Corporate governance cannot be considered a fixed number of regulations and procedures, but an innovative process by which the most crucial decisions in companies are managed, values and cultures are redefined, and the leaders are assessed".

In 2014, the ' Committee of Sponsoring Organizations' (COSO) has published its latest 'Integrated Framework', a remarkably comprehensive enterprise risk management set of guidelines to support a holistic approach to enterprise risk management. In the committee's view, the notion of risk management entails the following areas: convergence of opinion on risk appetite and strategy between management and stakeholders, continuous improvement in combating risk and operational difficulties arising from loss, awareness about risk complexity internally and in the industry environment and, last but not least, improvement of predictive mechanisms and unbiased decision making.

OECD's 2014 Risk Management and Corporate Governance report, based on OECD's Principles of Corporate Governance, has identified though a widely applied questionnaire to both state and private owned companies that while risk is a fundamental driver of evolution, the cost of risk management is widely misjudged. Risk governance, as the report pins it, is a topic nested in corporate governance practices that must ensure a transparent, accurate and appropriate communication to both internal and external stakeholders. With the BOD as the responsible for setting out risk minimums and maximums for the company, the process of setting these limits is yet unclear as to how to split it by types of risk and how to ensure the correlation between these targets, the risk management system and the company strategy.

A 2010 survey of Manifest Information Services, commissioned by the OECD, shows that across the OECD countries there is quite a limited presence of specialized risk committees in enterprises. Moreover, a matrix compiled to show where risk falls in as a responsibility reinforces the statement that the most common practice is to have risk governance under the umbrella of a department that contain no reference to risk in title.

ISO31000 standard, published by the International Organization for Standardization, provides an array of generic guidelines that can be adopted across industries or countries, with an appropriate update of specificities. This standard is a source of structure for most published literature as it outlines the process of risk management step by step: risk identification, risk analysis, risk estimation and risk treatment. In the process, the focus is not only on the measures taken but also on designing the framework on which a company can rely, with continuous improvement, to predict, deal with and learn from risk events.

The Financial Stability Board (FSB) has qualified in 2013's Thematic Review on Risk Governance the practice of having an independent risk committee represents a good case practice, a proactive measure, which further brings to discussion whether the

audit committee should or should not have the risk topic under their responsibilities. The New York Stock Exchange (NYSE) guidelines for risk management place the topic under the umbrella of senior management and the audit committee, the latter being responsible for guidelines, practices and final risk assessment and management. The survey applied in 2014 by OECD has shown for Sweden, for example, that audit committees are more active analytically but there was reduced follow up intent showing that more often than not data is processed, actions are taken but the follow up to ensure the appropriateness and adjust is poor.

A policy paper published by ACCA's Corporate Governance and Risk Management Committee in 2008 outlines a set of principles defined as fundamentals to corporate governance practices globally. While the list starts with the basics – common understanding of the purpose across boards, shareholders and stockholders, leading by example, strategies rewarding risk and inquiries to balanced power distribution – it ends with what seems to be the most important pillar in a corporate governance policy – the evolving nature of this concept. One can easily accept differences across sectors in industries on almost any topic, on corporate governance and risk management it is by far the most important to differentiate and adopt a flexibility that fosters progress and innovation.

Culp C. (2002) emerges into the risk management process by taking steady steps in constructing arguments with the support of illustrative examples that outline several directions of his work. On one hand, the author deals with strategy related topics and how they have the potential to add value to stakeholders and on the other hand, the direction of tactics lay ground for clearly defined steps in risk management. The focus of the book is to construct a picture of risk control that includes a set of processes which are broken down into ex ante and ex post actions that aim at combating risk. Leaving aside the impossible target of risk elimination, the author gets closer to the core processes and displays a concentrated bundle of five steps for a risk control procedure. The five steps are to be easily adjusted and completed with specificities of the company, industry, country or any other potential source of unicity. The steps are as follows: identify risk and determine tolerances, measure risks, monitor and report risks, control risks and oversee, audit, tune and realign the risk management process. All steps enumerated construct a base for the approach of the case study.

Brunnermeier M. and Yogo M. (2009) make an insightful paper on the means of combating liquidity risk through a well-balanced debt structure and a sufficient but not harmful cash reserves. Dealing with 'rollover failure' brings to question both short and long term financing – the former being sought out timely and allowing for dynamic changer while the latter is more likely to be sought prior to major difficulties. The author further describes at large a model for hedging liquidity risk with focus on timeliness and quality – the choice of maturity should account for worthy creditors.

Amberg A. and Friberg R. (2016) approach the following methods of risk management that companies may use: financial hedging through portfolios of futures, options or both; operational hedging where companies locate production with consideration of currency advantages and insured access to external financing. The author bases the research on a wide assessment through means of survey on non-financial Swedish companies, the results showing that 95% of companies using financial derivatives are also employing operational methods. In addition, companies expressed inclination to secure access to external financing sources as they approached it as a mean of ensuring against cash flow downturns that can prevent cutbacks in investment.

Lucic L. (2014) provides an excellent framework for business risk assessment with the use of financial ratios, an approach that yields great support for the present paper's case study in the selection of ratios and benchmarks to determine the influential factors of risk management. Risk assessment, as pointed out by the author, regardless of the stakeholder is carried out furthermost through financial ratios analysis. Pointing towards several groups of ratios and explaining the output reflected as a standalone information or as one subjective to benchmarking, makes this paper an important source for a measurable analytical approach towards risk management.

3. Case Study

The purpose of this paper's case study is to construct a broken down framework for risk management that can be employed further on in analyzing the reaction of different stakeholders to risk undergone by a company. It is important to mention as a hypothesis that:

- Stakeholders are interested in different aspects of risk (financial, environmental, social etc.) and are subject to different risk affinities (from risk adverse to risk takers)
- Stakeholders can use any framework to the extent they see it appropriate and increase or decrease levels of achievement or assigned benchmarks according to their expectation, a behaviour that allows the company to have different types of stakeholders in all areas.

To begin with, the presented process flow for risk management holds the structure of ISO31000 and divides it in the four sequences: risk identification, risk analysis, risk estimation and risk treatment.

The second layer of the process involves dealing with different types of risk and assigning benchmarks or bottom line actions as main deliverables which can be further translated into key performance indicators (KPIs) for assessing the risk as an empirical construct.

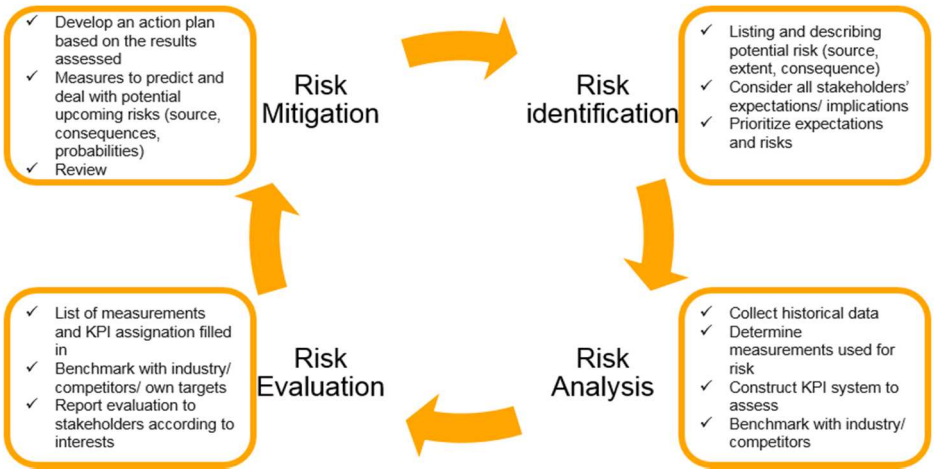

Figure 1: Risk management framework

Last but not least, the process cycle can be closed within the sequence of risk treatment with a conclusion drawn as a result of aggregating the factors identified, analysed and estimated. Therefore, the importance of the KPIs being measurable and easily comparable (across companies, industry, countries etc.) is stressed.
Having at centre a long list of enterprise risk management frameworks from the literature consulted, the author has developed the following matrix and risk evaluation framework that includes all aspects to be considered in estimating risk from the position of any potential stakeholder. The differentiation amongst stakeholders can be accentuated in assigning the importance in the sections of the evaluation model so that for example, a risk adverse stakeholder (namely, a bank) can put a greater weight on the company's solvability while a risk taker stakeholder can assign more to the financial performance of the enterprise.
As shown in *Figure 1*, the risk management framework proposed by the author is a cyclical one and does not necessarily close with risk treatment. This is the result of changes in the conditions of the framework, updating of benchmarks, changes and/or evolution of stakeholders and any other factors that are subject to change that therefore demand a continuous adaptation of the framework for an accurate status quo output.
To begin with, the process of risk identification is the phase in which a company has to gather information from the entire environment of the company: shareholders, stakeholders, market segment, industry, country etc. Listing all sources of risk may be an industrious task since there are so many variables to consider but it is rather relevant to enlist those that are actually in the attention of stakeholders and those that can affect the shareholders. This step requires data about the source of risk, outcomes of risk and consequences of risk that can be translated into an outcome for any potential stakeholder. For example, a manufacturing enterprise can list as risk sources the price of raw materials and labour shortages. Then, outcomes of risk are increases in production expenses and decreasing the manufacturing capacities which have as potential consequences an increase in price of the product leading to decreased sales and lower manufacturing output leading to decreased volumes and decreased sales.
Further, risk analysis deals with processing the data that was marked as being of importance in the assessment of the risks determined. Measurements of risk should be taken from each category of risk identified. For example, the same manufacturing enterprise can assess the impact that the supposed price increase would have on its returns. Then, in the system of KPIs the company should assign a certain weight to each risk, according to the weight it would have in the company not achieving its goals. Therefore, if the manufacturing enterprise from our example considers this a minimal risk then it should assign a low weight and should it consider it an important imminent risk then a higher one, leading to a clear assessment of how much this raw materials price increase would affect the expected results of the company.
The third step, risk evaluation, should mainly focus on making the connection between the stakeholders' expectations and the analysed risks. As a result, the benchmarking assessment should lead to an overall result as to where the company is positioned in terms of the expectations of its stakeholders' interests. The most important action in this process is reporting such results transparently so that stakeholders' can assess the company's analysis and express their opinions on the results achieved.

Risk mitigation closes the cycle and must represent a solid basis for restarting it due to the fact that the action plan puts together all implications of the framework. This plan should comprise not only measures for dealing with risk or its identified effects but also include actions that can forecast and ensure predictive measures for potential risk. Most importantly, it is of great importance for future risk mitigation to continuously review and update the identification, analysis and evaluation steps as conditions perpetually change for the company. Nevertheless, changes should be in aligned in such way that it would allow for a year to year comparison which would be necessary in assessing the company's evolution.
All in all, the risk management framework aims at providing a cyclical view on the actions that companies should take in order to ensure that they are continuously aware of and dealing with risk and its effects. To ensure the stability of a company in terms of risk management the continuity in approach and the perpetual improvement of means, measurements and processes is implied.

4. Conclusion

In conclusion, enterprise risk can be managed through a strong model that takes into account stakeholders interests and affinities and that can quantify risk measurements according to such preferences with an output that can indicate to the company's management how the status quo is positioned in respect to expectations from stakeholders.
The quality of the company's assessment lies in its continuous improvement, value of communication with stakeholders and its ability to ensure predictive and responsive actions. Setting priorities shows potential to deal with risk systematically and it should not deter the company from achieving good results in terms of risk management KPIs.
The present paper represents an attempt to present briefly the importance of having in place a risk management system and attempts to deal with several aspects of this process that converge with the field of corporate governance. Despite the limited view upon the process, this frame can successfully be a starting point for building up a risk mitigation system that connects the management's interests to those of shareholders and a wide array of stakeholders. The inclusive nature of this framework ensures that it allows for this basis to be used by a wide variety of companies which take different interests and deal with different expectations from their shareholders and relationship to stakeholders.
The author identifies as further potential steps applying the developed framework to a number of listed companies, with available data, and assessing whether the behaviour of several types of investors can be predicted with such a framework estimation. A further inquiry into the topic will be, more concretely, assessing whether historical data on this framework can predict investor behaviour and if so what are the KPIs worth aggregating for a risk behaviour predictive measurement.

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CORRELATIONS EXISTING BETWEEN SHARE CAPITAL AND SOCIAL PATRIMONY

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Abstract: *What is social patrimony and what is its role in the existence and functioning of the company? Is there any connection between share capital and social patrimony? These are questions that we try to answer throughout this paper. Current research presented is based on a theoretical study of specific regulation and doctrine regarding the risk of insolvency for companies. Using critical research method we found various discrepancies in their implementation which in turn can lead to market distortions and to an increase in bankruptcies. Research conducted revealed us another question that we had to find an answer and that was: Can a certain society reach the brink of insolvency even if it has a well-established and reliable market with an impressive portfolio of customers who offers quality goods and services at a good price? Present research presented offers arguments, pros and cons to concluding a correct answer. This paper reflects upon the answer that the role of patrimonial balance to the society is vital. In order to achieve current research results present paper critically argues upon the definition of legal personality and how it relates to social patrimony. Through the effects of legal personality, each legal person acting on the market is liable for its obligations with its own goods. Deriving another fact from this situation is the fact that associates of a company are accountable for social liabilities in a "subsidiary, unlimited and joint" manner. Research goes further into analysing the causal link between the capability of the legal entity and its patrimony. Theoretical findings show that only those rights and obligations which are necessary to achieve the goal set bylaw or in the charter can be part of the companies` activity and capability of use. Also the functioning of a company implies the realization of its exercise capacity by the fact that it is able to hold rights and fulfil its obligations through its management appointed by the memorandum of association or bylaw. Research also presents the elements composing the social patrimony and these are social assets and social liabilities hold by a company and also the differences in nature regarding share capital comparing various incident regulations.*

Keywords: *insolvency; dissolution; social assets; social liabilities; patrimony; share capital; legal personality.*

JEL classification: *K20; G33; G34.*

Introduction

Current context in which organizations operate is made up of a large number of forces. Each one has its own specific interest or direction. There are the forces of external environment such as the market, customers, suppliers, investors, business partners as well as the internal environment of the company's management and employees. All these stakeholders want to get some value for the resources invested

within the organization. However, this value has a different content for each of them and takes the form of divergent interests because each one wants maximization of its own utility or profit (Stancu I., 2007:30). Depending on how the organization will manage to coordinate all these divergent forces to achieve its own goal depends on its success on the market, as well as on gaining a comparative advantage over its competitors. This comparative advantage actually translates into that added value for all stakeholders in the organization. The way managers can find the most appropriate solutions to the ever-diversified requirements of customers, suppliers or investors will influence its survival on the market. Financial policies of enterprises include aspects related to the optimal allocation of capital towards achieving the objectives or interests of the shareholders (Halpern, 1998). State plays an important role in supporting businesses by creating a legislative framework appropriate to their needs by protecting the rights and obligations of both the creditor and the debtor.
In Romanian law a company is able to producing, trading or providing services in a legal manner under certain codification of its activities known as CAEN codes. CAEN stands for the Romanian statistical classification of economic activities. The process of encoding core business and introducing secondary activities is done in the description of the object of activity in charter or partnership deed regarding the establishment of the company, this we know from common law expressed in the Romanian Civil Code in the art. 1225. How can any legal person realize its activity is stated both in Companies Law known as no. 31/1990 law, republished as amended and Civil Code according to article 25, paragraph (1) that refers to the subjects of civil law as “natural and legal persons" and that the legal person refers to "any form of organization meeting the conditions required by law is entitled to hold rights and civil obligations" according to the same Civil Code, art. 25, par. (3).

1. Legal personality - defining aspect of social patrimony

What is social patrimony? The answer is provided to us by Professor Stanciu D. Cărpenaru (2012: 133) as the total rights and obligations that are able to be valued in monetary units, having economical utility and belonging to the company. Therefore the social patrimony is made up of assets and liabilities as they are reflected in the company`s financial statements.
In order to carry out activities for making profit Company Law according to art.1, par. (1) tells us that "the natural and legal persons may associate to establish companies with legal personality." This aspect indicates that an organisation who intends to achieve profit by the use of production, trade or service providing, it must establish itself according to the Company’s Law in one of the forms of organisations endowed with legal personality. This is very important because Civil Code defines the effects of legal personality in art. 193, par. (1) as deriving from the fact that legal persons participating in the civil circuit are liable for its obligations with their own goods. Civil Code also regulates the rights and obligations of a legal person and that it they can coexist either as legal person with legal personality or not and the difference between them is being discussed more fully below.
Civil Code states who can be a legal person and that is any entity legal stated by law or any other person legally established although not declared by law as legal persons but fulfil the specified conditions from art.187 of Civil Code, namely "legal person must have an independent organization and its own patrimony affected to achieve a certain licit and moral purpose in accordance with the general interest". The Civil

Code mentions at article 189 legal person categories of public or private interest. This paper will address specific elements of private legal persons.
Civil Code in the article 1887 states the legal provisions that make up the system of common law for companies to legally exist but it does not exclude the fact that law describing different types of companies depending on their object of activity can exist and produce effects. Thus Civil Code at art.1888 classifies generic forms in which companies can be found in the economy as "simple, joint-venture, partnership, limited partnership, limited liability, by shares, limited by shares, cooperatives or others." Commercial law states which are the corporate forms that can be established without legal personality and that is simple and venture companies according to art.1892, par. (1) and art. 1951. Company law already mentioned tells us what types of companies can be established endowed with legal personality as: society partnerships, limited partnerships, by shares, company limited by shares and limited liability company according to art. (2).
In terms of acquiring and possessing legal personality Civil Code, by art. 1889, par. (1), states that by partnership deed or any other act associates may establish a company with legal personality. The first effect arising from the acquisition of legal personality refers to the fact that associates' accountability for social liabilities of the company, under the same article of the Civil Code previously mentioned, is "subsidiary, unlimited and joint". Same article above mentioned at paragraph (4) specifies that until obtaining legal personality, relationships between partners are governed by the rules of simple societies and paragraph (3) reveals that "the company acquires legal personality at the time of its registration at the Trade Register."

1.1. The causal link between the capability of the legal entity and its patrimony

The effect of obtaining legal personality is reflected in the content of civil capacity of the legal person referring to the fact that only persons registered according to Civil Code art. 205, paragraph (1), have the ability to hold rights and obligations after their registration that is after obtaining legal personality. There is one exception to this legal requirement, namely that the action taken by the founders, associates or any other person acting on behalf of a legal person may be hold by a legal person after it has acquired legal personality and is considered to be valid since their birth, producing their full legal effect in accordance with paragraph (4) of the article above. For other categories of legal persons they have the ability to acquire rights and assume obligations under art. 194 of the Civil Code starting with the date of the establishment document and these may be "only those civil rights and obligations which are necessary to achieve their goal set by law, articles of incorporation or bylaw" according to the same law at art. 206, par. (2) and art. 1894, par. (1). Civil Code states the sanction to any action that may violate these rules namely absolute invalidity according to art.1894, paragraph (3). The functioning of legal person has the effect of the realization of its legal exercise capacity by the fact that it is able to hold rights and fulfil its obligations through its management appointed by its memorandum of association and Bylaw governed by the rule of mandate (Civil code art. 209).

1.2. The correlation between legal personality and share-capital

In order to create a company, associates are obliged to contribute with money, goods, specific services or knowledge according to art. 1882, par. (3) from Civil

Code. One difference that appears between a legal person beholding legal personality and another one that does not refers to the fact that in case of a legal person from the first category, associates contributions fall within the assets of the company and in case of entities without legal personality the contributions are co-owned by associates unless they have agreed in a different manner (Civil Code, art. 1883, par.1).
Agreement of the partners in order to establish a company refers to the fact that they undertake the responsibility to mutually cooperate for an activity and contribute to joint-stock through cash, goods, specific knowledge or services for the purpose to share the benefits or to use economy that might result it is called bylaw and by this the associates become accountable to " bear the losses proportional to the distribution of benefits, whether by contract hasn't been otherwise agreed " according to the article 1881, paragraph (1) and (2) from Civil Code. Absolute invalidity is the sanction that law gives to the contract used to establish a company with legal personality that is not concluded in writing and does not provide the detailed description of associates, contributions, legal form, object of activity, name and registered society according to art. 1884, paragraph (1 and 2) from Civil Code.
The Civil Code defines the issued share capital as divided into equal parts which are distributed to associates proportional to their contributions, unless bylaw or the articles of association otherwise provide according to art.1894, paragraph (1). According to the same article above mentioned, par. (2 and 3) if associates have contributed with specific knowledge or services to the establishment of the company they will participate to the benefits sharing or bearing the losses and decision making in society.

2. The difference in nature and content of contributions to share capital as reflected in Company's Law and Civil Code

Civil Code is the common law in the matter of share capital and covers from art.1896 to art.1899 the rules regarding the contributions to share capital in tangible or intangible goods, cash, services, specific knowledge. What is important is that company law comes with different rules from those given by the civil code in the matter of share capital. Namely, cash contributions are compulsory to set up any type of company as stated in the Companies Law while the rules from Civil Code in art. 1881 par. (1) state that there is no specific mandatory contribution in cash to establish a company.
Also, with regard to the contribution in tangible or intangible goods, company law comes with specific provisions additional to those provided by Civil Code art. 1881, paragraph 1, namely that contributions in kind should be valued in economic terms according to art. 16, par. (2) of the Companies Law. Regarding contributions in services, regulated by the Civil Code art. In 1881 this states that they cannot take part to the formation or capital according to art. 16, par. (4) of the Companies Law. For contribution to the capital which has undertaken an associate in benefits or specific knowledge to be recognized as contribution to share capital it should be provided continuously. The associate who contributes to share capital in services or knowledge is entitled to a certain share from profits resulted from productive activities performed as a contribution to capital in accordance with art. 1889 of the Civil Code and also to participate in losses according to the article no.16, par. (5).

Formal requirements of capital to companies with legal personality
Companies` Law states specific conditions for the establishment of capital to companies regulated by it. The Articles of Incorporation referring to partnerships, limited partnerships or limited liability companies will include the value of share capital, mentioning the contribution of each partner in cash or in kind, the contribution in kind and its valuation method. Limited liability companies shall specify the number and nominal value of shares and the number of shares given to each associate for his contribution (Company Law, art. 8). The charter of the joint stock company or limited liability shall include "capital subscribed and paid and if the company has an authorized capital, the amount thereof" in accordance with paragraph 9 of the same Company Law mentioned above. The registered capital for the joint-stock company or limited partnership by shares cannot be less than 90,000 lei and according to article 91 of the same law, the share capital of a limited liability company cannot be less than 200 lei, divided into equal shares, which cannot be less than 10 lei (Company Law, art. 10, par. 1).

3. Operations on share capital

3.1. Share capital decrease
The share capital may be increased or reduced depending on the business needs of the company. Thus according to art. 207 of the Companies` Law it can be reduced by reducing the number of shares or reducing the nominal value of each share, acquisition of own shares, followed by their cancellation. This can happen when the reduction is motivated by the loss of assets and in the opposite situation it can be reduced by "full or partial exemption associations of payments due repayment to shareholders of a share of contributions proportional reducing capital and equally calculated for each share" according to the same article mentioned above.
Decision to reduce the share capital will have to meet minimum capital according to art. 208, paragraph 2 and paragraph 1 says that "the share capital decrease will be only after a period of two months from the day the decision to change the capital taken by the General Assembly of Associates (AGA) was published in the Official Gazette of Romania, Part IV to offer protection to the company's creditors whose claims are certain but not necessarily due before the publication of the decision giving them the right to object against that judgment and ask for guarantees claims which have not fallen due by the date of such publication. The reducing of share capital has no effect and it does not entitle to make payments to shareholders until the creditors will not be achieved realization of their claims or adequate safeguards. In other news if the court considers that the company has provided adequate safeguards creditors or the company's assets is sufficient and guarantees are not necessary, it will reject the request of creditors.

3.2. Share capital increase
If the share capital decreases this means that the company's creditors could suffer losses thus by raising capital the opposite effect occurs. This reveals a role of share capital namely the protection of creditors of the company.
Companies Law regulates the ways in which this operates, namely share capital increases according to article 201 paragraph 1 of the Companies' Law by issuing new shares or by increasing the nominal value of existing shares if new contributions

are made in cash and or in kind. If internal resources are available in the company and there are sufficient reserves, benefits, emission premiums or compensation of liquid and due claims on the company shares (except legal reserves) in accordance with paragraph 2 of the before mentioned law are also methods to increase share capital. Companies' Law provides in this case a right of protection of creditors according to art. 61 of the Companies` Law.

4. Social patrimony of company - elements

The notion of patrimony (Dragoi A., Florian R. G., 2013: 14-15) refers to all the rights and obligations of that legal person holding or will hold in the future bearing monetary value. Specifically, the assets of a company consist of all the company's goods and rights and liabilities consist of all the obligations of the company resulting from its commercial activities (Puie O., 2014: 443-444).

Social patrimony of a company consists of two parts that are connected to each as assets and liabilities. Company Law states in article 3, par. (1) that social patrimony is the warranty for social obligations. Social assets are those contributed to the formation of the share capital alongside with those acquired during the conduct of its business and social liabilities consists of all obligations acquired by the company (Stanciu D. C., 2012: 133).

However, Companies` Law establishes certain limits on financial accountability of the company and its shareholders regarding the type of society we are talking about. In case general partnership, limited partnership or limited by shares, the company's creditors will first turn against its social patrimony held responsible and if this is not sufficient they will have the right to turn against shareholders of these companies. This is also the case of joint liability associates who are unlimited accountable for social obligations under article 3, paragraph 1 and 2 from Companies` Law. On the other side limited liability company creditors will go first against company`s social patrimony which is therefore responsible for social obligations and if this is not enough then they will be able to turn against shareholders who will be accountable for social creditors corresponding their limited share capital in accordance with paragraph 3 of the same article 3 mentioned above. The same rule applies to the limited partners according to the same paragraph.

Conclusions - correlations existing between social patrimony and share capital

The relationship that exists between social patrimony which consists of a legal universality of rights and obligations valued in money, on one side and on the other side share capital which is a right of the shareholders at the time of dissolution of the company. Each of the associates is entitled to a share of its contribution made to the joint-stock and therefore this represents an obligation of the company to its shareholders. In other words the relationship between capital and social patrimony is that of a part of the whole.

The role of share capital represents a general guarantee of unsecured creditors (Stanciu D. C., 2012: 131) while social patrimony has the function of meeting the financial needs of company's social creditors. One can say that share capital can be considered as a part of the social patrimony but the concept is not very accurate because associates accountability for the company's creditors has subsidiary

purpose. It then operates only when the productive activity of the company hasn't produced enough social assets to cover social liabilities. In this situation, company's creditors may turn against associates who are accountable just up to the limit of their contribution to the share capital (in case of limited partners and of Limited Liability Company). Between these two concepts there is still a functional relationship of major importance for business continuity and that is where the net assets (calculated as the difference between total assets and total liabilities) as part of social assets has a lower value than half of the share capital, associates organize a general meeting to see if there is a need for dissolution. The company has two options in this case, one is to restructure social assets up to the legal level, in a given period of time, or to reduce share capital by an amount at least equal to the losses that could not be covered by reserves, according to Companies' Law, art. 153, par. (1 to 5).
Another relationship to be established between social patrimony and share capital is that share of the company's profit is distributed to shareholders as dividends and these are part of social patrimony. The dividends value is determined at a value proportional to the contribution of that shareholder to the share capital formation according to Companies` Law, art. 67. The restructuring of issued share capital must be done before the distribution of profit according to art. 69 of Companies` Law. In other words, ending the life cycle of a society mainly depends on the solvability state of its social patrimony and that is the situation when value of social assets is enough to cover social liabilities. In this respect, the insolvency Law no. 85 from 2006 defines the insolvency state as the one in which the social patrimony characterized by the fact that the payment of certain, liquid and due liabilities cannot be done from the exiting funds available in the company's treasury. Therefore, having the right balance between liquid assets and payable liabilities depend the state of solvency of a company which offers a guarantee for its very existence in the economy and society.
In conclusion we would like to offer an answer to the following question: Can a certain society reach the brink of insolvency even if it has a well-established and reliable market with an impressive portfolio of customers who offers quality goods and services at a good price? And the answer is straightforward: Yes! The role of patrimonial balance to the society is vital, it is the one that guarantees the existence and continuity of the company while the one of share capital is to provide a general guarantee for social creditors of the company.

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CHARACTERISTICS OF THE HUNGARIAN LEASING MARKET

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Abstract: *In Hungary, the first leasing companies appeared in the 1990s. Nowadays, a very large number of operators are active on the leasing market; most of them are subsidiary of a bank operating in Hungary but there are also independent leasing companies which are not or not directly belonging to banking groups. In Hungary, the leasing market shows a fairly diversified picture. The authors will present the leasing forms which are current and frequently used in Hungary, the main features thereof and some characteristics of the accounting records, highlighting the Leasing Standard IFRS 16. Under IFRS 16, from the year of 2019, the lessee shall recognise the operating lease as an asset thus there will be impact on structure of the balance sheet and income of the large leasing companies as well as the amount of Earnings after taxes. Based on the statistical data concerning the years from 2008 to 2016, the authors will analyse the evolution of the following things: turnover of the whole leasing market, values of the assets outstanding and the new finances. They will point out the fact that, while the Hungarian leasing market has grown only slowly – even despite of the low interests – since the financial crisis erupted in 2008, the growth is continuous in the European countries and the leasing plays an important role in funding the investments of small and medium-sized enterprises. At the same time, in Hungary, the investment performances changing at national economic level and the sources of EU grants for development – in addition to other market factors – are greatly influencing the Hungarian leasing market developments. In the long term, one of the most important aims of the leasing companies is to be universal financers i.e. to provide flexible and cost-effective financing not only for vehicles, machinery and equipment but, for instance, IT tools. The continuously appearing innovations are expected to encourage the Hungarian companies to improve their competitiveness and, for this purpose, to make their IT investment more frequent. A financial manager should deal with the choice between some leasing forms and leasing products not only as a funding issue but care should be taken that the leasing can affect the capital structure of company assets equally in the short and long terms.*

Keywords: *financial leasing; IFRS; asset financing; leasing market; competitiveness.*

JEL classification: *G10; M40.*

Introduction

Nowadays, leasing is a well-known and usual form of finance among companies, budgetary institutions and private individuals. In Hungary, leasing became widespread in the '90s; the role thereof initially increased by leaps and

bounds in the development of tools. More and more types of leasing products and services related to the leasing appeared in the area of funding. Since their widespread emergence, their roles in the long-term equipment development and completion of the investments have depended on the economic cycle and, not least, the then-existing tax and accounting rules (Walter, 2014).
If an enterprise decides to use leasing for asset financing then the long-term leasing agreement will be similar to the insurance lending contract. If a company frequently improves in the form of leasing and leases a lot then attention should be taken to the amount of credits and loans recognised in the balance sheet. Because the investors realize that the leasing as an off-balance sheet item is capable of replacing loan capital. [Bélyász, 2007] Companies can generally obtain tangible and intangible assets by procurement or leasing. The lessee firstly recognises the asset obtained under financial lease as an investment then capitalises it and recognises among the assets in the balance sheet (Kardos et al., 2016; Lukács, 2015).
Aim of the treatise is to present the features of the two most widespread forms of the leasing. The authors will firstly examine the Hungarian leasing market trends, highlighting the changes in new leasing finances and assets outstanding. Subsequently, the main features of European countries' leasing markets will be presented in international comparison. Impact of the financial-economic crisis started in 2008 can be detected in almost all areas of the Hungarian economy therefore the analysis concerns the period between 2008 and 2016. Databases of the Hungarian Central Statistical Office (KSH), the Hungarian Leasing Association and the European Federation of Leasing Company Associations (Leaseurope) have served as source of the analysis.

1. Concept and characteristics of leasing

The leasing products, the specific characteristics and effects thereof on the result and property are detailed by numerous textbooks and specialized literature (Bélyácz, 2007; Lukács, 2015; Siklósi, 2016; Zéman et al., 2016). Therefore, we will now emphasise the most important concepts related to the financial leasing and the categories belonging to the lease accounting statements, based on the Act on Credit Institutions and Financial Enterprises (hereinafter Htv.) and Act on Accounting (hereinafter Sztv.). It should be noted that neither of the acts defines the concept of operating leasing which is known in practise. (Htv., 2013, Szvt.,2000)
According to the *Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises* [3], *financial leasing* shall mean an operation where the lessee acquires title of use on the ownership of a movable tangible property or a real estate property, or a right, from the lessor for a specified period of time, upon which the lessee:

a) shall bear all risks stemming from the passing of risk,

b) becomes entitled to collect proceeds,

c) shall bear direct costs (including maintenance and depreciation costs or amortization charges),

d) j gains entitlement for acquiring title of ownership - or to assign such entitlement to another party - of the leased property following expiration of the lease period as stipulated in the contract and upon payment of principal and interests in full and payment of the residual value described in the contract. If the lessee decides not to exercise this right, the possession of the leased property shall revert to the

lessor. Parties shall stipulate the principal - which equals the contract price of the leased tangible property or leased right - and the interest amount of lease payments and the due dates of such payments.
Act C of 2000 on Accounting includes the following concepts and categories:
Financial leasing means a transaction established on the basis of a financial leasing contract under the Act on Credit Institutions and Financial Enterprises, including when it is established between a parent company and its subsidiary.
Residual value means the estimated value of an asset which can be realized at the end of its useful economic life, as determined at the time when commissioned or placed into operation based on the information available as consistent with its useful economic life. The residual value can be zero if its estimated value is insignificant.
Leasing is a special form of the investment funding; during the term of the leasing contract, it is comparable to a rent where the rented object, whether it is machinery, vehicle, real estate or anything else, which will or may become the renter's property at the end of the term. However, the real importance of the leasing is that the leased production equipment itself can produce its own price during the term; the fixed lease payments can facilitate the planning of cash flows; funding is largely carried out through foreign sources; the enterprise can acquire machines and equipment representing a new and developed technology; the leasing item is an adequate collateral for the lessor (Darabos et al.).
The financial leasing and the operating leasing are the two most frequently forms used in Hungary. The former is an investment activity by the lessee while the latter is the consumption of a service, a rent.
Financial leasing: The lessor shall buy the asset (movable tangible property or a real estate property, or a right) designated by the lessee and shall transmit it for fixed-term usage in return of payment. At the time of contracting, parties shall already stipulate the right of ownership of the good after the end of the term which, in the majority of cases, provides a call option right for the lessee. Having regard to the value added tax accounts, there are two base cases (Lukács, 2015):
Closed-end financial leasing
In case of a closed-end financial leasing, the lessee shall repay VAT content of the purchase price of the asset to be funded at the beginning of the funding; this amount can be refunded later based on the invoice issued by the leasing company.
This form is favourable for those companies which are obliged to prepare regular VAT accounts, are generally contributors and possess free resources to pay VAT of the whole net value.
Advantages:

- in case of a perfect payment of the leasing charges, the right of ownership of the leasing item will automatically pass to the lessee,
- EU funds are mostly available in case of this scheme.

Accounting settlement from the perspective of the lessee:

- the lessee shall capitalise the leased asset based on the invoice of the lessor and shall state it among the assets,
- the lessee shall recognise the amortisation of the leasing item and the amount of interests of the leasing charges as expense.
- shall record the value of the leased asset as a liability in the books and, during the term, shall also pay the value of the asset by paying the instalments.

Open-ended financial leasing

This form is favourable for those companies which want to distribute their VAT payment obligation for the total term and, at the time of contracting, do not know whether they want to obtain the right of ownership of the leased asset at the end of the term. The leasing contract provides a call option right or customer allocation right for the lessee. At the end of the term, value of the leasing item will be still not paid; the lessee can buy the asset for the remaining amount i.e. in residual value under sale contract or can transfer the right for purchase to other parties (e.g. the payment of residual value is passed to the employees). If the lessee decides not to exercise this right, the possession of the leased property shall revert to the lessor. This is a favourable leasing instrument for those companies which cannot reclaim VAT or can reclaim it only quarterly.

Advantages:

- the lessee shall repay the amount of VAT content of the purchase price during the term, together with the principal of each leasing charge,
- the lessee can obtain the right of ownership of the leasing item (option right) at the end of the term insofar as the lessee pays the residual value,
- insofar as the lessee decides not to exercise the right of pre-emption, the lessee can implement the customer allocation right.

Accounting settlement from the perspective of the lessee:

- the lessee shall capitalise the leased asset based on the invoice of the lessor,
- the lessee shall recognise the amortisation of the leasing item and the amount of interests of the leasing charges as expense,
- shall record the amount of leasing as a liability in the books and shall continuously repay it,
- VAT content of own resources and the repaid principal is recoverable,
- residual value: fixed value option related to the financial leasing; by repaying it, the total principal debt is repaid and the lessee obtains the right of ownership.

Operating leasing: The lessor shall hand over the good that it owns to the lessee for a pre-fixed duration, in return of payment. However, the lessee is obliged to return the given good to the lessor after the end of the term. The lessor considers the leasing as a provision of complete service. The operating leasing is close to the industrial product lending activity or, otherwise, it is similar to a bound-term rental agreement. The lessee needs the means of production for a period shorter than its useful life thus the leasing company can lend the given machine or equipment to numerous lessees so the expenses are refunded during several consecutive leasing transactions. The lessee does not have to possess own resources and the capital thereof is not tied. The operating leasing service is chosen by those companies which want to save tax by recognising the leasing charge as an expense.

Advantages:

- there is no need for own resource, the enterprise can apply developed technology,
- during the term, the lessee has the right of use,
- total amount of the leasing charged can be recognised as an expense during the term, thereby decreasing the tax base,
- the lessee does not need to decide about the right of ownership of the leasing item until the end of the term.

Accounting settlement from the perspective of the lessee:

- the lessor shall capitalise the leased asset and shall recognise the depreciation,
- under the Accounting Act, the lessee shall recognise the leasing charge (net rental payment) as an expense and VAT content of the monthly fees can be reclaimed.

In the light of the foregoing, it can be concluded that the financial leasing can be considered as a kind of asset financing loan and the operating leasing can be considered as a rental scheme. It cannot be generally determined which form is optimal or favourable for an enterprise since numerous circumstances (e.g. the prices, loan interest, extent of the available grants etc.) can influence the decision. In addition, different benefits are concerning the different leasing types thus it is definitely worth seeking information about which construction could be the most suitable for the enterprise (Darabos et al., 2016).

The leasing market has undergone a significant change in recent years therefore we will now examine, primarily concerning the years between 2008 and 2016, how the funding of some segments of the Hungarian leasing market has changed as well as we will point out some characteristics of the EU countries' leasing markets.

2. Accounting for lease according to IFRS

The aim of establishing the Leasing Standard IFRS 16 was to increase the comparability of financial statements and to eliminate that the settlements and result effects of the financial and operating leases are dissimilar, based on Standard ISA 1 still existing in each year. In case of the operating leasing, compared to the financial leasing, little information shall be presented in the financial statements, and therefore the users (bank, investor) have only little information about the risks caused by the operating leasing.

The standard will be compulsorily to be applied on 1 January 2019 or in the following financial year. During the available lead time, the entities will be able to weigh the impacts of the Standard on the processes and the contracts to be concluded in the future.

In cases of the short-term leases and the leases of small value assets, the Standard grants an exemption from the accounts regarding the leases and allows to recognise the leases as an expense during the term i.e. according to the current rules of the operating leasing. According to the new regulation, a leasing will be qualified as short-term leasing it does not include call option right and the term of the leasing is 12 months or shorter at the beginning of the lease. The entity shall stipulate the threshold of the small value leasing in the accounting policy. At the time of contracting, it shall be already stipulated that a leasing contract is actually intended. Bookkeeping of the lessor does not change and the lessee enters "right of use" assets and liability into the books almost in case of all leases thus at the time of accounting the operating leasing as well, except in case of the short-term and small value transactions. Consequently, the appropriate items of the balance sheet and income statement will change and, indeed, numerous performance indicators will be modified (IBIT, EBITDA and EPS etc.).

Experts believe that the general introduction of IFRSs is a large challenge for the business organizations carrying out the change-over but, at the same time, it reduces the administrative burden, there is no need to operate two (national and international) accounting systems and it enhances the international comparability of

the financial statements. (Lukács, 2017; Böcskei et al., 2017; Dékán et al., 2016; Pál, 2017)

3. The Hungarian leasing market

In our country, the leasing transaction as financial service has been present in the legislation since the 1970s. Despite that, this transaction type has spread only slowly. In spite of the low interest burden, the leasing charges were high because the prices of assets obtainable for foreign currency were high and the acquisition of the modestly available foreign currency was subject to authorisation etc. Legal framework of the leasing as financial service was established in 1987, by introducing the two-tier banking system. Among the specialized financial institutions, the leasing companies as special credit institutions became widespread in the '90s.

Nowadays, a very large number of operators are active on the leasing market; most of them are subsidiary of a bank operating in Hungary but there are also so-called "active independent operators" (Walter, 2014) which are not or not directly belonging to banking groups and which are funding the purchase of assets from own capital and/or loan. In Hungary, the leasing market shows a fairly diversified picture. In 2016, the Merkantil group had a 20.5 percent share in the funding amount of new finances but neither of the other operators attained a 10 percent share. In 2016, the five largest leasing companies (Merkantil Group, Budapest Autófinanszírozási Zrt., MKB Euroleasing Group, UniCredit Leasing Group and Deutsche Leasing) collectively accounted 50% of the total market. However, in particular, there is a significant specialization in the area of corporations, population and budgetary institutions as well as in respect to different leasing market products. The long-term aim of the leasing companies is to be universal financers i.e. to provide flexible and cost-effective financing not only for vehicles but for any required asset.

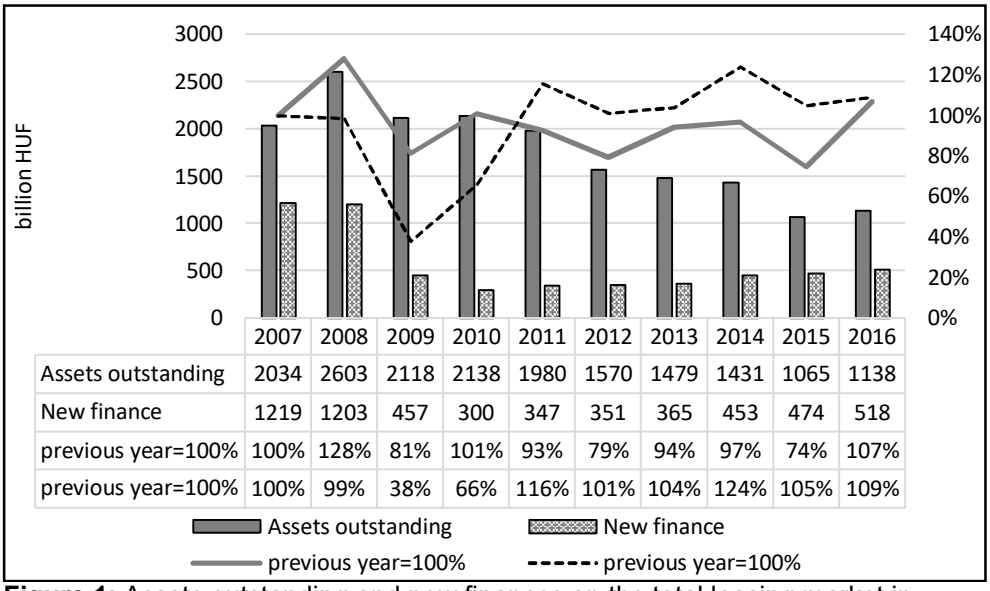
Based on the data of 2016 of the Hungarian Leasing Association, Table 1 includes the ranking list of domestic leasing market operators according the new finances and portfolio, compared to the ranking list of 2015.

Table 1: Ranking list of the Hungarian leasing market operators according to finances and portfolio

New finances	2015	2016	Portfolio rang list	2015	2016
Merkantil Group	1	1	Merkantil Group	1	1
Budapest Autófinanszírozási Zrt.,	2	2	Budapest Autófinanszírozási Zrt.,	3	2
MKB Euroleasing Group	4	3	MKB Euroleasing Group	4	3
UniCredit Leasing Group	9	4	CIB Lízing Group	2	4
Deutsche Leasing	5	5	Deutsche Leasing	5	5
De Lage Landen Finance Zrt.	7	6	UniCredit Leasing Leasing	8	6
Ober Pénzügyi Lízing Zrt., Immo Truck Zrt.	8	7	De Lage Landen Finance Zrt.	7	7
K&H Zrt., Leasing Group	10	8	Raiffeisen Corporate Lízing Zrt.	13	8
CIB Leasing Group	6	9	K&H Zrt., Lízing Group	9	9
IKB-Pénzügyi Lízing Zrt.	12	10	Ober Pénzügyi Lízing Zrt., Immo Truck Zrt.	10	10

Source: Magyar Lízingszövetség, 2017

Figure 1 shows the amount of the assets outstanding and new finances of the Hungarian leasing market and the pace of changes therein. The asset outstanding was the highest in 2008 that verifies the growth of investment climate before the crisis in this area as well; though there was a modest decline in the value of the newly allocated capital compared to 2007. By 2009, the asset outstanding decreased by 19% and the new finances significantly decreased by 62%. In 2010, the asset outstanding hardly changed and the new finances decreased by further 34%. The reason for that is primarily the increase in the interest burden as well as the significant lowering of exchange rate of HUF and, as a consequence of the foregoing, the significant increase in the leasing charges but all these things threatened the return of previous funding.

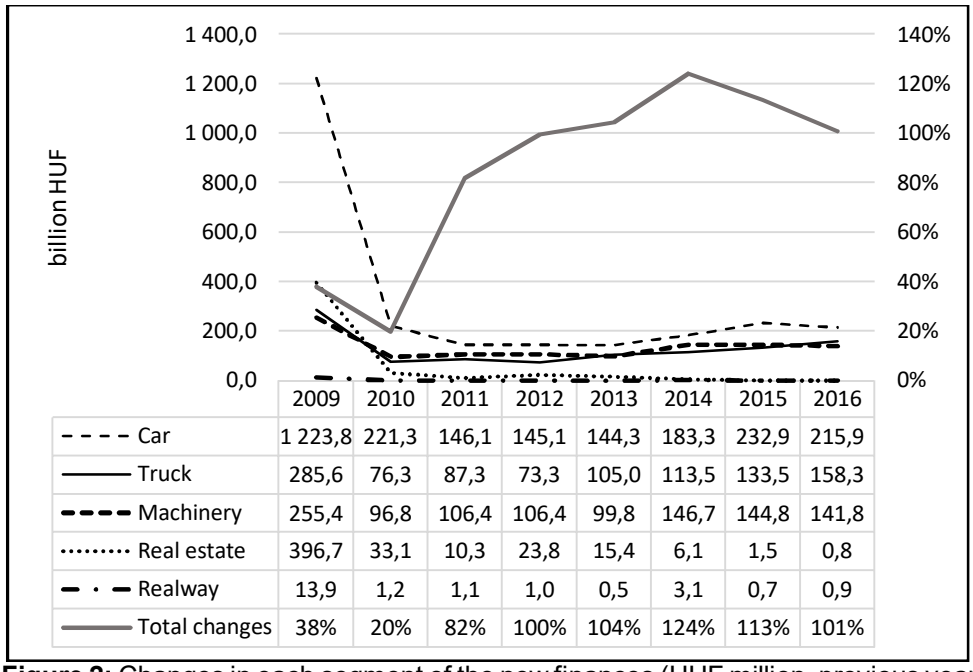


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Assets outstanding	2034	2603	2118	2138	1980	1570	1479	1431	1065	1138
New finance	1219	1203	457	300	347	351	365	453	474	518
previous year=100%	100%	128%	81%	101%	93%	79%	94%	97%	74%	107%
previous year=100%	100%	99%	38%	66%	116%	101%	104%	124%	105%	109%

Figure 1: Assets outstanding and new finances on the total leasing market in Hungary
Source: Magyar Lízingszövetség, 2017

The total assets outstanding had been continuously decreased, albeit with fluctuations, since 2011 but this trend reverted in 2016. In 2011, value of the new finances increased by 16%, after which a continuous increase can be experienced in the amount of new finances. Although, the funded amount of new finances was HUF 1 219 billion in 2007, it was only HUF 518 billion by 2016 i.e. only 42% of the funding before crisis could be attained at a slow level of pace of the increasing. Funding for vehicles, mainly trucks, had a major role in the increasing of 2016.
Value of each segment of the new finances already showed a significant decline in 2008. According to the trends of the leasing market (Figure 2), further fall occurred in case of each product in 2009. Among the newly allocated assets, funding of car (82%), real estate (92%), truck (73%) and machinery (60 %) suffered the largest losses. Each segment has been on very different paths since the eruption of the crisis: further declines were present in case of almost all products until 2013,

although it is true that these declines had different values and extents. In 2014, funding of cars and machinery showed a larger increase but the real estate leasing continuously decreased. In 2016, the funding amount totalled HUF 518 billion on the Hungarian leasing market which means a 9 percent growth compared to 2015. However, neither of the segments could approach the amount of funding before the crisis. (Figure 2)



	2009	2010	2011	2012	2013	2014	2015	2016
Car	1 223,8	221,3	146,1	145,1	144,3	183,3	232,9	215,9
Truck	285,6	76,3	87,3	73,3	105,0	113,5	133,5	158,3
Machinery	255,4	96,8	106,4	106,4	99,8	146,7	144,8	141,8
Real estate	396,7	33,1	10,3	23,8	15,4	6,1	1,5	0,8
Realway	13,9	1,2	1,1	1,0	0,5	3,1	0,7	0,9
Total changes	38%	20%	82%	100%	104%	124%	113%	101%

Figure 2: Changes in each segment of the new finances (HUF million, previous year =100%)
Source: Magyar Lízingszövetség, 2017

Leasing markets of Hungary and the European Union

According to the report of 2015 of Leaseurope, the five largest leasing markets of Europe are represented by England with EUR 77 billion, Germany with EUR 60 billion, France with EUR 44 billion, Italy with EUR 20 billion and Sweden with EUR 12 billion; this is 62% of the market. In Germany, 23% of the investment of machinery and equipment are financed in form of leasing. For SMEs, leasing is a decisive form of realizing the investments, particularly in case of funding for machinery, equipment, vehicles and IT tools. According to a study of Leaseurope, in Germany, 70% of enterprises employing at least 50 persons realize the development in form of leasing and this ratio is 40% in the European countries. (BDLU, 2017)

Figure 3 shows the evolution of new finances on the leasing market of the EU. In 2008, value of total assets outstanding was EUR 330 billion but, by 2009, it decreased to EUR 223 billion i.e. by 32% compared to the previous year. The declines were different in the member states. Among countries with the largest turnover, the turnover decreased by 44% in England, by 20% in Germany and by

20% in France. Since 2010, a continuous increase can be observed. By 2015, the level of new finances of 2008 was approached by the German market and was far exceeded by the English and French markets; the EU average is 7% lower compared to the beginning of the crisis.

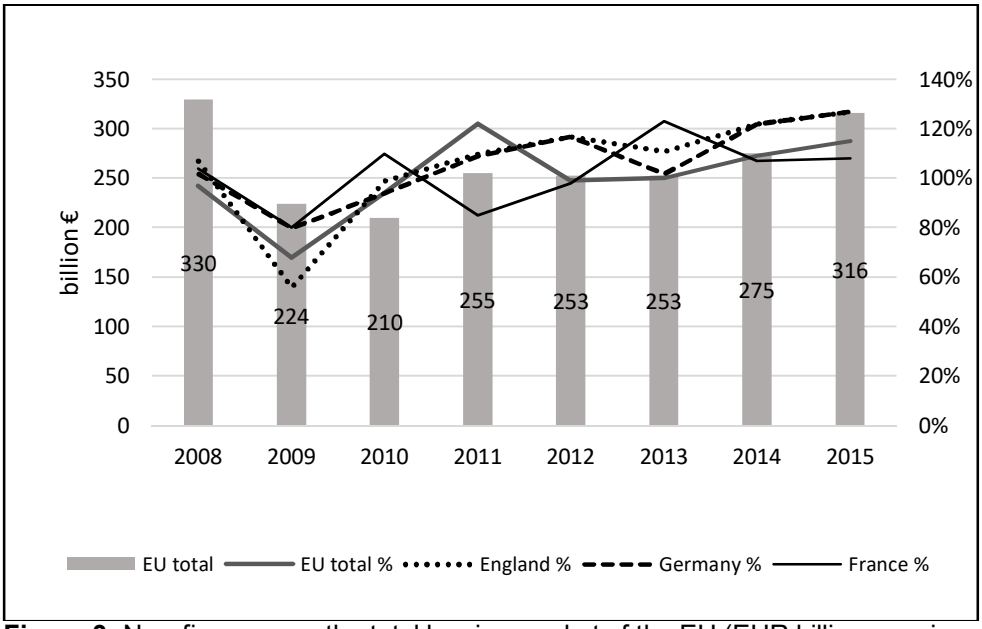


Figure 3: New finances on the total leasing market of the EU (EUR billion, previous year = 100 %)
Source: Leaseurope, 2016

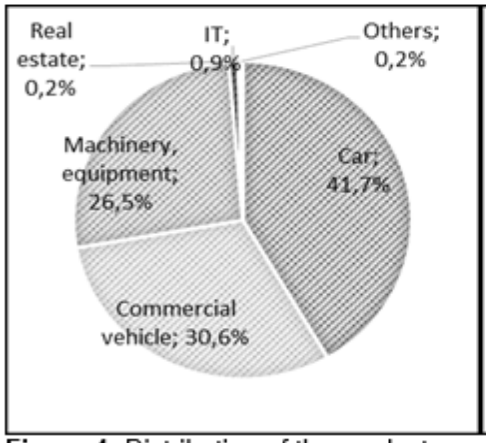


Figure 4: Distribution of the product market in Hungary
Source: Magyar Lízingszövetség, 2017

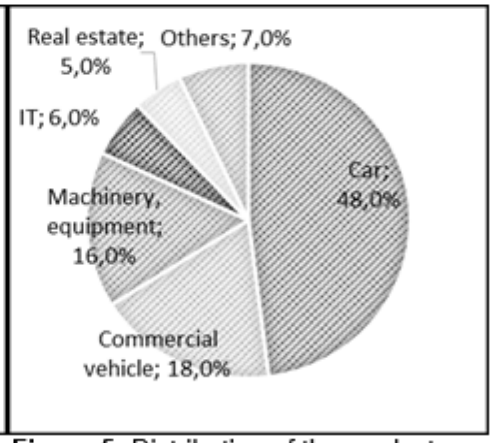


Figure 5: Distribution of the product market in the EU

Figure 4 demonstrates the distribution of the Hungarian leasing market by product and Figure 5 illustrates the composition of the EU. In Hungary, value of the new finances is HUF 518 billion: cars have a 41.7 percent share, commercial vehicles have a 30.6 percent share, machinery and equipment have a 26.5 percent share, IT tools have a 0.9 percent share and real estate has only a 0.2 share on the market. Within the leasing market, the funding for cars and vans as well as the fleet financing cover the half of total assets outstanding. Within the machinery and equipment, the leasing of agricultural machines is the most important for the sector operators.
In the EU countries, the leasing of cars represents almost half (48%) of EUR 315 billion and commercial vehicles have an 18 percent share. IT and telecommunication tools have also a significant slice of the cake (6%) and the share real estate is continuously decreasing but is still 5%.
Beyond the traditional leasing products, a new trend can be experienced in the world of business: companies do not necessarily want to buy the expensive modern machines but to use and this fact means a growth potential for the leasing market. Robotization is also a challenge for the leasing companies. In addition, the completion is ever more serious on the market. It should be considered that new operators can enter such as fintech companies using digital distribution channels.

Conclusion

In the light of the above, it can be concluded that a financial manager will not have an easy ride if he/she decides to use the leasing as a form of asset-based financing. It is important to be noted that the lessor and the lessee can discuss the conditions before concluding the contract, taking into account the lessee's needs and cash flows arising in the future. The reimbursement and the amount of payment are generally determined according to annuity cash flow but Parties may derogate from this. A financial manager should deal with the choice between some leasing forms and leasing products not only as a funding issue but care should be taken that the leasing can affect the capital structure of company assets both in the short and long terms.
Based on the statistical data, it can be stated that there is a drastic decline on the leasing market as a result of the international financial crisis started in 2008. It had several reasons such as the permanent lowering of HUF and the resulting risk factors, increase in the purchase prices, increase in the interests etc. Although the exchange rate of HUF now seems to be stable and the interests on the Hungarian and international financial markets are at low level, the growth of the Hungarian economy is still low so this fact does not enable the recovery of the investment activity. Since 2014, the State would mainly like to facilitate SME access to credit within framework of preferential loan schemes (László, 2016) which could simultaneously help the companies in obtaining the leasing products. The fact increasingly seems to be proved that the EU grants play an important role in the growth of economy and the evolution of investment performances.
On the EU countries' leasing market, the turnover of assets outstanding decreased by 32% from 2008 to 2009, during the initial period of the crisis. However, the turnover approached the level before crisis by 2015. Turnover of the largest leasing countries reached or significantly exceeded the level of 2008. Leasing of cars and real estate declined primarily but these transactions have reached their former share by now and IT products are increasingly emerging on the leasing market.

On the basis of the above, numerous factors are affecting the evolution of the leasing market. In order to expand, the Hungarian Leasing Association is focusing on that purchase of equipment and machinery of the enterprises, including the small and medium-sized enterprises, can become a pillar of the leasing market, in addition to the car finance. Their role is still barely perceptible on the Hungarian market but, according to the international trends, it is becoming more and more common that IT systems, hardware, devices in unity of hardware+software and IT solutions representing complex commercial value are financed. The continuously emerging innovations are expected to encourage the Hungarian companies to increase their competitiveness and, to this end, to make their IT investments more frequent; leasing may play an important role in this process.

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FINANCIAL SUSTAINABILITY FOR ROMANIAN COMPANIES - EUROPEAN STRUCTURAL FUNDS BETWEEN INTER-REGIONAL COHESION OR DIVISION? PART I

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Abstract: *The current article it is the first part of a study which is focusing on analysing the effects financial sustainability and efficiency, if these are influenced by EU funding. Since the issue of financial sustainability and efficiency in usage of European funding has again came into the attention of both the public and specialists. The main goal of the current paper is to study statistically if SMEs projects financed from European Union Structural Funds are sustainable and if these projects are having a net positive impact over their beneficiaries. In the same time, the article tackles the dilemma between cohesion, convergence and economic competitiveness. The current research was realized by analysing if inter-regional development differences are important or not, when accessing European funds. The case study is using data which was collected from the Government reports and EU statistical databases and it is only focusing Romanian SMEs located in the North-Western region of Romania. This region was selected since it is a mixt developed region with a huge economic contrast between well developed and lesser developed counties. These companies contracted development projects co-financed under the Regional Operational Programme. Taking into consideration the goals of this study the authors decided to use for its first part only corporate finance and statistical methods of analysis. The study concentrated over the evolution of several financial and economic indicators such as: Return on Equity, Economic efficiency, Number of employees and Solvency. The selected period is 2009-2015 in order to analyse the financial information published before and after the implementation of the investment projects. The article also will compare head to head the results in different counties of the above mentioned indicators and also will pair them for a much easier analysis: solvency vs value of fixed assets and economic efficiency vs number of employees.*

Keywords: *SME; Financial analysis; Absorption capacity; Foreign Aid; Efficiency; European structural Funds; Cohesion policy; economic efficiency.*

JEL classification: *F35; F36; G30; C58; D61; O16; R15.*

1. Introduction

The topics regarding the financial sustainability and efficiency for the usage of the financial aid provided by the European Union through its Structural Programs have again(in 2013-2016) came under closed scrutiny by both researchers and policy makers. The focus over the issues of absorption capacity and efficient

usage of European Structural Funding has been increased in 2016, since this year is the last year of implementation for the period 2007-2013 and, in the same time, it's the year when most of the calls for projects belonging to the 2014-2020 European Structural Funds programming are launched.
Over the last 20 years, many authors analysed the impact and efficiency of foreign aid programs over different economies. The opinions were diverse, starting from strong supporters of foreign aid such as Sachs (2005), Barry et all (2005) or Woods (2009) which consider that the effects of foreign aid are mostly positive with clear effects over economic development, reduction of discrimination, poverty reduction, so on. Critical, but moderate opinions can be found in the writings of authors such as Stuckler and Basu (2010), Easterly (2003, 2006, 2009) which recognize the role of foreign aid but also doubt the methods through which the foreign aid system is implemented or its sustainability. On the other side, authors such as Moyo (2009) pose radical opinions against foreign aid since she is considering the foreign aid as "the perfect way to keep an inefficient or simply bad government in power" and also considers that "the aid system encourages poor-country governments to pick up the phone and ask the donor agencies for next capital infusion".
But, when analysing foreign aid system all over the world, some of the specialists like Shleifer (2009) and de Renzio (2011) recommend that the foreign aid programs operating in Africa, Asia or Latin America should be restructured and should take the model of European Structural Funds.
In the same time, we have found no approaches regarding the investigation of the absorption capacity, sustainability and efficiency of the SMEs programs, financed through EU funds and which must have a significant impact over the cohesion targets, since the indicators of the cohesion targets are based on economic development, jobs creation and increased competitiveness.

2. Assessing the sustainability and efficiency of European funding allocated towards the SME sector

The main questions which were raised after reviewing the relevant literature and which were at the basis of selecting the elements of the case study were:

- Are the SME projects financed from European Union Structural funding sustainable and efficient? Are they having a net positive impact over their beneficiaries?
- Can we establish a link between the efficiency of accessing European funds and the economic development of certain regions? Are the inter-regional development differences important when assessing efficiency of European funding?

Taking into consideration the above-mentioned factors the authors focused on analyzing the usage efficiency of the European funds, as well. First, similar case studies have been under a process of selection and valuation. The case studies are from new member states and from old member states, as well. The first conclusion, after analyzing these studies, was that in the last years, the studies regarding the efficiency of using European funding in order to increase the cohesion were mainly national or regional studies. In the recent years flourished the studies regarding the efficiency for usage of European funds at the level of a country or at a level of a specific region: Mirošník K., Petkovová L. and Čadil J.

(2014), Daszuta, A. (2005), Sumpikova et all (2003) Bourdin (2012) or Ramajo et all (2014).

The case study will be focused over several indicators which can prove the programme sustainability, are relevant at the level of SME analysis and also have a close link with the absorption capacity. The indicators selected for analysis were:

- Productivity Analysis
- Job creation
- Business Efficiency:
  - Return on Equity
  - Solvency

- *Productivity analysis indicator* has the goal to analyze the efficiency of production or the efficiency of usage one or more factors in order to create wealth for the company. From the numerous models of productivity analysis we choose: the average productivity ratio.

$$Pr=\frac{\text{Net Revenues}}{\text{Number of employees}}$$

- *General solvency ratio* was chosen to reflect the ability of the beneficiaries to cover the total debt out of the total assets held in property. Solvency it is generated by an efficient activity and ability to pay. Increase in the results of this indicator should be realized since the companies implemented projects financed with non-reimbursable aid.

$$Rsv=\frac{\text{Total Assets}}{\text{Total Liabilities}}$$

- *Return on Equity* – measures the company's ability to make profit from the usage of its own capital. This rate should register values above the average bank interest rate in order for a business/a company to be considered profitable.

$$ROE=\frac{Net\ income(After\ tax)}{Shareholder\quad Equity}\times 100$$

3. Identification and construction of the case study (Phase I)

The case study was constructed using data which was provided by the Romanian Ministry for European Funding and was compared with data provided by Ministry of Regional Development and by the Ministry of Finance. Since the current analysis wants to study the efficiency of SMEs financing programs in the North Western region of Romania the analysis was concentrated on the most common SME financing program: the Regional Operational Programme operating in Romania in the period 2007-2013.

The region taken into consideration for this study is the North-Western region of Romania (NUTS 2) and is considered a highly dynamic region, having a surface of 34,159 sqkm, accounting for 14.3% of the total surface of the country and being inhabited by 2,7 million inhabitants. The region comprises six counties (NUTS 3): Bihor, Bistrița-Nasaud, Cluj, Maramures, Satu Mare and Salaj.

The region was selected since, according with the official data, the region has a great economic discrepancy between the counties of Cluj and Bihor, which are

more developed, and the counties of Salaj and Bistrita Nasaud which are considered less-developed. As observed from the statistical data the counties of Cluj and Bihor have the biggest GDP levels and the lowest unemployment from the region. The counties of Maramureș and Satu Mare are situated at the near the median GDP/capita, while the counties of Salaj and Bistrita Nasaud have the lowest level of GDP and the highest rate of unemployment in the region.

The reason for selecting the Regional Operational Programme (ROP) was the fact that within this program an important component with a high level of European funding absorption, is the Axis 4.3, which concerns the financing of micro-enterprises. The Regional Operational Programme 2007 - 2013 (REGIO) is one of the main Romanian operational programmes agreed with the European Union and a very important tool for implementing the national strategy and the regional development policies (Droj, 2010). The programme was eligible to all development regions of Romania and did not made any differences between regions or counties when assessing the contracting possibilities.

The data used for the case study was collected from several databases:

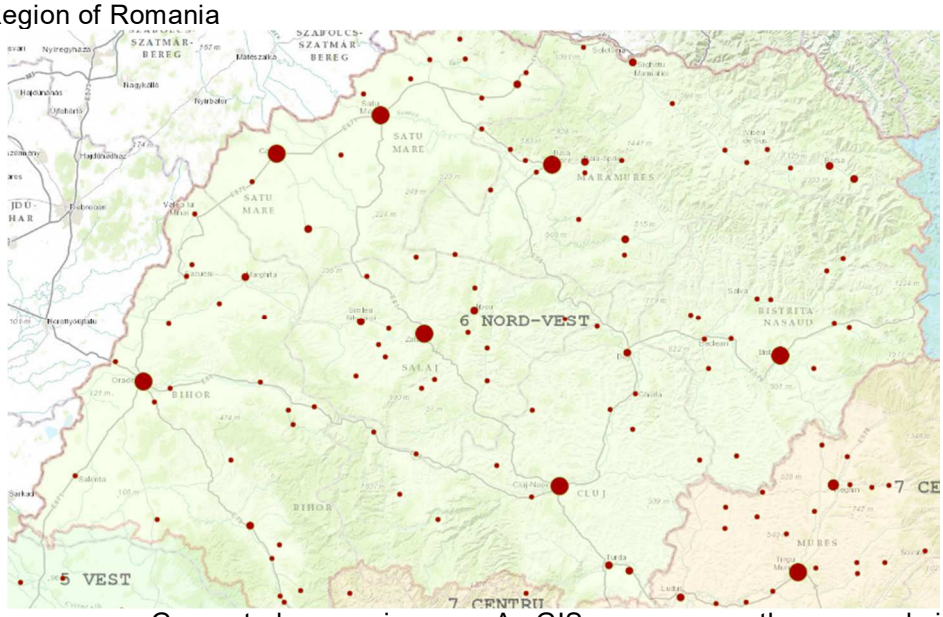
- The database which was published by the Ministry of Regional Development and Public Administration in September 2015 on the website: http://administratie.gisportal.ro/mdrap/.
- The database published by the Ministry of European Funding on the websites: http://fonduri-ue.ro and http://inforegio.ro
- The database of Romanian Ministry of Finance, www.mfinante.ro, which held the data regarding the financial results published by companies located in Romania

From these websites, using different queries the authors were able to identify and collect data regarding the applicants: 493 subjects, mainly micro-companies which submitted funding applications and contracted the implementation of investment projects in the North-Western region of Romania. These projects were financed within the framework of the Regional Operational Programme - Axis 4.1 Development of Business Infrastructure and Axis 4.3 Support for Development of the Microenterprises.

Based on the databases from the Ministry of Finance: www.mfinante.ro were collected additional information regarding the financial results of these companies before and after the implementation of the projects. The analysis was based on data collected over a period of 6 years, but with an emphasis in the years: 2009 (prior to European funding) and 2015 (the year when most of the projects were already implemented or were at the final implementation stage). The data was collected in the months of November and December 2015.

In order to proper distribute the data on the counties was used an Esri ArcGIS application which was made available on the website: http://administratie.gisportal.ro/mdrap/. As mentioned before, the data used for the spatial distribution modelling is declared to be valid at the end of September 2015 and it shows a clear spatial distributions of projects towards the most developed national and regional economic centers: the big cities. Usually these cities are the county capitals, which contract most of the European funding and attract more businesses than smaller locations. Also big differences can be observed between the different county capitals as well. The largest amount of European Funds seem to be attracted by beneficiaries from Cluj and Oradea.

Figure 1 Spatial distribution of the beneficiaries of ROP in the North-Western Region of Romania



Source: Generated using ArcGIS on the website http://administratie.gisportal.ro/mdrap/ (Data updated September 2016)

As initially expected, a large number of projects were implemented by private entities from Cluj and Bihor counties both on Axis 4.1 and on axis 4.3, these counties being the most developed economically counties in the region with significant business development tradition. More than half of the projects were submitted these counties on Axis 4.3. On axis 4.1 the disequilibrium is even more evident since 85,71%, of the projects which are focused on big infrastructure development, are contracted from these two counties. The lowest number of projects are developed and submitted by the less economic developed counties, within the region, Bistrița-Nasaud county have contracted the lowest number of projects: only 22 and Salaj 43 projects.

Prior to analysis the database went through a correction process by eliminating duplicate companies and the companies which had their financing contracts cancelled. The **Analysis of the statistical and financial data** was the most difficult element of the study since it was analyzed the data reported to the Romanian Ministry of Finance in their financial statements, by the companies who implemented projects within ROP. Since the goal of the study was to analyze the results of the programme the base year was selected 2010(the first complete reporting year since the programme was approved) and the final year was selected 2015 (the last financial year).

Afterwards the study continued with the calculation of the following indicators in order to determine, on each county, the unweighted arithmetic average of the:

- Evolution of Workplaces created by SMEs beneficiary of the programme
- Productivity Analysis
- Business Efficiency - Return on Equity and Solvency

As can we see, in the table below, the unweighted arithmetic average of the projects implemented in the six counties for the four indicators mentioned above were:

Table 1 Unweighted arithmetic average of the efficiency indicators for SMEs

Indicator (Evolution 2010-2015)	Counties (Evolution 2010-2015)					
	Cluj	Bihor	Satu Mare	Maramures	Bistrita Nasaud	Salaj
Return on Equity	0,1022	0,072582	-0,014424	-0,09624123	0,129935078	0,105435
Economic efficiency	62898	19981,7	-19508,62	-3393,70943	5735,583333	15656,75
Number of employees	1,8	4	3,5	1	1	0
Solvency	0,6721	0,743479	-8,138828	2,004169507	2,377897371	1,757087

Source: Own calculation based on data provided by the Romanian Ministry of Finance www.mfinante.ro

The data was obtained by analyzing statistically and by calculating the arithmetic average on each county. Since the ROP programme had one of its objectives improvement of productivity and competitiveness for the beneficiary companies a special emphasis has been taken in analyzing the evolution of Return on Equity, evolution of solvency and evolution of fixed assets that constitute the base for the activity of a company. The results were unexpected and in total contradiction with the objectives of the programme: the companies from Satu Mare and Maramures county had a decrease in the values of the Return on Equity from 2015 comparing with those of 2010.

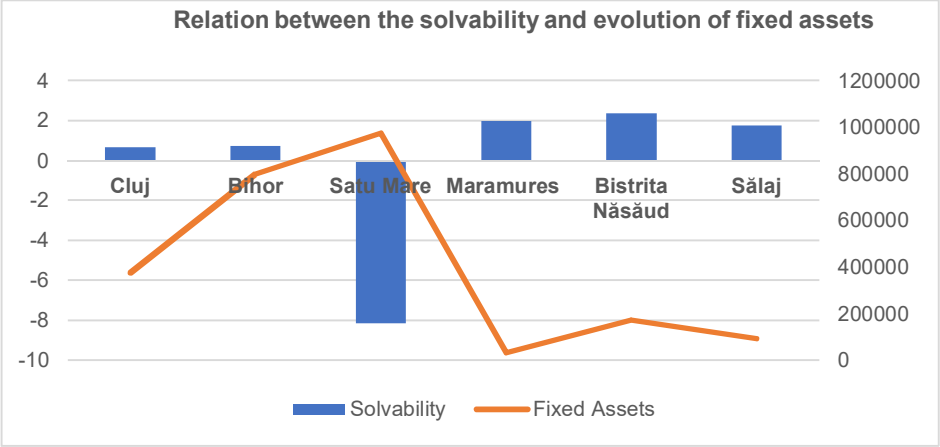
The problem seems even higher when analyzing the solvency in Satu Mare, which plummeted to a significant negative value in 2015 comparing with 2010, even if the increase in the value of total assets is much higher in this county than everywhere else in the region. These seem to be linked with a high level of debts, probably credit loans, contracted in the project implementation period and in the first years after the project completion. On the other side, even if the companies from Bistrița-Nasaud and Salaj submitted the lowest number of projects, obtained excellent results in the evolution of Solvency and Return on Equity, while having the lowest increase in the level of fixed assets. This seems to be linked with the fact that some of the projects implemented in these counties have lower values than those implemented in other counties.

In the same time, companies from Cluj and Bihor County obtain excellent levels of all three indicators. The companies that not cancelled their contracts performed well and obtained healthy results. What is remarkable is that some of the companies used the momentum given by accession of European funding in order to increase their competitiveness and the fixed assets further more than requested within the indicators of the programme.

An increase in economic efficiency and an increase in number of employees were the main objectives of the Axis 4.3 and 4.1 of the programme. However, in some cases the results were inconclusive: in Salaj County the companies, which contracted European Financing, did not increase the average workplaces reported in their financial statements (from 2010-2015) even if one of the measurement criteria for the success of the programme is new job creation.

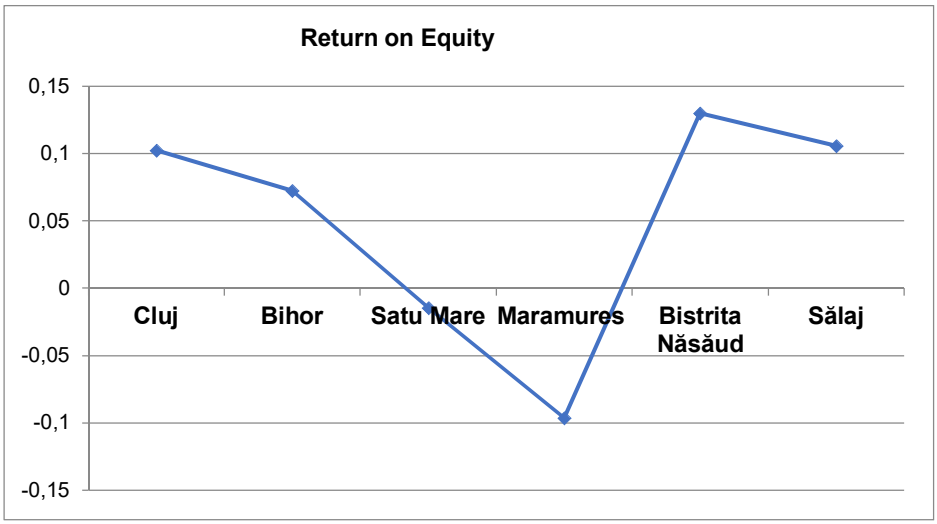
Moderate results were obtained by companies located in Maramureș and Bistrita Nasaud which increased the average number of workplaces with 2 employees.

Figure 2 Relation between solvency and fixed assets for SMEs (2010-2015)



Source: Own calculation.

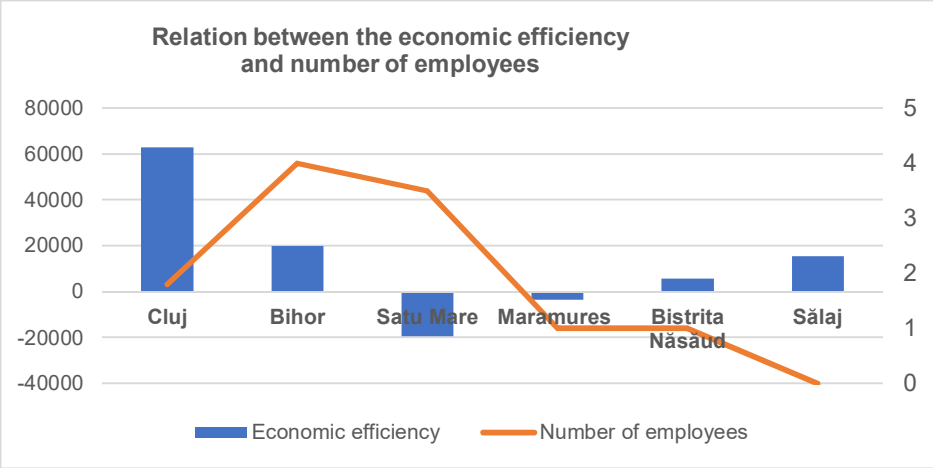
Figure 3 Evolution of Return on Equity (2010-2015)



Source: Own calculation.

The companies from Bihor County improved greatly increasing their average number of employees with 4 new employees. The economic efficiency (productivity) puts Cluj in a much better position, with an increase of 62.898 RON/person in the period of 2010 and 2015. An unexpected negative growth of the productivity was obtained when analyzing data from Satu Mare County.

Figure 4 Relation between solvency and fixed assets for SMEs (2010-2015)



Source: Own calculation.

Conclusion

Based on the two research questions and on the analysis we will draw several conclusions. As observed from the general data, the SME projects financed from the European Structural Funds seem to be a good opportunity for SMEs to increase their economic competitiveness. In general, with few exceptions, we observed that projects seem to have net positive impact over the beneficiaries. But the results differentiated significantly between counties: in Cluj and Bihor the beneficiaries increased their economic competitiveness, obtained better financial results and created new jobs. In the analyzed period (2010 and 2015) the financial indicators were on the rise, obtaining excellent results and contributing also to the improvement of their region economy.

Instead, in counties such as Salaj and Bistrita Nasaud the efficiency for using European funding was low, since the numbers of employees remain constant or increased very slow. Also when analyzing the arithmetic average for the proposed sustainability financial indicators we can observe that the results are moderate, despite benefiting from the EU support, and have brought a small contribution to the local and regional economic growth. But a comparison with companies which not benefitted from EU funding, from the same region, showed that the companies contracting European funds had much better results.

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FINANCIAL SUSTAINABILITY FOR ROMANIAN COMPANIES - EUROPEAN STRUCTURAL FUNDS BETWEEN INTER-REGIONAL COHESION OR DIVISION? PART II

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Abstract: *This article contains the second part of the study "Financial sustainability for Romanian companies - European Structural Funds between inter-regional cohesion and division?" The first part of the study presented several aspects regarding the literature review, selection of the case study analysis of data based on simple statistical methods and several conclusions. This part of the study goes even deeper in the specialized literature presenting the new opinions regarding the efficiency and sustainability for usage of EU funding at the regional level. These opinions also signal several warning signs, especially when considering the increasing economic division between developed and less developed regions or regarding. Also was mentioned the dilemma between equity, which is ensured by the funding proposed to be delivered in the rural areas for ensuring the convergence policy and competitiveness which is obtained by investment high developed area in order to gain further growth. In order to establish the methodology, were analysed the most common approaches in assessing the efficiency of aid in general and European Structural Funds in particular: statistical data analysis, Social Accounting Matrix, Regionalized Hermin, Combined macro and regional model Applied Spatial New Economic Geography, GeoCells a multi-layered hierarchical automaton and Econometric methods. Since none of the studies were focused on the effects of EU funding over the private companies the authors tried to tackle this issue in the current study. Based on a database formed from 493 small and medium sized Romanian companies which directly benefitted from EU investment funding the authors decided to create, for the data analysis, a mixed methodology between the Spatial Data Analysis, Corporate finance and Econometrics. In order to solve the "dilemma" the paper through its case study assessed if there is a link between the efficiency of accessing European funds and the economic development of certain regions. This was done especially by comparing the efficiency of EU funded SMEs projects from well-developed counties with those located in less-developed counties, inside the same region.*

Keywords: *SME; Financial analysis; Absorption capacity; Foreign Aid; Efficiency; European structural Funds; Cohesion policy; economic efficiency.*

JEL classification: *F35; F36; G30; C58; D61; O16; R15.*

1. Introduction

At the European level, the European Structural Funds constitute the main instruments for implementation of the Cohesion Policy. The opinions of the specialists regarding the efficiency of the Cohesion Policy it is mixed. On one side, we have the positive opinions of experts like Busillo et all. (2010), Pastor (2001) or Beugeldsdijk and Eijffiger (2005) considering the cohesion policy of the European Union as a functioning tool for the economic growth and a proper solution for reduction of economic and social disparities. On the other side we can find the opinions of other specialists, which seriously doubt the efficiency, or some particular results of European funding. Boot et all (2001), Horvat and Maier (2004), Horvat (2004), Bauer (2001), Wostner (2008), Droj (2010) or Kemmerling and Bodenstein (2008), highlight the fact that, sometimes, the final results, expected from European funding, are not at the level initially planned. In addition, in these cases, the EU funds absorption is low and the real reduction of economic and social disparities at the European level was not achieved or the results are not sustainable.

Some of the causes, which hinder the absorption capacity, are clearly linked with the readiness of both the beneficiaries of funding and of the national and regional implementing authorities in order to successfully of the European funding. While these authors have excellent contributions towards the improvement of absorption capacity process, other specialists are more concerned over issues regarding with the efficiency of the projects implemented through European funding or through other instruments of foreign aid.

An excellent study of Bourdin (2012) reopens a discussion about the link between "an unprecedented increase in the economic gap between developed regions and those lagging behind" questioning the efficiency of the cohesion policy. Bourdin (2012) also cites authors such as Lackenbauer (2006) which is mentioning a real dilemma between the equity and competitiveness. Other authors such Gorzelak et all (2010) considers that just massive injection of European funding in poor regions may prove ineffective if this process is not sustained by other measures. Studies realized in Spain, South Italy or Eastern Germany also indicate that even if strong infrastructure investments were realized, using European or state funding, this has not increased significantly the competitiveness of the beneficiary regions. It made them dependable and addicted to aid. Bourdin (2012) also cited Aghion and Cohen (2004) who consider that for these regions the most effective investments have been those which are focused on education. The increasing regional differences, within a country, can also be caused by factors such as metropolization (Stryjakiewicz, 2007), concentration of economic development or efficiency of the government (Droj). In front of these facts Bourdin (2012) also mentions that usually European Union faces a hard dilemma between equity, which is ensured by the funding proposed to be delivered in the rural areas for ensuring the convergence policy and competitiveness which is obtained by investment high developed area in order to gain further growth.

Even if these studies are analyzing the issues of efficiency of external aid and its impact over the cohesion policy, very few of them were focused on the linkage between the absorption capacity and the efficiency for proper usage of European funding in order to achieve the goals of the Structural Programs and Cohesion

Funds. Therefore, an assessment on this field it is necessary and will be carried out in the next section of the paper.

2. Methods for determining the financial sustainability and efficiency for usage of EU funding

In the first part of this research we tried to establish and analyse mainly statistical data in order to answer to the main research questions: Are the SME projects financed from European Union Structural funding sustainable and efficient? Are they having a net positive impact over their beneficiaries? Can we establish a link between the efficiency of accessing European funds and the economic development of certain regions? Are the inter-regional development differences important when assessing efficiency of European funding?

Taking into consideration the above-mentioned factors the authors focused on analyzing the usage efficiency of the European funds, as well. First, similar case studies have been under a process of selection and valuation. The case studies are from new member states and from old member states, as well. The first conclusion, after analyzing these studies, was that in the last years, the studies regarding the efficiency of using European funding in order to increase the cohesion were mainly national or regional studies.

Different methods have been used to analyze the efficiency and the impact of the European Funds over the local, regional and national economy. From these methods, we can mention:

- *Statistical data analysis* (Sumpikova et all, 2009 and Daszuta, 2005), based on analysis of statistical data provided by the EU and national state. This type of analysis is the most common and is used also by Romanian Development Agencies (such as Ministerul Dezvoltării Regionale și Administrației Publice, 2015)
- *Social Accounting Matrix (SAM)* used to quantify the output and employment effects derived from the structural and cohesion funds that a region received due to its “Convergence Region” situation (Ramajo et all, 2014)
- *Regionalized HERMIN model* uses a top down approach, where the results at the national level are disaggregated to regional level using some region-specific characteristics of the base year (DG Regional Policy, 2008).
- *Combined macro and regional model for Hungary* – developed by Pecs University, which links macro-econometric model with a regional model ECORET and a Spatial Computable General Equilibrium (SCGE) model. This model predicts changes resulting from additional public spending on education, R&D and infrastructure as well as from changes in regional-level agglomeration (DG Regional Policy, 2008).
- *Applied Spatial New Economic Geography models such as CG Europe* a spatial general equilibrium model for a closed system of 270 regions covering the whole world. All of regions are treated separately and are linked through endogenous trade (DG Regional Policy, 2008). This model can be further improved by using Geographical Information System (GIS) applications.
- *GeoCells a multi-layered hierarchical automaton,* which is presented by Bourdin (2012). This model is a meta-model based on spatial agents or a topologic cellular agent and is used on EU27. It models the evolution of

GDP/capita and compares it with the influence of different types of aid under the cohesion policy and the effects of diffusion growth by neighbourhood.

- *Econometric methods* – which include the analysis of certain indicators and projections of the results.

Meanwhile this study has as its goal to analyze the link between the sustainability, efficiency and impact of a programme which finances the small Romanian companies in the North-Western region of Romania. This region is representative for the entire country and for Eastern Europe in general since it comprises all types of sub-regions: from less developed, moderate to well-developed sub-regions. Under these circumstances, the authors tried to select from the proposed methodologies only elements suitable for this type of analysis. Most of the models above are using macro-economic data and we discovered that their applicability to testing efficiency of a regional development programme operating only at the level of SMEs is limited. In the same time the authors wanted to assess if there is a link between the efficiency of accessing European funding and the economic development of a certain region in correlation with theories and researches done by: Bourdin(2012), Gorzelak et all (2010), (Stryjakiewicz, 2007).

Taking into consideration the goals of this study, the analysis of Šumpíková et all (2003) and the principle of additionality mentioned by Wostner and Slander (2009) and Del Bo, C., Florio, M., Sirtori, E., & Vignetti, S. (2011); the authors decided to create, for the data analysis, a mixed methodology between the Spatial Data Analysis, Corporate finance and Econometrics. The Corporate finance indicators which were selected were: Productivity analysis, Job Creation, Return on Equity and Solvency. For further analysis of these indicators, several econometric methods were taken into consideration. The most suitable econometric method, considering the goal of our study and the information which had to be analyzed is the Student dispersion (Van Hauwermeiren et all., 2012). The Student dispersion is used when low volume samples are available or when a normal distribution approximation is unsatisfactory. By definition, the probability density of Student distribution (Van Hauwermeiren et all., 2012) is:

$$f(t) = \frac{\Gamma\left(\frac{\upsilon+1}{2}\right)}{\sqrt{\pi\nu}\,\Gamma\left(\frac{\upsilon}{2}\right)}\left(1+\frac{t^2}{\upsilon}\right)^{-\frac{\upsilon+1}{2}}, t \in \Re, \upsilon \geq 1$$

.

The distribution parameter n is called the degree of freedom and can take the values 1, 2, ..., n. Where n, the degree of freedom, is greater than 30, the Student distribution is equivalent to the normal distribution. The student distribution can be visualized as a dispersion diagram and from the analysis of the obtained results can be easily assessed the following: common and marginal distributions, as well as information about how the association of variables influences the analysis.

3. Initiation of the second phase - case study

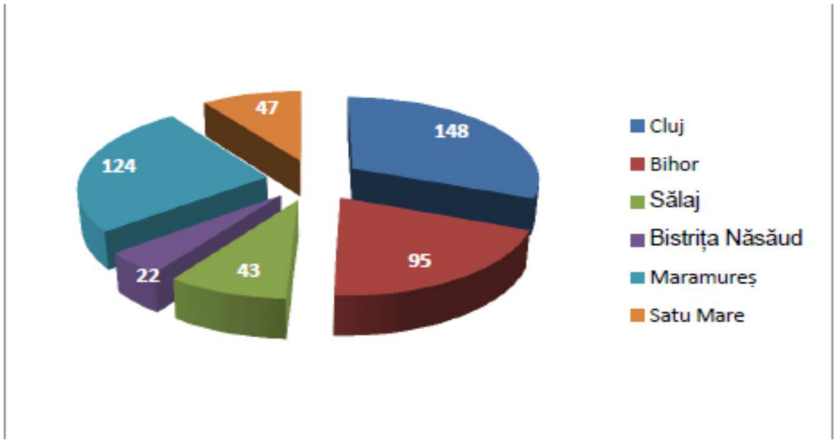
The construction of the case study was realized in several steps:

- Identification of databases containing the necessary information for the case study
- Collection of the data and creation of the initial dataset

- Corrections to the data set
- Analysis of the statistical and financial data
- Modelling of the results using econometric instruments
- Interpretation of the results
- Drawing up the conclusions

As mentioned by Romanian Government (2007) the overall objective of the ROP consists of "supporting and promoting sustainable local development, both economically and socially, in the regions of Romania, by improving the conditions of infrastructure and business environment, which support economic growth". In order to do so, ROP's main objective was to reduce the economic and social development disparities between the more developed regions and the less developed ones and also to increase economic competitiveness (Romanian Government, 2007). Most of the projects funded under this programme were supposed to be finished until 31.12.2015 but the real absorption capacity could be calculated only after the end of 2017. But this does not impede on analyzing if the programme had real conclusive results over its beneficiaries since most of the projects were already completed at this point, especially those submitted in 2009 or 2010. For these projects the beneficiaries are already in the post-implementation monitoring stage which lasts between three to five years. As mentioned above, the Axis 4.3 was selected especially since its main objectives were the increase in economic competitiveness, job creation and economic growth, and since the beneficiaries are micro-enterprises, the analysis over their financial results should bring relevant results regarding the increase of efficiency. The total number of companies selected for the case studies is 493, all located in North-Western region of Romania. These companies were selected for financing in the Regional Operational Programme Axis 4.1 and 4.3

Figure 5 Distribution of awarded contracts for beneficiaries for Axis 4.3 and 4.1



Source: Calculation of the author based on data provided on fonduri-ue.ro

Based on the databases from the Ministry of Finance: www.mfinante.ro were collected additional information regarding the financial results of these companies before and after the implementation of the projects. The following table was computed and statistically analyzed in the first part of the study:

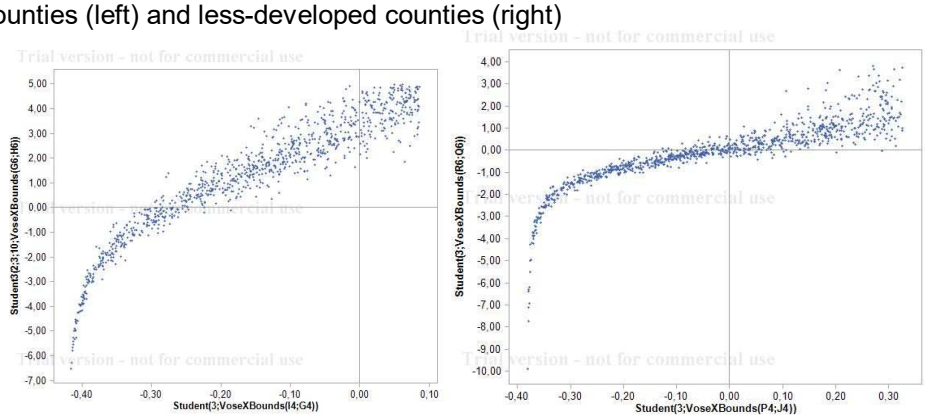
Table 2 Unweighted arithmetic average of the efficiency indicators for SMEs

Indicator (Evolution 2010-2015)	Counties (Evolution 2010-2015)					
	Cluj	Bihor	Satu Mare	Maramures	Bistrita Nasaud	Salaj
Return on Equity	0,1022	0,072582	-0,014424	-0,09624123	0,129935078	0,105435
Economic efficiency	62898	19981,7	-19508,62	-3393,70943	5735,583333	15656,75
Number of employees	1,8	4	3,5	1	1	0
Solvency	0,6721	0,743479	-8,138828	2,004169507	2,377897371	1,757087

Source: Own calculation based on data provided by the Romanian Ministry of Finance www.mfinante.ro

But we observe that interesting results are obtained when applying the statistical correlation and we compare the results of the companies located in the well-developed counties(Cluj and Bihor) with the results of companies located in lesser developed counties(Bistrita Nasaud and Salaj). Usually, the statistical correlation is used to highlight the interdependence or link observed variables in the statistical population. The plotted correlation between two variables is represented in the form of points, to provide information about correlation, analyzed data uniformity and symmetry. Examining visual graphical representation of points (x_i; y_1), it can be seen that in all N possibilities, we have positive linear correlation between the variables that follow a normal distribution (Student) and a positive linear correlation between variables following a partial normal distribution (Chi Square).

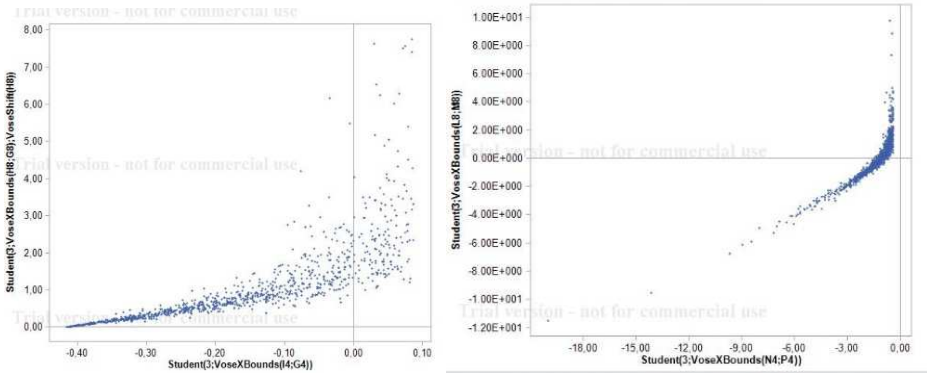
Figure 6 Correlation between rate of return and solvability for well-developed counties (left) and less-developed counties (right)



Source Analysis realized by author with application ModelRISK – VoseSoftware

Examining visual graphical representation of points (x_i; y_1), you can see that in both cases, we nonlinear positive correlation between profitability and solvency both variables follows a normal distribution (Student). In case of less developed regions we can observe the fact that the point cloud is predominantly located in quadrant III (both variables are negative) while analysing the results from the most developed regions we can observe the fact that the results are located mostly in quadrants I and II proving that in these cases the solvency is mainly positive.

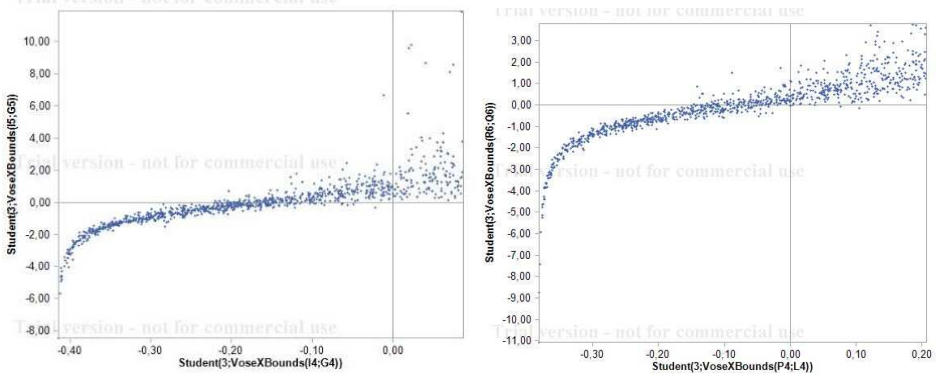
Figure 7 Correlation between rate of return and number of employees for well-developed counties(left) and less-developed counties (right)



Source Analysis realized by author with application ModelRISK - VoseSoftware

When analysing the correlation between the Return on Equity and number of employees the disequilibrium is even higher between Bihor and Cluj the most developed counties in the region and Salaj and Bistrita Nasaud. It can be clearly observed, that the results from the less developed regions are concentrated in the upper right corner of the quadrant showing that both the number of employees and the Rate of Return are having moderate or neutral evolution. We also detect that in the better economic developed regions the points cloud is concentrated mainly in quadrant II because these regions had increases in both number of employees and in financial results.

Figure 8 Correlation between solvency and number of employees for well-developed counties (left) and less-developed counties (right)



Source Analysis realized by author with application ModelRISK - VoseSoftware

The last graphical analysis brought together all three indicators: return on equity, solvency and number of employees. Again, we can observe the huge differences between the results of the indicators between the two compared situations: companies from well-developed economically counties and companies from lesser-developed counties.

Conclusions

The conclusive remarks must start from the two questions that stayed at the basis of this research:

- Are the SME projects financed from European Union Structural funding sustainable and efficient? Are they having a net positive impact over their beneficiaries?
- Can we establish a link between the sustainability and efficiency of accessing European funds and the economic development of certain regions? Are the inter-regional development differences important when assessing efficiency of European funding?

Scrutinizing the results of the case studies, we can certainly consider that there is a close link between the development of a region, absorption capacity, sustainability and efficiency for usage of European funds. The bigger chances for a successful implementation of EU funds are having the companies, located in good business areas, and which have a good organizing and financial capacity prior to application. Inter-regional differences seem also to be important, since SME projects developed in regions with a concentrated economic power and well-developed business environment seem to bring good results. This is contradicting the principles of the Cohesion policy and should be addressed properly in the future programs by establishing different priorities for development in different regions. On the other hand, an increase in the organizational capacity, at the level of SME, could bring a more efficient usage of European funding.

Considering these, we can definitely conclude that European funded projects have a net positive impact over their beneficiaries but also the inter-regional development differences are important. Even if the projects are developed in the same region, those implemented in better-developed areas have superior effects and use more efficient European funds than the projects, which are developed in lesser-developed areas. As this aspect seems to be signalled by different researchers over the last years it should be further researched at the national or international level in order to establish its causes and address it properly.

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IMPACT OF NON-PERFORMING ASSETS ON THE PROFITABILITY OF BANKS – A SELECTIVE STUDY

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Abstract: *Non-performing Asset is a vital factor in the examination of financial performance of a bank. Non-Performing Asset is the key term for the banking corporations. Non-Performing Assets show the competence of the performance of the banks. Non-Performing Assets means which amount is not received by the bank in return of loans disbursed. Non-Performing Assets affect not only the finance institution but the total financial system. Thus a selective study has been done on public sector banks in India to evaluate the effect of Non-Performing Assets on the profitability of banks. Banks today are not judged only on the basis of number of branches and volume of deposits but also on the basis of standard of assets. NPAs negatively effect on the profitability, liquidity and solvency of the banks. This paper analyses the circumstances of NPAs in selected banks namely State Bank of India (SBI), Bank of India, United Bank of India, Bank of Baroda, Indian Overseas Bank, Punjab National Bank and Central Bank India. It also highlights the policies followed by the banks to tackle the NPAs and suggests a multi-pronged strategy for speedy recovery of NPAs in banking sector. Seven Public Sector Banks has been selected for the study the relation between Gross NPA and Net Profit of seven banks. In this paper is applying the panel regression. The result shows that except for SBI and PNB all the other banks exhibit a negative correlation between their gross Non-Performing Assets and net profits. But SBI and PNB is increased the net profit every year not affected by Gross Non-Performing Assets. Both banks are paying attention towards their NPA to recover their pending loans. The study is based upon secondary data recovered from Report of Progress of banking in India, Websites, Journals and Articles. The scope of the study is limited to analysis of nonperforming assets of public sector banks covering the period of 2007-2016.*

Keywords: *Non-Performing Asset; Net Profit; Doubtful Debts; Correlation; Deposit.*

JEL classification: *G21; C23.*

1. Introduction

With the introduction of financial sector reforms 1991 the faces of Indian Banking sector have extremely changed. The problems arising in the banking sector will affect the Indian economy. When the economy collapsed also affected the banking sector. Function as an intermediary bank is not running normally. The banking sector also has a very important role in the recovery process of the country's economy as a whole. The banking industry has moved step by step from a synchronized environment to a decontrolled market based economy. In 1991-1992 India was adopted the open economy. The beginning of liberalization and globalization in market development there has been tremendous changed in the transitional role of banks in India. The problem of swelling non-performing asset is catching attention

and addition of huge NPA has assumed great importance in terms of risk management. The incidence of non-performing assets (NPAs) is affecting the performance of the credit institutions financially. NPA is a disorder resulting in non-performance of a portion of loan portfolio leading to no recovery or less recovery income to the lender. NPAs represent the quantify "Credit Risk". Bankers have realized to have effective NPA management on their priority list.
NPA broadly defined as non-repayment of interest and instalment of principal amount (Das & Ghosh, 2006). According to the "Narasimham Committee Report (1991), those assets (overdraft/ cash credit) for which the interest remains due for a period of four quarters (180 days) should be considered as NPAs". After, this period had reduced and from March 1995 onwards assets for which interest and principle remains unpaid for a period of 90 days were considered as NPAs. Thus, NPA constitutes an important factor in the banking system as it seriously affects the profitability of the banks. The NPA can broadly be classified into Gross NPA and Net NPA. Gross NPA reflects the quality of the loans made by banks whereas Net NPA shows the actual burden of banks.

1.1 Types of NPA

Gross NPA - Gross NPA is an advance which is considered written off, for bank has made provisions, and which is still held in banks' books of account. Gross NPA (non-performing asset) refers to overall quantity of loans that have gone bad debts. It consists of all the nonstandard assets like as sub-standard, doubtful, and loss asset. "Gross NPAs Ratio = Gross NPAs / Gross Advances"
Net NPA - Net NPAs are those type of NPAs in which the bank has deducted the provision regarding NPAs. "Net NPAs = Gross NPAs – Provisions / Gross Advances – Provisions"

1.2 Assets Classification

Standard Assets - Standard Asset means which assets are not facing the problem and not more risk towards customer. Such assets are assumed to be performing asset. A general provision of 0.25% has to be provided on global loan portfolio basis.
Sub-standard Assets - An asset would be classified as sub-standard if it remained NPA for a period less than or equal to 12 months. Accordingly a general provision of 10% on outstanding has to be provided on substandard assets.
Doubtful Assets - These are the assets which have remained NPAs for a period exceeding 12 months and which are not considered as a loss advance. As per RBI instruction banks have to facilitate 100% of unsecured amount of the outstanding loan.

1.3 Causes of NPA

Lending Practices of Banks - In 2008 the financial crisis has been happened because of bad lending practices of banks. The banks should strictly follow rules and regulations while lending loans. They should properly follow the credit policy of banks.
Business Risk - The organization may sometimes face problems with its own operational environment which may result in losses for the company.
Environmental Risk - Sometimes there may be environmental problems like cyclones, drought which does not give the required output to the farmers and Agri based businesses.

1.4 Impact of NPA

Liquidity - The Banks are facing the problem of NPAs. They are not recovering which lending money to borrower. Those times money will be blocked. Banks don't have enough cash in hand for short period of time.

Credit loss - Banks lose their goodwill and brand equity in market when there is problem with their NPA that further affect the value of the banks in terms of market credit.

Profitability - NPA not only affects on current profits but also profit of entire financial year.

2. Literature review

According to Reserve Bank of India (RBI) explains the definition of NPAs, "an asset makes non-performing when it stops to generate income for the bank. Recently an asset was measured as non-performing asset (NPA) stand on the concept of 'Past Due'. A non-performing asset was examined as credit in respect of which interest of principal has remained 'past due' for a particular time".

Siraj and Sudarsanan Pillai says that "NPA is a virus affecting banking sector. The study concluded that NPA still remains a major threat and the incremental component explained through additions to NPA poses a great question mark on efficiency of credit risk management of banks in India".

Debarsh and Sukanya Goyal (2012) emphasized "on management of non-performing assets in the perspective of the public sector banks in India under strict asset classification norms, use of latest technological platform based on core banking solution, recovery procedures and other bank specific indicators in the context of stringent regulatory framework of the RBI". In the seminal study on 'credit policy, systems, and culture', Reddy (2004) raised various critical issues pertaining to credit delivery mechanism of the Indian banking sector.

Reddy (2004) critically examined "various issues pertaining to terms of credit of Indian banks. In this context, it was viewed that 'the element of power has no bearing on the illegal activity. A default is not entirely an irrational decision. Rather a defaulter takes into account probabilistic assessment of various costs and benefits of his decision". The problem of NPAs is related to several internal and external factors facing the borrowers (Muniappan, 2002). "The internal factors are diversion of funds for diversification taking up new projects, helping/promoting associate concerns, time/cost overruns during the project implementation stage, business (product, marketing, *etc.*) failure, inefficient management, strained labor relations, inappropriate technology/technical problems, product obsolescence, *etc.,* while external factors are recession, non-payment in other countries, inputs/power shortage, price escalation, accidents and natural calamities".

3. Research Methodology

Aim of the present research paper is to analyze the trends in NPAs in terms of values, gross NPAs and net profit. Several research studies on NPA in Indian banking sector are available, the studies on a closer look validated NPA problem using secondary data. The primary emphasis of this research is focused on analyzing nonperforming assets of public sector banks in India during the period 2007 to 2016.The present

study is a descriptive study which tries to establish the relationship between the non-performing assets and net profits. This is selective study. The data for the study has been sourced from Reserve Bank of India (RBI) bulletins, statistical tables relating to banks in India, report on existing and progress of banking in India, issued by the RBI. The study also suggests multi-pronged and diversified strategy for speedy recovery of NPAs in commercial banks in India. The final analysis is done by Correlation and Regression using MS Excel. The paper consists of secondary data which has been collected from different publications such as the Reserve Bank of India publications, the reports published by commercial banks, various issues of the IBA journal etc. The empirical findings using observation method and statistical tools like correlation, regression and data representation techniques identifies that there is a negative relationship between profitability measure and NPAs.

4. Table and Figures

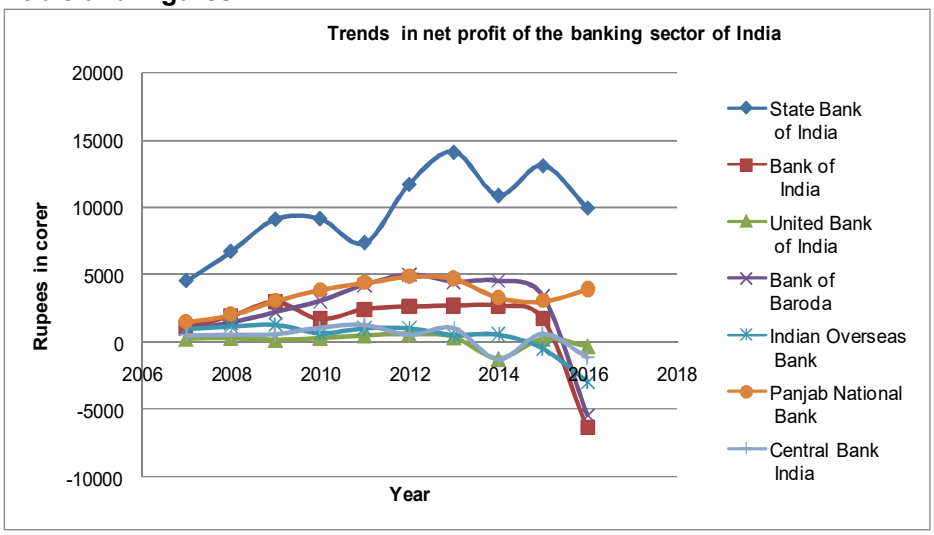

Figure 1: Net profit of Seven Banks for Ten year
Source: Prepared by Author

This is the trend of Net Profit for the different banks for the years 2007 –2016. Almost all the banks have experienced a negative growth in the year 2016.
The gross NPA have been continuously increasing for all he banks for he specified period. As the business operations of the bank increasing the amount of NPAs have also increased.
A remarkable difference in the financial status of the banks was observed in the year 2016. All the banks except SBI and PNB went through a severe loss in the year. The loss percents of the banks- BOI, BOB, IOB, CBI and UBI in the year 2016 as compared to 2015 were 462.32, 258.77, 537.71, 284.30, and 210.14 respectively (Table 1). Among the banks, only SBI and PNB could achieve profit consistently in all the years.

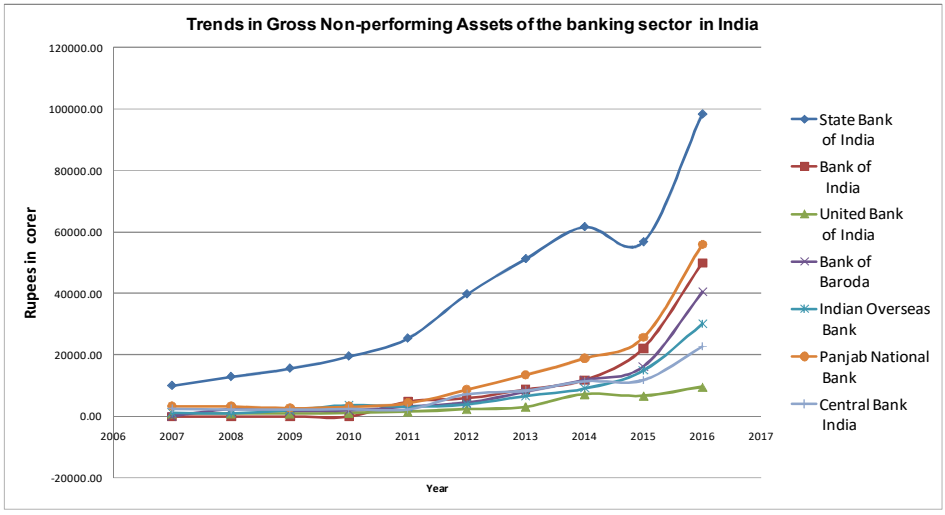

Figure 2: Non-performing assets of seven banks
Source: Prepared by Author

Table 1:

Net Profit (Rupees in corer)							
Year	State Bank of India	Bank of India	United Bank of India	Bank of Baroda	Indian Overseas Bank	Panjab National Bank	Central Bank India
2007	4541.31	1125.95	267.28	1026.46	1008.43	1540.08	498.01
2008	6729.12	1960.28	318.95	1435.52	1202.34	2048.76	550.16
2009	9121.23	3009.41	184.71	2227.20	1325.79	3090.88	571.24
2010	9166.05	1738.56	322.96	3058.33	706.96	3905.36	1058.23
2011	7370.35	2488.71	523.97	4241.68	1072.54	4433.50	1252.41
2012	11707.29	2674.62	632.53	5006.96	1050.13	4884.20	533.04
2013	14104.98	2741.91	391.90	4480.72	567.23	4747.67	1014.96
2014	10891.17	2732.65	-1213.44	4541.08	601.74	3342.58	-1262.84
2015	13101.57	1748.32	255.99	3398.44	-454.33	3061.58	606.45
2016	9950.65	-6334.98	-281.96	-5395.54	-2897.33	3944.40	-1117.67

Source: Financial results of different seven banks of ten years

Table 2:

Gross NPA (Rupees in corer)							
Year	State Bank of India	Bank of India	United Bank of India	Bank of Baroda	Indian Overseas Bank	Panjab National Bank	Central Bank India
2007	9998.00	0.00	744.30	0.00	1120.00	3390.72	2572.00
2008	12837.34	0.00	817.00	2400.69	997.00	3319.30	2350.00
2009	15588.6	0.00	761.00	1842.92	1923.40	2767.46	2316.50
2010	19534.89	0.00	1019.60	1981.38	3611.00	3214.41	2457.90
2011	25326.29	4811.55	1355.78	3152.50	3089.00	4379.39	2394.53
2012	39676.46	5893.97	2176.42	4464.75	3920.00	8719.62	7273.46
2013	51189.39	8765.25	2963.83	7982.58	6607.00	13465.79	8456.18
2014	61605.35	11868.80	7118.01	11875.90	9020.00	18880.06	11500.01
2015	56725.34	22193.24	6552.91	16261.45	14922.00	25694.86	11873.06
2016	98172.80	49879.12	9471.01	40521.04	30048.00	55818.33	22720.88

Source: Financial results of different seven banks of ten years

NPA of the banks went on increasing in all the years but a drastic raise was observed in the year 2016. The percentage raise of NPA of the banks in the year 2016 as compared to 2015 were SBI – 73.07, BOI- 124.75, UBI- 44.53, BOB- 149.18, IOB- 101.37, PNB- 117 and CBI- 91.36

Table: 3 Correlation between NPA and Net Profit of the selected banks

Bank	Correlation
State Bank of India	0.591125611
Bank of India	-0.863792026
United Bank of India	-0.654074198
Bank of Baroda	-0.720973007
Indian Overseas Bank	-0.985503809
Panjab National Bank	0.194168193
Central Bank India	-0.73857971

Source: Prepared by author

In Table no 3 is showing that correlation for SBI and PNB are equal to 0.591 and 0.194 respectively. It means that there is a positive relation between Net Profits and NPA. It means that as profits increase NPA also increase. NPA is directly related to Total Advances given by bank and banks main source of income is interest earned by bank. But other banks are negative correlation. NPAs are increasing in every year but net profit decrease.

5. Result

The banks have expressed correlation between Gross NPA and the Net profit. SBI and Punjab National Bank have shown positive correlation, and all the other banks expressed negative correlation. Bank of Baroda increasing the NPA almost 249% as compare with 2015.In this research paper applying the random method of panel regression, the result is:

plm(formula = G.NPA ~ Net.Profit, data = npa_rp, model = "random",

R-Squared: 0.57082

R value is 57% that's why this model is effective model. This model showed that when the NPA is increasing that time net profit decreasing. The independent variables is non-performing asset.

Normally the profitability of the banking sector depends on recovery of loans on time which are disbursed to the different sectors. The performance of banking sector depends on how effectively you manage the non-performing assets. Except SBI and Punjab National Bank all the banks are facing problems with respect to NPAs. It does not indicate that the more NPAs the more profits for SBI but the largest bank of India is able to receive more profits only because of its wide variety of financial services and effective management of NPAs. But if NPAs continue in the same manner then even large banks will also stumble like Lehman Brothers in USA which resulted in International economic crisis.

6. Conclusions

NPAs affect the financial performance of Indian banks as well financial growth of economy. Indian banking system is facing the NPAs problem. Every country's economic growth depends upon their financial system. The financial system mainly comprises banking sector. Especially public sector banks should focus on their NPA Management to grow their profitability. The financial institutions should develop new strategies planning to improve the recovery of loan. Non-performing assets (NPAs) is affecting the performance of financial institutions both financially and psychologically. The non-performing assets have become a major cause of concern. Absorbing the credit management skills has become all the more important for improving the bottom-line of the banking sector. The current NPAs status continues to disturb Indian banking Sector. Several experiments have been tried to reduce NPAs but nothing has hit the mark in tackling NPAs. The Indian banking sector faced a serious problem of NPAs. A high level of NPAs suggests high probability of a large number of credit defaults that affect the profitability and liquidity of banks. Most of the problem related to NPA is faced by public sector banks. To improve the efficiency and profitability, the NPAs have to be scheduled. Strict measures are needed to be taken up to combat these NPAs crises. It is highly impossible to have zero percentage NPAs.

Improvement in recovery management properly functioning of banks depends on time recovery of loan. Banks should develop a new recovery programs for over dues, monitoring accounts, keeping regular contact with borrowers. However, many borrowers are defaulters not because of low income but due to lack of ethics.

Improving the credit Management- Management of credit is essential for proper functioning of banks. Preparation of credit planning, proper credit appraisals, disbursements, post sanction follow-up and need based credit are the some areas of credit management that needs improvement in order to reduce the NPAs. Banks should reduce dependence on interest income- Indian banks are largely dependent on the lending and investment as in comparison to developed countries. Indian banks should look for sources (income) from fee based services and products. Credit Information Bureau India LTD (CIBIL) the institutionalization of information sharing arrangement is now possible through the newly formed Credit information Bureau of India Limited (CIBIL) it was set up in the year 2001, by SBI, HDFC, and two foreign technology partners. This will prevent those who take advantage of lack of system of information sharing amongst leading institutions to borrow large amount against same assets and property, which has in no measures contributed to the incremental of NPAs of banks.

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IS THE CAPITAL MARKET IMPORTANT FOR THE ECONOMIC GROWTH IN THE EU?

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Abstract: *The European Commission's plan to mobilize the capital in Europe by launching the project of the Capital Markets Union, expected to be accomplished by 2019, is strongly based in the characteristics of the European financial system, relying heavily on the banking industry. The importance of capital markets and financing venues was emphasized by the financial crisis that started in 2007, seriously affecting the banking industry, and whose effects can also be seen today. In this article, we analyse the relationship between economic growth and some variables that characterize the capital markets in the 28 member states of the European Union. We use annual data for the 2000-2015 time frame, in order to capture the multiple economic cycles in Europe, corresponding to each of the 28 member states at the beginning of 2017 (even though the accession to the EU occurred later than 2000, as is the case of Central and Eastern European countries). We used data reflecting economic growth, stock markets returns, market capitalization as percentage in GDP and stocks traded value as percentage in GDP. We start the analysis by checking the existence of some causality relations between the analysed variables, by conducting a pairwise Granger causality test. The results show that the variables characterizing the capital markets are in the Granger causality relation with the economic growth. We also use the panel data regression to find a relation between the selected variables, and the obtained results. The conclusion reveals the existence of a positive relation between the economic growth and the other three variables, for the selected countries and time period. These results reveal the importance of the capital market as a way of financing companies throughout Europe, as the market capitalization (the size of the capital market) and traded value (as a measure of liquidity and activity in the capital market) are directly related to the economic growth. Stock market returns are also positively related to economic growth, a result that shows the potential use of the first variable as an indicator of the future economic trends. These results are of importance for a diverse scale of users, from individual investors, to institutional investors (more interested in the development of capital markets and mechanisms), but also for decision-makers from each and every member state and European institutions, involved in shaping and implementing the Capital Markets Union plan.*

Keywords: *capital markets; economic growth; market capitalization.*

JEL classification: *C23; G15; G10.*

1. Introduction

The Capital Markets Union, promoted by the European Commission and intended to be operational by the year 2019, is the most important project involving the free

movement of capital in the European common economic space. It aims to address the heavy reliance of the European companies on the banking system, by providing an alternative venue for enterprise financing and establishing a genuine single European capital market.
This process involves adopting large scale measures throughout Europe, included in the Action plan on Building the Capital Markets Union, in order to unlock the disposable capitals from the European Union and direct them toward the companies, including toward small and medium enterprises.
In this respect, it is important that every member state assesses the possible benefits and costs associated to the Capital Markets Union project, in order to find the proper measures necessary to foster the economic growth and activity.
Therefore, the analysis of the relationships between macroeconomic variables and alternative measures of activity in the capital markets becomes relevant in the process of designing the measures necessary to implement the Capital Markets Union.
The relationship between these variables is widely analysed in the economic literature, the conclusions drawn being dependent on the selected variables, data or methodology, as well as on the selected countries included in the analysis.
In this article, we use annual data for the 28 member states of the European Union, in order to assess the relationship between economic growth and stock market returns, market capitalization and traded value. The article consists of five parts, the first being the Introduction, the second part being dedicated to a brief analysis and overview of the relevant financial literature, the third being concerned with the data and the methodological issues, the fourth presenting the results and the fifth containing the most relevant conclusions.

2. A Brief Overview of the Relevant Financial Literature

The relationships between economic growth and sectorial variables was widely studied in the financial literature, as many researchers and practitioners tried/are trying to find the answers and reasons for the financial markets' evolution during different time intervals. The globalization process enabled the financial investors from the developed countries to have an easier access to less developed countries, such as the emerging ones.
Bekaert and Harvey (1997) found the relation between capital markets and economic growth, by analysing 18 emerging markets around the globe (from Europe, Asia, Latin America and Africa) during the 1986-1992 time frame. They stressed the role that capital markets play on the economic development of the countries that promoted the financial liberalization measures and established sound basis for the capital markets' functioning.
Demirguc-Kunt and Levine (1996) used data for forty-four developed and developing countries during the 1976-1993, related to the capital market development (considering, for example, the liquidity and financial integration measures), in order to find the relation to the economic growth. They find that the countries with better-developed capital markets have also better-developed banking systems and nonbank financial intermediaries sector. But more important, Demirguc-Kunt and Levine found that the capital market's development is positively and significantly correlated with long-run economic growth for the analysed countries.

Mishkin (2005) stressed the role the financial development has on economic growth, by assessing the negative effects of the financial liberalization. Although the financial liberalization can lead to economic development, it also increases the risks of the financial contagion phenomenon.
More recent, Demirguc-Kunt, Feyen and Levine (2013) found that the impact that capital market depth has on economic growth is much stronger for the countries that have more developed capital markets. As such, the authors argue that as the countries develop, the relationship between the economic growth and the development of the capital market becomes stronger.
Kaserer and Rapp (2014) analysed the role of the capital markets in Europe and found that there is a significant and positive relationship between the capital market size and economic growth. But this relation is related to the capital market's capacity to provide funds for long-term investments, especially from institutional investors, such as the pension funds, mutual and hedge funds, or the private equity funds.
Rapp (2016) analysed the relationship between the financial sector structure and economic growth in the Danish case, emphasizing the positive and significant relationship between these two indicators. Moreover, referring to Denmark, Schularick and Steger (2007) analysed the relationship between the international capital market and economic growth, considering two eras of financial globalization, the first (according to the economists, the one that spans over 1880-1914) and the recent one. For the first era of globalization, the authors collected data for 24 countries during the 1880-1914 timeframe, covering more than 80% of the global GDP in 1914. For the recent era of globalization, Schularick and Steger used observations for 54 developing and developed countries, during 1980-2002. They found that, for the selected countries, it cannot be supported the idea of an effect of financial markets' openness on economic growth.
Alongside economists and researchers, the importance of the financial sector for the economic growth is also revealed by policymakers, as the former president of the European Central Bank, Willem Duisenberg, emphasized in a speech delivered to the conference "The Single Financial Market: Two Years into EMU" (ECB, 2001). The President of ECB pointed to the complementary relation between the capital market and the banking system in the European Union and the need for new measures to ensure financial integration.
Still, a large spectrum of researchers neglects the role of capital markets in the development of the economic activity within a country, by a narrow approach on the role the stock markets play in the economy (seen as a trading venue, and not a financing one). For example, considering data from the 1970-1985 timeframe and for 5 countries, Mayer (1988) draws the conclusion that the stock markets are not important for the economic growth, since the corporate investment using equity issuance means of financing is low.
Also, Stiglitz (1989) stresses the limitations of the government in conducting measures that help the development of capital markets, and, therefore, the limitations of the financial intermediaries' role in creating the proper conditions for economic growth.
In the Romanian case, Cioacă (2015) analysed the characteristics of the capital market, observing that one of the main problem is liquidity (market depth and total traded volume are low), that also influences the informational efficiency. Also, Cioacă (2015) analysed the market concentration for the Romanian capital market, showing that the capital market is moderately concentrated, but with a consolidation

trend. Therefore, in order to design proper measures to enhance economic growth, it can also be considered the design of a strong capital market, starting from a good knowledge of its characteristics.
The impact of the financial crisis on the Romanian capital market was also studied in Armeanu and Cioacă (2015), with an emphasis on the bankruptcy risk that was present for the listed companies at the Bucharest Stock Exchange.
Moreover, the capital markets from the Central and Eastern Europe and their exposure to financial contagion was studied by Armeanu, Enciu, Obreja and Cioacă (2016), revealing the large impact the developed capital markets have on the returns and volatility of the less developed capital markets.

3. Methodology and data

In order to assess the relationship between economic growth and the variables that characterize the capital markets, we use data panel analysis and a regression of the following type:

$$y_{it} = \alpha + X'_{it}\beta + \mu_i + \vartheta_{it} \quad i=1, \ldots, N; \; t=1,\ldots,T$$

where i is the cross-section dimension, t is time, α and β are the equation's coefficients, $X'_{it}$the it's observation for the explanatory variables, u_{it} is the specific effect and $\vartheta_{it}$is the residual value.
We estimate the model using the fixed effect model and random effect model, therefore conducting the Hausman test in order to assess which model is appropriate.
In order to assess the impact the capital markets have on economic growth, we considered the time series corresponding to the 28 member states of the European Union, for the 2000-2015 time frame. We considered the data corresponding to the states that entered in the European Union after 2000, such as Cyprus, Estonia, Latvia, Lithuania, Malta Poland, Czech Republic, Slovakia and Hungary (with the accession date May 1st 2004), as well as Romania and Bulgaria (that entered in the European Union from January 1st, 2007) and Croatia (that entered the European Union starting July 1st, 2013).
For each country, we considered annual data for economic growth (during 2000-2015) and for variables that characterize the capital market, such as the market returns (calculated using the representative indexes from each European Union member state), market capitalization as percentage in GDP and stocks traded value as percentage in GDP (using the concepts and definitions given by the World Bank). We choose the last two indicators in order to find a relationship between the economic growth and the size and dynamics of the capital markets, sectors that are intended to be financing venues for companies.
The data were collected from the European Central Bank, World Bank, market operators and Federal Reserve Bank of St. Louis.

4. The Results

Data for the 2000-2015 time frame were used to study the existence of the relationships between the economic growth (variable GDP_GR) and time series that characterize the dynamics of the capital markets (S_P – annual market returns, STOCKS_GDP – the value of shares traded, as percentage in GDP and MAR_CAP – the market capitalization expressed as percentage in GDP). We used data panel

analysis, aiming to find a model that relates the economic growth with the variables specific to the capital markets.
For selected data series, we use the pairwise Granger causality test, in order to find the possible correlations between those variables, the results being presented in Table 1.

Table 1: The Pairwise Granger Causality Tests for selected variables (2000-2015)
Pairwise Granger Causality Tests
Date: 04/18/17 Time: 10:24
Sample: 2000 2015
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
S_P does not Granger Cause GDP_GR	392	81.9722	2.E-30
GDP_GR does not Granger Cause S_P		8.17855	0.0003
MAR_CAP does not Granger Cause GDP_GR	392	17.2390	7.E-08
GDP_GR does not Granger Cause MAR_CAP		2.13650	0.1195
STOCKS_GDP does not Granger Cause GDP_GR	392	4.28818	0.0144
GDP_GR does not Granger Cause STOCKS_GDP		1.88952	0.1525
MAR_CAP does not Granger Cause S_P	392	5.04904	0.0068
S_P does not Granger Cause MAR_CAP		3.44563	0.0329
STOCKS_GDP does not Granger Cause S_P	392	7.81851	0.0005
S_P does not Granger Cause STOCKS_GDP		7.09460	0.0009
STOCKS_GDP does not Granger Cause MAR_CAP	392	0.94547	0.3894
MAR_CAP does not Granger Cause STOCKS_GDP		7.60827	0.0006

Source:own calculation

Analysing the data from Table 1, we can see that there is no causality relationship between the economic growth and the stocks traded value and market capitalization, expressed as percentage in GDP. Despite this, there is an inverse causality relationship, as the market capitalization percentage in GDP and the stocks traded values as percentage in GDP both influence the economic growth (considering the probabilistic values, that are below an usual threshold of 5%).
We can also observe the direct relationship between the economic growth and the market returns, as both causality relations are significantly statistic (the probability value for the first null hypothesis from Table 1 is 2.E-30, and the probability value for the second nul hypothesis is equal to 0.0003).
Moreover, considering the variables that characterize the capital market, we can observe that there are some causality relationships, as the one between the market returns and the market capitalization expressed as percentage in GDP (one of the ofetn used measures for the development of a capital market), or the one between the market returns and the stocks traded value as percentage in GDP (that

expressess the liquidity and the companies' openness to financing using the capital markets mechanisms).
Starting from these results, we developed a regression model based on panel data, were the dependent variable is the economic growth, and the independent variables are the time series that characterize the capital markets. The results are shown in Table 2.

Table 2: The proposed model for GDP_GR variable, fixed effect (2000 – 2015)
Dependent Variable: GDP_GR
Method: Panel Least Squares
Date: 04/18/17 Time: 10:18
Sample: 2000 2015
Periods included: 16
Cross-sections included: 28
Total panel (balanced) observations: 448

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.046361	0.405547	0.114318	0.9090
S_P	0.006443	0.005138	1.253882	0.2106
STOCKS_GDP	0.020184	0.008274	2.439502	0.0151
MAR_CAP	0.031191	0.007129	4.375088	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.196920	Mean dependent var	2.319530
Adjusted R-squared	0.139144	S.D. dependent var	3.737413
S.E. of regression	3.467658	Akaike info criterion	5.391522
Sum squared resid	5014.281	Schwarz criterion	5.675559
Log likelihood	-1176.701	Hannan-Quinn criter.	5.503492
F-statistic	3.408360	Durbin-Watson stat	1.313463
Prob(F-statistic)	0.000000		

Source:own calculation

Analysing the data from Table 2, we can observe that the proposed model explains 19.6920% of the changes in the economic growth and the 3 selected variables characterizing the capital markets, out of which 2 are statistically significant (market capitalization and the stocks traded volume expressed as percentage in GDP).
We can also see that the values for the 3 coefficients characterizing the capital market (S_P, STOCKS_GDP, MAR_CAP) are all positive, emphasing the existence of a positive relationship between the dynamics of the economic activity (measured by the economic growth of the GDP) and the financing venue represented by the capital market.
For example, the positive relationship between the economic growth and the market returns (although not statistically significant) confirms the results obtained by a large spectrum of empirical results, as well as researches done by other economists and

practicians, emphasinzing the importance the capital market has on estimating the new economic trends and changes in the dynamics (that stressess the fact that an accurate estimation of the capital market's movement is important for estimating the dynamics of the economy as a whole, therefore being of interest for the monetary and fiscal policymakers in a country).

Moreover, the positive relationship between the capital markets' dynamics (as it is assessed by the stocks traded volume expressed as percentage in GDP) and the economic growth stressess the importance the capital market have on financing the companies, at least considering the trading activity impact has on the institutional investors' interest. As such, the existence of a liquid capital market is a necessary condition for the atractivity of this financing venue for the companies interested in obtaining financial resources that are needed to developing new activities and projects. Also, from the institutional investors' standpoint, besides the reasons related to the general economic, social or judicial stance within a country, the liquidity of the country's capital market is an important condition that influence the investment decision (as the number of trading sessions needed to implement an investment/dis-investment decision is important for the expected returns and institutional investors' strategy,faced with a many alternatives markets to invest).

Also, the positive relationship between the market capitalization expressed as percentage in GDP and the economic growth is important, as it emphasizes the potential the capital market can have in development of an economy of a member state from the European Union. Considering this, the development of the non-banking financial sector, where the capital market is the main financing venue for the companies, that is complementary to the banking system, is important in adopting by the interested companies the decision of using the stock exchange's mechanisms to finance the operations (that constitutes the demand for financial resources), as well as for the local or foreign institutional investors (that cumulates the supply for financial resources). Actually, that is the main driving aim for the Capital Markets Union project, that is expected to be done by 2019, in order to provide an alternative financing mechanisms for European companies, espaceially the small and medium enterprises.

The existence of some important companies listed on the stock exchanges gives positive signals in the financial field related to their capacity as financing venue for the interested companies, where there are clear advantages for investors, given by the transparency and reporting requirements from the corporate governance codes and regulations of every stock exchange.

In order to check whether this model is appropriate for the selected time series, we used the Hausman test for the random effect model. The results are shown in Table 3.

Analising these results, we can see that the Hausman test shows that the fixed effect is appropriate, as the null hypothesis is rejected (the probability value for the null hypothesis, saying that the random effect model is appropriate, is null).

As such, the model presented in Table 2, based on panel data regression with fixed effects, is appropriate and relevant for the selected time series, emphasizing the positive relationships between the economic growth and the variables characterizing the dynamics of the capital markets, such as the market returns, stocks traded value and market capitalization, expressed as percentage in GDP.

Table 3: The model for GDP_GR variable, random effect (2000 – 2015)
Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	41.316343	3	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
S_P	0.006443	0.011898	0.000002	0.0003
STOCKS_GDP	0.020184	-0.008699	0.000042	0.0000
MAR_CAP	0.031191	0.014569	0.000026	0.0010

Cross-section random effects test equation:
Dependent Variable: GDP_GR
Method: Panel Least Squares
Date: 04/18/17 Time: 10:10
Sample: 2000 2015
Periods included: 16
Cross-sections included: 28
Total panel (balanced) observations: 448

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.046361	0.405547	0.114318	0.9090
S_P	0.006443	0.005138	1.253882	0.2106
STOCKS_GDP	0.020184	0.008274	2.439502	0.0151
MAR_CAP	0.031191	0.007129	4.375088	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.196920	Mean dependent var	2.319530
Adjusted R-squared	0.139144	S.D. dependent var	3.737413
S.E. of regression	3.467658	Akaike info criterion	5.391522
Sum squared resid	5014.281	Schwarz criterion	5.675559
Log likelihood	-1176.701	Hannan-Quinn criter.	5.503492
F-statistic	3.408360	Durbin-Watson stat	1.313463
Prob(F-statistic)	0.000000		

Source:own calculation

5. Conclusions

Using annual data for the 2000-2015 time frame, for the 28 member states of the European Union, we studied the existence of relationships between the variables used to describe the macroeconomic dynamics, such as economic growth, and the ones that characterize the capital markets, such as the market returns, the stocks traded volume and market capitalization expressed as percentage in GDP. Therefore, we used data panel analysis, finding a positive relation between the capital markets's characterizing variables and the economic growth for the selected countries.

The existence of this relation is important for a large spectrum of users, from retail investors, interested in finding an alternative for their investments using the disposable income and resources, to institutional investors, that are interested in finding investment alternatives among the possible classes of countries around the globe, according to their investment strategies and mandates. Moreover, these results are of importance for policymakers from the European Union's member states, considering the initiatives of Capital Markets Union, a project launched in 2015 and expected to be operational by 2019 (even though the process is still analysed and adapted, as the European Union faces new challenges, such as the results of the June, 2016, UK's referendum, that reveals the choice of the British people to leave the European Union).

These results can be further refined, by including in the model some other explanatory variables, such as dummy variables, that can be used to differentiate the results according to the clusters where the European Union's member states are allocated (such as the MSCI classification, in developed countries, emerging countries, or frontier countries). Moreover, this analysis can be further refined by considering quarterly data for the selected variables, an option that can better reflect the capital markets' moves and their impact on the other analysed macroeconomic variables. Also, we can consider other macroeconomic variables in this model, such as the GDP per capita, that can emphasize the relationship between these variables and development stage of the non-banking financial sector (and, especially, to the capital markets).

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MODELING ACTIVITIES OF COMMERCIAL BANK THROUGH PETRI NETS

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Abstract: *The relevance of the article is determined by the need to improve the methods of modelling and simulating commercial bank activity, including for the purpose of calculating, controlling and managing the risk of the bank, in the context of the transition to the application of Basel III standards. This improvement becomes necessary because with a direct transition to new regulatory standards internal assessments of the main risks become the initial data for calculating the capital adequacy of a bank. We believe that commercial banks are interested in developing existing practices of modelling and simulating activities, including risk management purposes. In other words, we must improve the formalization of logical and mathematical representation of connections, regularities and the explanatory theory for the operations in commercial bank. We believe that attaining similitude between commercial bank and its model by Petri nets has a number of advantages compared to other instruments. This involves some opportunities of continuous improvement of the theoretical model, the possibility of slight changes of the degree of homomorphism, the possibility of concomitantly including variables typical of deterministic models, stochastic models, as well as fuzzy (vague) models. It is important that Petri nets have a graphic representation with a particularly effective impact on intuitively understanding the systems dynamics. The article reveals the possibility of modelling the activity of a financial institution through Timed Hybrid Petri Nets. The purpose of this article is to study the possibility of using Petri nets for modelling activities of a financial institution. The present study involved the employment of universal methods of economic analysis, namely, the method of scientific abstraction, mathematical modelling and the method of functional analysis. The content of the article refers mostly to summarizing the extensions of Petri nets that can be used to model, review and evaluate numerical characteristics of financial institutions' performance. This article deals with generalized timed Petri nets, timed continuous Petri nets, and generalized timed hybrid Petri nets. The main result obtained in the study and presented in the article is the argumentation of the possibility to analyze the quantitative and qualitative characteristics of a commercial bank with the help of Petri net extensions.*

Keywords: *commercial bank; modelling; Petri nets; qualitative properties; quantitative properties; financial institution; generalized timed Petri nets; timed continuous Petri nets; generalized timed hybrid Petri nets.*

JEL Classification: *G17; G21; G23; C02; C60.*

1. Introduction.

For the purpose of modelling, a financial institution can be regarded as a subsystem of the economic system. Thus, the internal parameters for the system are external for the financial institution and we will have to develop a model that describes the interdependence between input and output parameters of the subsystem. The size and the uncertainty of output subsystem parameters are dependent on the corresponding parameters of input.

In this paper, we present an approach to modelling activities of a financial institution that has as its starting point the fact that the functions of parallel/distributed application are achieved through *cooperative actions* of data processing. In this context, cooperation implies the capability of the processes to communicate and the correlation of the actions with a focus on achieving common tasks.

Formulating *a mathematical model* for a *real system* is crucial and much more difficult than solving it and interpreting its results. In this regard, one of the possibilities is the use of Petri nets (Aalst W.M.P., 1998, Juncan T., Ţiplea F. L., 1995, Li Hui- Fang, Fan Yu-Shun, 2004).

Hereafter, we will briefly present some extensions of Petri nets that can be used in modelling, verification and evaluation of numerical characteristics of financial institutions' performance.

2. Generalized Timed Petri Nets.

The theory of autonomous Petri nets relates to the order of events and, consequently, the net dynamics is regarded as a sequence of events (transitions) restricted to considerations of logic (a transition can start only if enabled). In this context, the question "how long does an event take?" is not asked. Yet, in order to answer questions related to the net performance and a modelled system, it is necessary to take the time into account. The time (duration) may be related to places and transitions in the following way:

- Time related to transitions: the time separating the start of the action (the consumption of the tokens in pre-places) and completion of the action (the production of tokens in post-places) corresponding to the transitions. These periods of time are named for action time.
- Time related to places: minimum periods of time for the tokens to become constant in a place before being able to contribute to the enabling (and firing) of the following transition. These periods of time are called delay time.
- Duration of transition firing can be used, for example, to represent the transfer time in banking systems (where the transition means time used for a transaction). Action times, delay times and firing times can be constant or variable, can be deterministic or nondeterministic.
  From the point of view of modelling capability, these two types of delays are equivalent (Alla H, David R, 1992).

Hereafter, we will use the timed Petri nets in which time is related to transitions, as the specifics of the analyzed processes is determined by the parallel sequence of events and concurrent actions.

The modification of the original model of Petri nets involves not only the simplification of their representation but also their extension. Petri nets extensions correspond to some models, where there have been added additional rules to allow treatment of a

broader range of applications and designs. In some cases, this became possible by extending syntax, without significant deviation from basic computing models - the Turing machine. The most significant models that extend the descriptive power of a basic computing model (also called autonomous models) are timed Petri nets, stochastic Petri nets, continuous Petri nets and hybrid Petri nets (Alla H, David R, 1992, Enicov I., Guţuleac E., 2007, Molloy M. K., 1982).

Further on we present a variant of Generalized Timed Petri Net(GTPN) subjacent to the timed hybrid Petri nets, (Guţuleac E., 2004, Guţuleac E., Reilean A., Boşneaga C., 2002), which can be used to model and evaluate the risk of financial institutions' performance.

Definition 1. A Generalized Timed Petri Net, in abbreviated form GTPN, is a structure expressed in terms of 11-tuple: $RPG=<P, T, Pre, Post, Inh, Test, K_p, Pri, G, \tau, M_0>$, where:

- P is a finite set of *places,* $|P| = k$;
- T is a finite set of *transitions*, $|T| = n$ and $P \cap T = \emptyset$;
- *Pre*, *Inh* and *Test* : $P \times T \to \mu P$ are the functions of the arcs weight: *Pre* is the incidence function of pre-places (direct arcs of transition input places of a transition), *Inh* is the inhibition function of transitions by means of inhibitor arcs, whereas *Test* is the function that describes the possible loops of an impure network, meaning $Pre(p,t) = Post(p,t)$. An *arc test* is represented by dashed arcs. *Post*: $T \times P \to \mu P$ is the incidence function of post-places (direct arcs of output places of a transition). These functions can be marking-dependent, i.e. they are determined by a number of multisets μP of P;

- $K_p : P \to IN \cup \infty$ is the function of the place capacity, it is considered unlimited by default. *IN* is a set of non-negative integers;
- $Pri : T \to IN$ is the priority function of a transition (it is considered null by default);
- $G : T \times IN^{|P|} \to \{true, false\}$ is a *switching* function which determines a Boolean function $g(t, M)$ for each t in this net marking. If function $g(t, M)$ is '*true*' and t is enabled by the current marking M, then this transition remains enabled and eventually it can be fired; yet, if $g(t, M)$ is '*false*', then it can not be fired, having function $g(t, M)$ is '*true*' by default;
- $M : P \to N$, $M = [m_1,\ldots,m_i,\ldots,m_k]$ with $m_i = M(p_i)$ is the function of marking places, and M_0 is the initial marking of the net;
- $\tau : T \to IR_+$ is the time needed for firing a transition enabled by current marking. IR_+ is a set of non-negative real numbers. Transitions $t_j \in T(M)$ enabled by current marking M, which were selected for the firing process, will change this marking after time τ_j.

The weight of different types of net arcs, which are not explicitly mentioned, is considered to be 1. The capacity of a place is considered unlimited by default. Also, if firing priorities and switching functions of transitions t_j are not explicitly mentioned, then it will be considered that they have the following values: $Pri(t_j) = 0$ and $g(t_j, M)$ ='*true*'.

In what follows, we will use the following notations:

- ${}^{\bullet}t_j$ ={$p_i \in P$: *Pre*(p_i , t_j)>0 } and $t_j^{\bullet}$={$p_i \in P_d$: *Post*(t_j, p_i)>0} is a multiset of input places and output places of transition t_j , respectively;

- ${}^{\circ}t_j$ ={$p_i \in P$: *Inh*(p_i,t_j)} and ${}^{*}t_j$ ={$p_i \in P$: *Test*(p_i , t_j)} is a multiset of control places through inhibitors arcs and transition test t_j , respectively;

Definition 2. (*Rule of firing an enabled transition*). A transition t_j of *GPN* is *enabled* by current marking M, noted as $t \in T(M)$, only on condition that, irrespective of its priority, it involves the verification of the following Boolean function, which is subject to verification $cs(t_j, M)$: $ec(t_j, M)$ = ($\bigwedge_{\forall p_i \in {}^{\bullet}t_j}$ ($m_i \geq Pre(p_i, t_j)$)) & ($\bigwedge_{\forall p_i \in {}^{*}t_j}$ ($m_i \geq Test(p_i, t_j)$)) & ($\bigwedge_{\forall p_i \in {}^{o}t_j}$ ($m_i < Inh(p_i, t_j)$))&(g(t_j, *M*) = 1) & ($\bigwedge_{\forall p_n \in e_j^{\bullet}}$ $((K_p - m_n) \geq Post(p_n, e_j))$

Transition t_j $T(M)$ is enabled after time τ_j , on condition that there *is no* other transition t_k of a higher priority *Pri*(t_j) > *Pri*(t_k) *for which* the conditions of enabling t_k $T(M)$ and timing are verified. Firing transition t_k from current marking *M* brings to a new marking $M' = M - Pre(\bullet, t_j) + Post(\bullet, t_j)$, wherre $Pre(\bullet, t_j)$, $Post(\bullet, t_j)$ are the functions induced by *Pre*, *Post* to *P*. The fact of firing transition t_j from current marking *M* is noted as $M[t_j > M'$.

3. Timed Continuous Petri Nets.

Timed Continuous Petri Nets were introduced by H. Alla and R. David (Alla H, David R, 1992, Alla A., David H., 1998). The particularities of these types of nets are in the fact that the marking of a place is a positive real number and not an integer. The firing of the transition is carried out by a continuous flow of fluid. This type of nets allows the modeling of the systems that can not be modeled by discrete Petri nets and leads to the creation of a new model, approached in a convenient way, when the number of reachable tokens of a discrete Petri net becomes too high, which will be a limit to the use of Petri nets for modeling such processes.

A *Timed Continuous Petri Net* is an extension of Petri nets, in which a number of tokens in their places and the corresponding incidence functions are defined as real numbers.

Next, we present an extension of Timed Continuous Petri nets (TCPN).

Definition 3. T-timed Continuous Petri Net, in abbreviated form (TCPN), is 11-double:

RCT = <*P, T, Pre, Post, Inh, Test,* K_p, *Pri, G, V,* M_0 >,

Where the definitions of *P*, *T*, *Pre*, *Post*, *Inh*, *Test*, *Pri,* K_p, *Pri, G,* are similar to the ones presented in the discreet Petri nets, apart from the fact that the incidence functions of *Pre, Post, Inh* and *Test* are real numbers;

- *V* is an application of a set of transitions *T* of a TCPN to a set of real numbers $R^+ \cup \{\infty\}$. Speed $V(t_j) = V_j$ corresponds to the maximal speed of transition firing t_j;

- M_0 is the initial marking of this net which is rendered by a vector of positive real numbers or null, which can also be noted as $\vec{x}_0 = X(0)$, knowing that $\vec{x}(\tau) = (x_1(\tau), \cdots, x_n(\tau))$, $n = |P|$ denotes the current marking of TCPN at time τ .

A place p_i having null as marking can enable a transition $t_j \in p_i^{\bullet}$. In order to obtain it, it is enough to have a place fed by a transition $t_k \in {}^{\bullet}p_i$ at the input of this place.

Definition 4. A location p_i is fed at time τ , if and only if there is at least a transition t_j in ${}^{\bullet}p_i$ which is enabled.

A transition t_j *is enabled* at time τ , if all the places $p_i \in {}^{\bullet}t_j$ meet at least one of the following two requirements: (i) $m_i(\tau) > 0$; (ii) p_i is fed.

We assume that the transition is *strongly enabled* if all the places from set ${}^{\bullet}t_j$ meet the first requirement. And, it is *weakly enabled* if it does not meet the first requirement.

In a TCPN, a transition t_j, whose real firing speed is $v_j(\tau) > 0$, is fired continuously. The marking of a place p_i, at time $\tau + d\tau$ is deduced from the current marking at time τ, using the following relation:

$$m_i(\tau + d\tau) = m_i(\tau) + \sum_{k=1}^{m} [Post(p_i, t_k) - \Pr e(p_i, t_k)] \cdot v_k(\tau) d\tau ,$$

which brings us to the following *fundamental relation*: $\dfrac{dM(\tau)}{d\tau} = C \cdot v(\tau)$,

where *C* is the incidence matrix of TCPN, whereas $v(\tau)$ is the corresponding firing speed vector of a transition at time τ , i.e. $v(\tau) = (v_1(\tau), ..., v_m(\tau))$.

Based on the fundamental relation, it is possible to verify different interesting properties of TCPN. Some of them, such as place invariants or transition invariants, are similar to the ones of the discreet Petri nets. Others, such as operation intervals and evolution graphs for TCPN are typical of a continuous model (Alla H, David R, 1992, Alla A., David H., 1998).

TCPNs may approximate a system of discreet events. At the same time, they also allow to model systems with continuous flows of data (leakage and/or, for example, flow blending) without being discretized. Moreover, they allow to model systems, in which parameters that characterize the nature of these flows can be very heterogeneous, for example, banking transactions, which will consider requests or offers (integers by nature) and sums of money (rational numbers).

TCPNs are well suited for modelling permanent operations with continuous flows by nature. Yet, in a financial system, operation processes are discreet-continuous by nature and there can often happen operation failure, when one or more resources are not available and then corresponding maximal speed *V* becomes invalid.

Suchlike situations can be modelled through *Generalized Timed Hybrid Petri Nets*, in abbreviated form *GTHPN*s, which will contain *continuous places and transitions* (hereinafter *C-places* and *C-transitions*) and *discreet places* and *transitions* (hereinafter *D-places* and *D-transitions*).
Further on, we will consider an extension which is called *Timed Hybrid Petri Nets*.

4. Generalized Timed Hybrid Petri Nets

To make a formal representation of a *GTHPN* we will again consider an autonomous discreet Petri net. We assume that transition t_j and place p_i are the corresponding transition and place of this net. Marking of place p_i is an integer of tokens in this place and is noted as m_i. We will also analyse a similar net model, though it is built up in a way that a set of places and transitions are divided into two disjointed parts: each place and each transition can be either discreet or continuous. The obtained net is called a Hybrid Petri Net, in which the marking of continuous places is a real number, while the marking of discreet places is an integer. If all the nodes of the net are discreet, then *GTHPN* is transformed into a timed discreet *Petri net.* If all the nodes of the net are discreet, then GTHPN is transformed into a *TCPN*.
Definition 5. A Generalized Timed Hybrid Petri Net, in abbreviated form GTHPN, is a quadruple $RHGT =< RPG,\ h, M_0, \vec{x}_0 >$ which conforms the following conditions:

1) A GPN is a generalized petri net, in which the set of places P makes up a partition $P = P_d \cup P_c$, $P_d \cap P_c = \varnothing$, where P_d is the set of discreet *D*-places and P_c is the set of continuous *C*-places, while the set of transitions *T* makes up a partition $T = T_d \cup T_c$, $T_d \cap T_c = \varnothing$, where T_d is a set of discreet *D*-transitions and T_c is the set of continuous *C*-transitions. The set of arcs *A*, determined by the incidence function *Pre, Inh,* $Test : P \times T \to \mu P$ and $Post : T \times P \to \mu P$ also make up a partition $A = A_d \cup A_c$, $A_d \cap A_c = \varnothing$, so that $A_d = (P_d \times T) \cup (T \times P_d)$ and $A_c = (P_c \times T_c) \cup (T_c \times P_c)$;
2) application $h : P \cup T \to \{D,\ C\}$, called hybrid function, indicates the type of every node of the net, whether it is discreet *D* or continuous *C*. When $p_i \in P_d$ is a *D*-place, then the corresponding incidence functions *Pre*(p_i, t_j) and $Post(p_i, t_j)$, $Inh(p_i, t_j)$ and $Test(p_i, t_j)$, $\forall t_j \in T$ are non-negative integers; yet, if $p_i \in P_c$ is a *C*-place, then $\forall t_j \in T_c$ these functions are positive real numbers.
3) for $\forall h(p_i) = D$ and $\forall h(t_j) = C$ *Pre* incidence functions and *Post* incidence functions verify the following relation *Pre*$(p_i, t_j) = Post(p_i, t_j)$;

4) current marking $(M, \vec{x})$ of the net is determined by the vector of the number of tokens $M = (m_i, p_i \in P_d)$ in *D*-places and the vector of continuous marking $\vec{x} = (x_k, p_k \in P_c)$ of *C*-places. In the initial state the net has initial marking $(M_0, \vec{x}_0)$.

An incidence matrix *W* corresponds to each of the hybrid Petri net:

$$W = [W_{ij}]_{n \times m} \text{ , where } W_{ij} = Post(p_i, t_j) - Pre(p_i, t_j).$$

The third requirement from definition 4.15 relates that an arc must connect a C-transition with a *D*-place, on condition that there is a reciprocal arc, which allows to ensure that the marking of *D*-places must always be an integer whatever the evolution of marking in the net is.

The marking of *C*-places is represented by a real number, an amount of fluid, whereas the marking of *D*-places is, as usual, represented by black dots, tokens by name.

Hereafter in order to distinguish continuous transitions and places from the discreet ones, we will mark continuous transitions as $u_k \in T_C$ and continuous places as $b_k \in P_C$.

Rules of enabling and firing of transitions. A discreet transition $t_j \in T_D(M)$ is enabled by the current marking *M* if the following logical expression (enabling condition $ec_d(t_j)$) is verified.

$$ec_d(t_j) = (\bigwedge_{\forall p_i \in {}^{\bullet} t_j} (m_i \geq \Pr e(p_i, t_j)) \,\&\, (\bigwedge_{\forall p_k \in {}^{\circ} t_j} (m_k < Inh(p_k, t_j)) \,\&$$
$$(\bigwedge_{\forall p_l \in {}^{*} t_j} (m_l \geq Test(p_l, t_j)) \,\&\, (\bigwedge_{\forall p_n \in t_j^{\bullet}} ((K_p - m_n) \geq Post(p_n, t_j)) \,\&$$
$$(\bigwedge_{\forall b_i \in {}^{\bullet} t_j} (x_i \geq \Pr e(b_i, t_j)) \,\&\, (\bigwedge_{\forall b_k \in {}^{\circ} t_j} (x_k < Inh(b_k, t_j)) \,\&$$
$$(\bigwedge_{\forall b_l \in {}^{*} t_j} (x_l \geq Test(b_l, t_j)) \,\&\, (\bigwedge_{\forall b_n \in t_j^{\bullet}} ((K_b - x_n) \geq Post(x_n, t_j)) \,\&\, g(t_j, M) \quad .$$

Also, a continuous transition $u_j \in T_C(M)$ is enabled by the current marking M if the following logical expression (enabling condition $ec_c(u_j)$) is verified.

$$ec_c(u_j) = (\bigwedge_{\forall b_i \in {}^{\bullet} u_j} (x_i > 0) \,\&\, (\bigwedge_{\forall p_k \in {}^{\circ} u_j} (m_k < Inh(p_k, u_j)) \,\&$$
$$(\bigwedge_{\forall p_l \in {}^{*} u_j} (m_l \geq Test(p_l, u_j)) \,\&\, (\bigwedge_{\forall b_k \in {}^{\circ} u_j} (x_k < Inh(b_k, u_j)) \,\&$$
$$(\bigwedge_{\forall b_l \in {}^{*} u_j} (x_l \geq Test(b_l, u_j)) \,\&\, (\bigwedge_{\forall b_n \in u_j^{\bullet}} ((K_b - x_n) \geq V_j \cdot Post(x_n, u_j)) \,\&$$
$$g(t_j, M)$$

An enabled transition can be fired. The firing of a D-transition t_j consists of removing $Pre(p_i, t_j)$ tokens from each input place p_i to transition t_j and adding

$Post(p_i, t_j)$ tokens to each output place of the transition fired. Firing of quantity *r* of a *C*-transition u_j involves removing $r \cdot Pre(p_i, u_j)$ of the fluid from each input place b_i to transition u_j and adding $r \cdot Post(p_i, t_j)$ fluid in each output place b_j out of u_j.

An enabled discreet transition $t_j \in T_D(M)$ (continuous $u_j \in T_C(M)$) will be *enabled* if there is no other transition $t_k \in T_D(M)$ ($u_k \in T_C(M)$) enabled, which has a priority over it.

Let's assume that σ is a firing sequence of transitions and $\overline{\sigma}$ is the characteristic related to σ. The size of the vector $\overline{\sigma}$ is equal to the number of net transitions *k*. Component $\overline{\sigma}_j$ of vector $\overline{\sigma}$ is represented by the number of transition firings t_j in a firing sequence σ and this number is noted as $N_j = N(t_j)$. If t_j is a *D*-transition, then N_j is an integer, whereas if t_j is a *C*-transition, then N_j is a real number.

Then one can determine the reachable marking *M* out of initial marking *M* through a firing sequence σ, $M_0[\sigma > M$, using the following fundamental relation (Alla H, David R, 1992):

$$M = M + W \cdot \overline{\sigma}$$

The fundamental relation of a Hybrid Petri net is identical to the one of a discreet Petri net. Thus we can anticipate that all the properties of discreet Petri nets which are intrinsic to this relation can be referred to the Hybrid Petri nets as well.

Definition 6. A Generalized Timed Hybrid Petri net is *double* $RHGT =< RHG, \theta, V >$, where: *A HPN* is a marked hybrid Petri net, specified in accordance with definition 5, in which a set of discreet transitions T_D is distributed in the following way $T_D = T_\tau \cup T_0$, $T_D = T_\tau \cap T_0 = \varnothing$:

- T_τ is a set of timed transitions with a finite firing time;
- T_0 is a set of immediate transitions with a null firing time;

θ :*T*μ *P IR*$^+$ is the function that determines a firing time parameter of an enabled discreet transition *tT*(*M*): if *t* is a timed transition, then $\theta(t, M) = d(t, M)$ is the transition firing time of $t \in T_\tau(M)$ in current marking *M*;

- if t' is an immediate transition, then $\theta(t', M)$ is the weight of this transition which determines the probability of the firing *a*(t', *M*) = $\theta(t, M) / \sum_{t_k \in T_0(M)} \theta(t_k, M)$ of a transition $t \in T_0(M)$ in current marking *M*, which describes a probabilistic selection

of free choice of the transitions in a structural conflict $t' \in {}^{\bullet}p$ regarding place *p*, so that $0 \leq a(t', M) \leq 1$, $\sum_{(t' \in {}^{\bullet}p)} a(t', M) = 1$;

-$V : T_C \times \mu P \rightarrow IR_+$ is the function that determines the maximal speed of firing related to a continuous *C*-transition u_j, so that the level of the fluid of a continuous place x_j will continuously change.

-μP is a multiset of places *P*, and IR^+ is a multiset of non-negative real numbers.

The state of GTHPNs is defined by its marking. For a Timed Petri net (whether hybrid or not) current marking M is decomposed into $M = M^r + M^n$, where M^r and M^n are *reserved marking* and *non-reserved marking* of a net, respectively. Only non-reserved marking M^n is taken into consideration in order to enable a transition. Moreover, C- transition firing speeds are deduced from this non-reserved marking. The state of a hybrid Petri net has no duration as C-places marking continuously varies. However, there is a time interval when D-places marking and C-transition firing speeds remain constant.

unde $M(\tau)$ este marcajul curent la momentul τ, iari *W* este matricea sa de incidenţă.

A set of reachable marking of a timed Hybrid Petri net is included in the set of reachable markings of an autonomous hybrid Petri net subjacent to this timed net. Current marking $M(\tau)$ at time τ is deduced from initial marking *M*(0), using the following fundamental relation:

$$M(\tau) = M(0) + W(\overline{\sigma}(\tau)) + \int_{u=0}^{\tau} v(u)du),$$

where $M(\tau)$ is a current marking at time τ, and *W* is an incidence matrix.

In this relation, characteristic vector $\overline{\sigma}(\tau)$ represents a number of firings of each D-transitions (discreet interpretation) between initial time $\tau_0 = 0$ and current time τ. C-transition components are equal to zero. Speed vector components $v(\tau)$ represent instantaneous firing speeds of C-transitions at time τ. D-transition components are equal to zero. This relation separates discreet evolution from continuous evolution. It is a trajectory in discreet-continuous space of a timed Hybrid Petri net.

5. Conclusions

Designed to model distributed systems, where concurrence and parallelism are central, Petri nets of various extensions have promptly become the reference model to describe these types of systems. Their application in the field of engineering has propelled them into the spotlight of researchers.

Autonomous Petri nets and their extensions are also of the utmost interest thanks to the clarity of representation of a control flow in a system of interdependent activities.

At the same time, the theory of Petri nets allows rigorous demonstrations of the systems behavior described by this formalism, observing some interesting properties in terms of cooperation of concurrent processes: mutual exclusion, synchronization, etc. Based on behavioural properties of Petri nets, it is possible to identify, for example, the correctness of the appropriate operating structures in relation to the specified restrictions.

Petri nets extensions are used to model, validate running processes and evaluate the system performance as well as parallel/distributed applications. Once a model has been developed for the given system, it is possible to perform a qualitative analysis of the functioning of this system.

Such quantitative and qualitative properties of commercial bank activity can be explored through Petri nets extensions, ensuring a relative simplicity of formulating logical and mathematical representation of connections, regularities and explanatory theory for processes of commercial bank and, simultaneously, providing graphic support with a highly efficient impact on understanding the dynamics of the model intuitively.

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ASSETS AND LIABILITIES MANAGEMENT DURING THE CRISIS - A STUDY ON BANKS IN ROMANIA

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Abstract: *Financial crisis with its main component, the banking crisis, had a negative influence on the US and European banks, affecting mostly bank assets with its toxic assets subprime mortgages. The financial crisis has affected all the economies, has had and still has a negative impact on the entire banking system. The main component of the financial crisis was and remains the banking crisis, which continued with the sovereign debt crisis and then returned under a new form of the Cyprus banking crisis. In this paper, we analyzed the changes in the evolution of assets and liabilities of a sample of banks in Romania with a system of financial ratios. For this reason, we used the ratios method in the vertical and horizontal analysis for the period 2006-2015 in order to evaluate the bankers' decisions. In this research, we analyzed whether performance indicators such as ROA and ROE establish a causal connection with indebtedness indicators, liquidity ratios and solvency ratios. The results showed that in the case of the analyzed banks, there is a dependency relationship between the solvency ratios and the "Total Risk Ratio", "Return on Assets" and "Long Term Funds to Long Term Assets". We highlighted that ROE has an insignificant influence on bank solvency, while other asset and liability indicators do not influence the solvency of the banks studied. Finally, we established that the financial crisis started in 2007 continues today and it is likely that it will begin to manifest itself with this year after the BREXIT.*

Keywords: *assets; liabilities; deposits; banking; analysis.*

JEL classification: *C61; G11.*

1. Introduction

The assets and liabilities of the bank's balance sheet show the financial position of the bank, with a view to measure the liquidity and interest rate risk. As a measure of liquidity management, banks are required to monitor their liquidity by establishing internal prudential limits with the approval of the board committee. The major objectives of our investigation in the banking sector are to provide financial data about liquidity, solvency, performance and risks based on balance sheet and income statement information during the period 2006-2015. That is why we analyze the evolution of a sample of credit institutions in Romania based on ALM (Asset – Liabilities Management) techniques which include financial ratios of assets, liabilities, equity and the capital adequacy according with Basel Agreements.

2. Literature Review

The recent global financial crisis has negatively affected the performance of most banking sectors around the world. Mirzaei (2013:27-44) analyses "the impact of bank market structure and efficiency on the profitability and stability of 6540 banks in 49 emerging and advanced countries during the crisis period 2007-2010" and find that "market concentration has a negative impact on bank profitability and stability while controlling other factors but in the same time the efficiency improves both the profitability and stability of individual banks during the crisis". Many analysts (Allen&Gale, 2007; Claessens&Kose, 2013; Kenourgios&Padhi, 2012: 24-38) believe that the financial crisis was a new phenomenon, unprecedented in the world economy. The "Pearl Harbor's economy", "the explosion of the financial bubble", "the new spill", the "vortex" are some of the phrases used by specialists like Warren Buffett or Alan Greenspan to define the global financial crisis. This unprecedented event has left its mark on all countries worldwide. Given the fact that it had a negative impact, the situation requires an analysis of the factors which led to it. Therefore, the aim of their paper is to draw a clearer picture of the phenomenon and to identify possible solutions (Bătrâncea, et al, 2009:143 – 155). The banking crisis is a subcategory of the financial crisis, consisting in moments of panic, temporary confusion regarding incidents within the financial system. The crisis began in the U.S., but because of the deregulation and financial liberalization, this phenomenon has spread to Europe and other continents, having a negative impact on the economy and forcing banks to deal with a difficult situation. After receiving bailouts from governments, some banks were nationalized, others were saved, but in many cases they went bankrupt (Bătrâncea et al, 2013:16-29). An important cause of the current financial crisis can be identified as the absence of regulation in the banking (financial) system of the United States (according with Basle I Capital Accord in 1988 and Basle II – the New Capital Framework in 1999), but also in the decrease of the FED reference interest after the terrorist attack from 2001 (Bătrâncea et al, 2009:58-64).

Asset Liability Management (ALM), aimed to reduce risks for banks and maximize total revenue, is a core part of banking. In their paper, Faruk and Alm (2014:106-128) evaluated previous performance through ratio analysis and showed graphically the trends of the financial position of banks. In the literature, there are other approaches to the causes underlying the problems banks face, especially during crises, and some of them consider that the risks depend on variations in the level of income set and expenditures covered from them. The main sources of income are interests and investments made, and the main expense is represented by the interest on deposits.

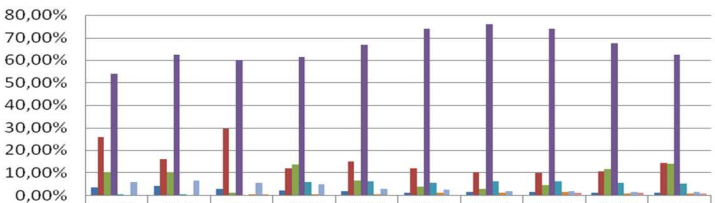
Bankruptcy prediction models are generally known as able to identify the factors menacing financial entities. Financial theory acknowledges three types of method investigating financial difficulties like the univariate analysis, multivariate analysis and logit analysis (Bătrâncea et al, 2013: 18-30).

For solving practical asset-liability management problems, Ferstl and Weissensteiner (2011:182-192) use a first-order unrestricted vector autoregressive process in order to model asset returns and state variables and include, besides equity returns and dividend-price ratios, Nelson/Siegel parameters to estimate the trend of the yield curve. Their purpose was to minimize the Conditional Value at Risk of shareholder value, i.e., the difference between the mark-to-market value of (financial) assets and the present value of future liabilities.

Lileikiene (2008:32-39) reports methods and strategies of asset and liability management in commercial banks, in addition he also includes comparative analysis. The author noticed that was very important for commercial banks to choose such performance strategy that would reduce the credit-, liquidity-, interest-rate-related risk and would balance the risk, profitability, liquidity and security. The success of any organization depends on how efficiently it uses assets and maintains a sound solvency position. Singh (2014:858-862) mentions that this is possible only with help of effective Asset and Liability Management (ALM), which is one of the important tools of risk management in commercial banks of India. Other study aims to analyze whether banks' deviation from the mainstream tendencies in terms of asset and liability allocation enables them to perform better than their competition. The analysis brings out the significance of liability allocation and of the effect of deposit strategies as a primary source of funding (Cenktan and Begumhan, 2011).
An efficient asset-liability management requires maximizing banks' profit as well as controlling and lowering various risks. That is why a study brings new evidence on the performance of emerging market banks with different managerial philosophies by comparing asset-liability management in crisis (Tektas, et al, 2005:135-149). The objective of another paper is to assess the investment policies in the banks with a view to suggesting better policy for better management of assets and liabilities while aiming distress resolution (Adegbie, et al, 2013). In the same time, liquidity is necessary for banks to compensate the expected and unexpected balance sheet fluctuations and to provide the funds necessary for development. Liquidity represents the capacity of a bank to cope efficiently with the withdrawal of deposits and the maturity of other debts and to cover the necessary of additional financing for the credits and investments portfolio (Bătrâncea, et al., 2008: 111-123).

3. Method and Results

Research methodology is based on analyzing assets-liabilities ratios, the evolution of these ratios and the balance and off-balance bank growth. Also, we also used the comparison method among assets-liabilities ratios during the selected period. The research that we have undertaken was based on published financial statements of the analyzed banks. The evolution of the banking assets rates are presented in the chart below. We computed each indicator as a ratio between every asset position and the total assets from the aggregate balance sheet of the sample of analyzed banks.



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
a) Rate of cash in bank cashier	3,56%	4,19%	2,87%	2,03%	1,73%	1,17%	1,25%	1,28%	1,09%	0,86%
b) Cash available to central banks ratio	25,84%	15,84%	29,48%	11,74%	14,82%	11,96%	10,33%	9,88%	10,61%	14,33%
c) Claims rate on bank customers	10,28%	10,32%	1,13%	13,50%	6,50%	3,81%	2,87%	4,56%	11,58%	13,99%
d) Claims on non-banks ratio	53,83%	62,21%	60,14%	61,38%	66,92%	73,77%	75,97%	73,78%	67,48%	62,42%
e) Rate of investments in securities	0,36%	0,36%	0,13%	5,82%	6,22%	5,55%	6,22%	6,30%	5,63%	5,19%
f) Rate of intangible assets	0,20%	0,27%	0,49%	0,40%	0,60%	1,17%	1,14%	1,43%	1,00%	0,89%
f) Rate of tangible assets	5,67%	6,40%	5,31%	4,75%	2,85%	2,25%	1,80%	1,56%	1,42%	1,26%
h) Rate of other assets	0,27%	0,39%	0,46%	0,38%	0,35%	0,33%	0,42%	1,21%	1,20%	1,06%

Chart 1: The evolution of the assets ratios of the analyzed banks
Source: Own calculus based on the financial statements

The data in the above chart shows that in total assets the claims on non-bank have the greater percentage, which is a normal aspect in the banking activity. As can be seen, the non-banking claims rate is more than 50% of the total assets. On the second place, we find the funds available at central banks with a share of over 10%. These weights are complemented by important banking claims on customers who have followed an upward trend in the recent analyzed years. We conclude that the management of the bank assets is primarily aimed at the type and the amount of deposits that a bank holds, and then the volume of other loans depends largely on its customers. Therefore, decisions made by the bank's management do not refer to deposits, but to the investment in the assets. Banks supervise the allocation of the deposits that receives and determines the recipients of loans. The key element of this strategy of the asset management is a careful management of credit. They are granted mostly short and finance working capital requirements by the customers, in order to cover existing deposits. Strategy Asset Management is based on the idea that the bank can cover the necessary liquidity by converting assets into cash, but the credit as the main asset, is not always easily transformed into cash, especially not at times of economic recession.

Passive operations - Basic ways of attracting bank resources

The activity of a bank always begins with the deposit taken from clients. Different types of debt existing on the balance sheet of a bank are almost universal. Their composition varies widely depending on the business of a particular bank, on the market orientation and price characteristics and on the types of supply of loans at a specific period. The financial structure of a bank has a direct impact on the cost of operation. Therefore, this determines the potential profit of the bank and its risk level. Debt structure reflects also the specific policies of asset management, debt and risk. The basic equation of passive operation of a bank is the following:

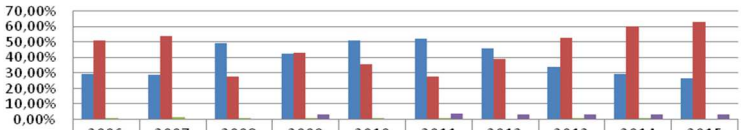
Total Liabilities & Shareholders' Equity	*= Liabilities+Shareholders' Equity*

Banking operations are based, in principle, on attracted sources, for which banks offer their customers a wide range of savings by: period of deposit; existing competition in the interbank market and structure and household income.

Subordinated debts are included in the additional bank capital, up to 50% of equity.

The structure ratios of the attracted resources - ways of the bank funds analysis

The structure ratios of the funds represent one of the pillars of banking, highlighting the share of the debts of the bank and other assimilated liabilities in total. These indicators are calculated as rates between each debt and total debts.



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Debt ratio on credit institutions	29,36%	29,14%	49,28%	42,50%	51,25%	52,39%	46,31%	33,91%	29,53%	26,89%
Debt rate on non-bank customers	51,20%	54,03%	28,11%	43,00%	35,74%	28,07%	39,00%	52,96%	60,46%	63,10%
The other liabilities ratio	1,29%	1,64%	1,23%	0,92%	1,20%	0,97%	0,63%	0,90%	0,96%	0,51%
Subordinated debt ratio	0,00%	0,00%	0,32%	3,26%	0,00%	3,70%	3,11%	3,20%	3,16%	3,43%

Chart 2: The evolution of liabilities ratios of the analyzed banks
Source: Own calculus based the balance sheet

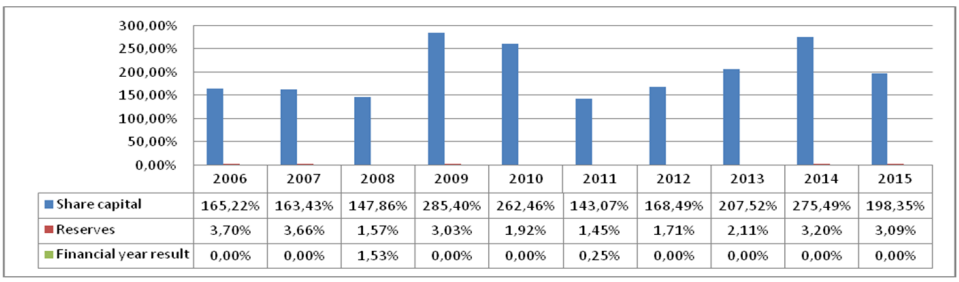
As can be seen from the above chart, the largest share of the total liabilities is the customer deposits, followed by the liabilities to credit institutions and the subordinated debt. Note that these have fluctuated from year to year, the total debt remained at approximately the same level of 90%, depending on the financing needs.

As shown by the above data, the share of liabilities to customers has the higher debt structure in the analyzed period. This report was reversed during the crisis, with liabilities of banking institutions registering levels 50%. While accounting for only 3%, the subordinated debts are the most important components of the total debts.

The analysis undertaken evidences that, in addition to short-term deposits, the bank must also have new sources of funding to meet the needs of its customers, which may require short or long term loans. It is imperative that banks should pay more attention to attracting additional sources of financing, and monitoring costs of deposits and other cost items. In this regard, banks must focus on attracting funding sources to minimize the cost and to establish a structure of deposits, loans and capital in order to provide the desired level of the stability funds. The bank has the possibility of placing resources available in high-yield assets, which often requires investing funds on a longer period and at a higher risk. Liabilities management strategy is mainly focused on the supremacy of the control funds of bank assets. The main control lever is represented by: the interest rate; other conditions offered by the bank for deposits and loans in order to obtain the desired size and cost.

Banks own resources

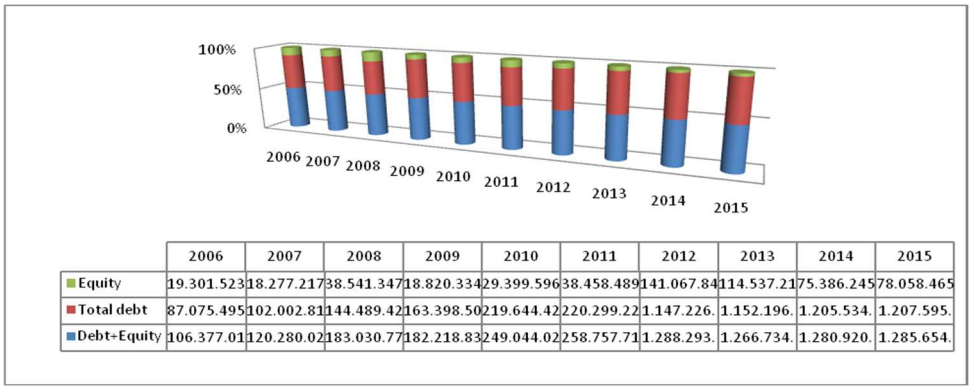
The banks' own resources have played an important role since their establishment. Due to this role, it has become the essential capital of bank management in recent years.



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Share capital	165,22%	163,43%	147,86%	285,40%	262,46%	143,07%	168,49%	207,52%	275,49%	198,35%
Reserves	3,70%	3,66%	1,57%	3,03%	1,92%	1,45%	1,71%	2,11%	3,20%	3,09%
Financial year result	0,00%	0,00%	1,53%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%

Chart 3: The evolution of equity of the analyzed banks
Source: Own calculus based on the balance sheet

The above data shows that in the entire period and particularly during the crisis, banks were strongly capitalized in order to cover losses. Another aspect related to the evolution of debt and equity can be seen in the chart below.



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Equity	19.301.523	18.277.217	38.541.347	18.820.334	29.399.596	38.458.489	141.067.84	114.537.21	75.386.245	78.058.465
Total debt	87.075.495	102.002.81	144.489.42	163.398.50	219.644.42	220.299.22	1.147.226.	1.152.196.	1.205.534.	1.207.595.
Debt+Equity	106.377.01	120.280.02	183.030.77	182.218.83	249.044.02	258.757.71	1.288.293.	1.266.734.	1.280.920.	1.285.654.

Chart 4: The evolution of liabilities and equity
Source: Own calculus based on the balance sheet

It can be noted that total liabilities are higher, thus representing a higher percentage than equity, aspect which is normal in the business of a financial institution. We consider that a bank with a higher capital indicator will better survive the decline in asset values when depositors and bank creditors are in a dangerous situation. Another aspect of the analysis is the level of the banking solvency, as follows.

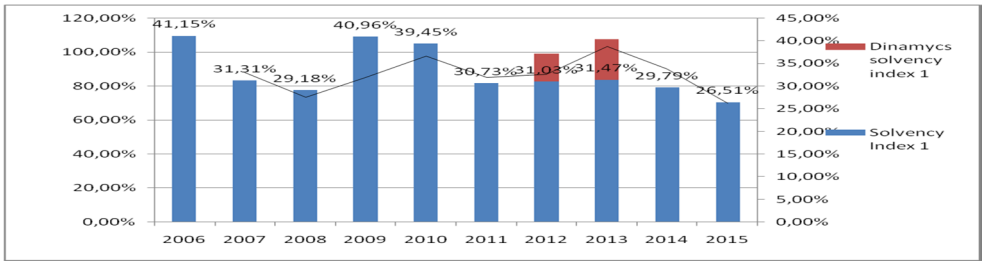


Chart 5: The Evolution of Solvency Index 1
Source: Own calculus based on the balance sheet

We note that the solvency index 1 decreased during the crisis, and it was situated at the same level as in 2015. This means that the analyzed banking system has not emerged from the crisis yet. On the other side, solvency 1 was located at over 19% and at the upper limit of 12% for the entire period, an aspect which highlights the good solvency of these banks.

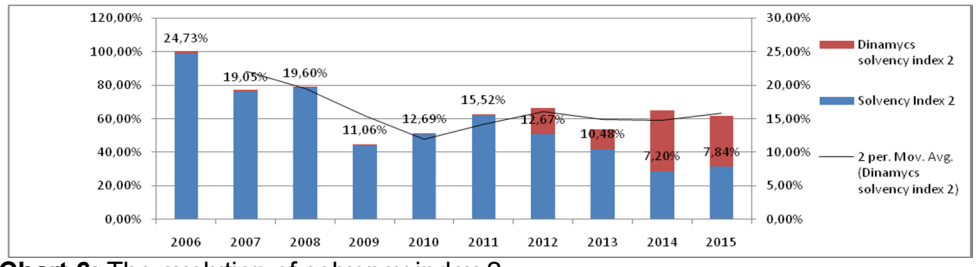
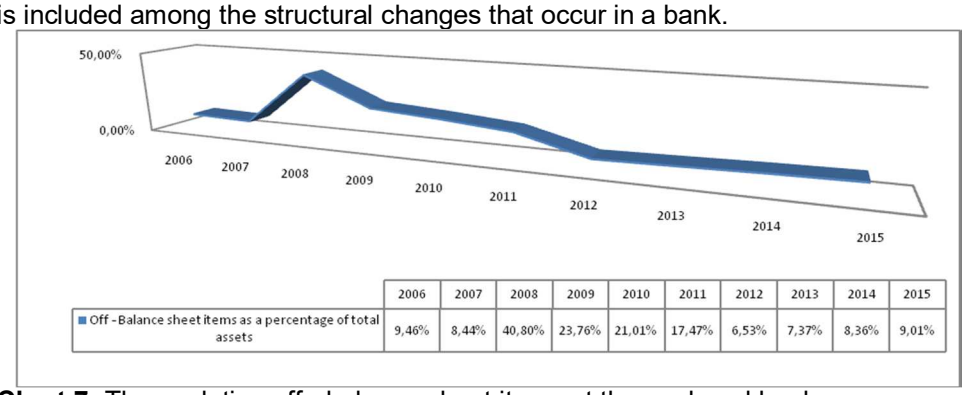


Chart 6: The evolution of solvency index 2
Source: Own calculus based on the balance sheet

Solvency 2 was higher than the minimum of 8% required by Basel II minimum capital requirements compliance. Banks increased the overall growth rates, a growth which is included among the structural changes that occur in a bank.



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Off -Balance sheet items as a percentage of total assets	9,46%	8,44%	40,80%	23,76%	21,01%	17,47%	6,53%	7,37%	8,36%	9,01%

Chart 7: The evolution off - balance sheet items at the analyzed banks
Source: Own calculus

The above data shows a steady increase in the assets and the risk-weighted assets, but also an increase in equity. In addition, the figures underline that the extent of the banks' growth is balanced or that banks were able to maintain the capital requirements in relation with total assets and with risk-weighted asset growth. A graph of this kind can provide a proof of the problems that may arise regarding capital adequacy, which can be generated as a result of rapid expansion. The above data can be used to increase the off-balance and the weighted elements.
In order to identify the causes of banks' solvency, we chose a sample of banks. So we analyzed the model of solvency index 1 and solvency index 2 using RStudio software.

A. The model of IS1
Firstly, we analyzed the relationship between IS1 on the one hand and RGR and IS2 on the other hand. The statistical analysis shows that between the dependent

variable IS1 (solvency index 1) and the independent variables RGR (Overall Risk Ratio) and IS2 (Solvency index 2) there is a strong linear connection as follows.

a) Build the linear model:
First we established the linear model function: lm (formula = IS1 ~ RGR + IS2)

The values of coefficients of the regression equation are presented below.

The independent variables	Estimate	Std.Error	t-value	Pr(>|t|)
Intercept (constant)	34.1568	11.4685	2.978	0.0044 **
RGR	-0.2683	0.1291	-2.079	0.0426 *
IS2	1.2643	0.1556	8.128	8e-11 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 12.47 on 52 degrees of freedom; (11 observations deleted due to missingness) Multiple R-squared: 0.5862, Adjusted R-squared: 0.5703, F-statistic: 36.84 on 2 and 52 DF, p-value: 1.085e-10
The next step is o test the model validity of IS1 using ANOVAs function

b) Testing the IS1 model validity (Analysis of Variance)

The independent variables	Df.	Sum Sq	Mean Sq	F value	Pr(>F)
RGR	1	1184.2	1184.2	7.6146	0.007976 **
IS2	1	10274.1	10274.1	66.0621	7.999e-11 ***

Residuals 52 8087.1 155.5; Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Conclusion: Both linear model „lm" and „ANOVAs" functions show us that the model is significant such as:

IS1 = 34.1568 - 0.2683 RGR+1.2643 IS2

So, we conclude that for a change of 1 unit of RGR, IS1 changes by -0.2683. On the other hand for a change of 1 unit of IS2, IS1 changes by 1.2643. Also for a change of 1 unit of RGR and IS2, IS1 changes by 0,996 (1,2643 – 0,2683) and finally for RGR =0 and IS2 =0 IS1 = 34.1568 (no action from RGR and IS2)

B. The model of IS2
The statistic analysis shows that between the dependent variable IS2 (solvency index 2) and the independent variables ROA (Return on assets), KFP (Long term funds to Long term assets) and IS1 (Solvency index 1) there is a strong linear connection as follows.

a) Build the linear model:

lm (formula = IS2 ~ ROA + KFP + IS1)

The values of coefficients of the regression equation are presented bellow.

The independent variables	Estimate	Std.Error	t-value	Pr(>|t|)
Intercept (constant)	-11.57563	3.91297	-2.958	0.00468 **
ROA	0.66611	0.26848	2.481	0.01644 *
KFP	0.08058	0.02704	2.980	0.00441 **
IS1	0.41386	0.04883	8.476	2.64e-11 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1; Residual standard error: 6.788 on 51 degrees of freedom (11 observations deleted due to missingness); Multiple R-squared: 0.6369, Adjusted R-squared: 0.6156; F-statistic: 29.82 on 3 and 51 DF, p-value: 2.81e-11

b) Testing the IS2 model validity (Analysis of Variance)

The independent variables	Df.	Sum Sq	Mean Sq	F value	Pr(>F)
RGR	1	317.8	317.8	6.8988	0.01136 *
KFP	1	493.7	493.7	10.7166	0.00191 **
IS1	1	3310.1	3310.1	71.8494	2.636e-11 ***

Residuals 51 2349.6 46.1; Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Conclusion: Both „lm" and „ANOVAs" functions show us that the model is significant:
The model of IS2 is:

IS2 = -11,57563 + 0.66611 ROA + 0.08058 KFP + 0.41386 IS1

This means that for a change of 1 unit of ROA, IS2 changes by 0,66611. Also, for a change of 1 unit of KFP, IS2 changes by 0,08058. On the other hand for a change of 1 unit of IS1, IS2 changes by 0,41386 and for a change of 1 unit of ROA, KFP and IS1, IS2 changes by 1,16055. Finally, for ROA =0, KFP = 0 and IS1 =0, IS2 = -11,57563 (no action from ROA, KFP and IS1).

4. Conclusions and limitations

This article presents the results of an investigation in private banks, related relationships, the potential advantages and challenges of introducing asset liability management to this banking industry. Also ALM is perceived to be a source of substantial improvements within the private banking industry. The main advantage of ALM is perceived to be its ability to manage clients' long-term risks.
The results of this article have a number of implications for the private banking industry. First, based on ALM, private banking has a general overhaul of its risk management strategies and concepts. In this sense, we show the importance of Solvency index 1 and Solvency index 2 and their connections with other indicators such as "Overall Risk Ratio", "Return on Assets" and "Long term funds to long term assets".
Second, ALM might offer a solution to structured assets and source of funds. That is why we analyzed the evolution of assets, liabilities and the equity to show if the analyzed banks have enough capacity to use their funds to get profit. Our results

highlight that the management of financial risks for private clients faces some challenges that could be overcome by implementing new risk management devices, such as ALM techniques. The paper recommends among others that the industry, regulators and supervisory agents should institute a good and sound investment policy for effective management of assets and liabilities in the banking industry. We note that a high level of solvency (IS1 and IS2) represents an effective capital adequacy and a competitive position in the market, due to a high capacity for further development of the banking activity.

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PERSPECTIVES IN THE APPLICATION OF THE INTERNATIONALE STANDARDS OF SUPREME AUDIT INTSTITUTIONS

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Abstract: *Administrative and financial activities of the public sector are governed by laws and regulations, so public external audit needs to verify that asset accounting and management are properly conducted in accordance with applicable laws and regulations. The public sector becomes the main beneficiary of the application of standards by the Supreme Audit Institutions. Institutions, through their activities, offer a certainty to the public sector that they carry out their activities in good condition and in an economical and efficient way. At the same time, audit activities also provide taxpayers with the good functioning of the public system, and the latter can provide greater confidence to the whole system. In our paper we have identify, for each EU Member State, the standards applied in the public financial audit system. According to the results, most member states apply the International Standards on Auditing or ISSAI, which underlines the desire for harmonization in the public sector. At the same time, the countries that have recently joined the European Union seem to be more interested in reforming the public sector and moreover, reforms in this sector are finalized more rapidly.*

Keywords: *Supreme Audit Institutions; International Audit Standards; INTOSAI.*

JEL classification: *M42.*

Introduction

It is known that audit, like accounting, is done according to international and national regulations accepted by each country. Entities in a state, irrespective of whether they are part of the private or public sector, essentially observe the same set of regulations, originally issued to the private sector and subsequently used in the public sector. Thus, were issued the International Auditing Standards - IAS for the private sector, developed by the International Federation of Accountants -IFAC and the International Standards of Supreme Audit Institutions -ISSAI, for the public sector, developed by INTOSAI.

International Standards of Supreme Audit Institutions are regulations issued by INTOSAI and aim to provide an updated framework that meets the needs of its members (Ispir, 2008). In general, professional standards and regulations are not exhaustive. They present a general framework of action for auditors, a general way to follow, but cannot predict the particular circumstances, specificities of activities and operations (Popa *et al*, 2012: 14).

Regarding *the need* for these regulations in the field of auditing, Anerud (2006) identified a number of factors that have influenced the development of international audit standards, of which:

- *Financial scandals and the need to restore confidence in the accounting and auditing industry* - over time, a major influence on the development of international auditing standards has been the numerous financial scandals that have existed, which is why the accounting and auditing industry have lost their credibility, and efforts to rebuild trust in these professions are concentrated around the world;
- *Globalization, convergence and the need to harmonize standards* - globalization and international convergence were also factors influencing the development of audit standards. The European Union and the World Bank are seeking a broad use of harmonized and high quality standards. There is, also, a real interest in harmonizing audit standards in the public and private sectors;
- *The link between the public and the private sector* - numerous Supreme Audit Institutions already have well-developed audit standards in the public sector. In countries such as the United States or the UK, if certain public external audit work is outsourced to private contractors, they are then reviewed by the Supreme Audit Institutions. Institutions within these countries have contact with national standardization bodies and are consulted in the process of developing national audit standards.

By analyzing the public sector and retrospectively in history, the factors that have influenced the development of international auditing standards, identified by Anerud (2006) and the development of public sector audit standards can be considered identical. At the same time, alongside these factors, *internal control* and *adequacy* need to be considered.

Strong internal controls can be seen as factors that have influenced the emergence and development of international auditing standards in the public sector, because they have a huge impact on the credibility of a government and the operations it carries out.

They form the international control environment in which governments operate so that standards provide a mechanism by which reasonable assurance can be obtained towards the fact that assets are protected, financial transactions are ethical, and financial reporting is reliable. Taking into account the fact that trust is a gradual concept - ranging from mistrust to absolute trust, it manifests horizontally or vertically, cognitively or emotionally, and ultimately leads to a built-in trust in favour of an ex-ante type (Feleagă *et al*, 2013: 12) - strong internal control provides insurance and trust for international companies and organizations with which a country enters into relationships, regardless of the field, and the use of common guidelines allows a unified understanding and efficient communication to obtain both insurance and trust.

Using a common framework or language in the public sector of audit standards and guidelines, it will be obtained an audit approach that will allow auditors to share experiences, reference points and a performance measurement framework through cross-border cooperation.

Adequacy, as a factor influencing public sector audit standards, should be taken into account because adequate standards must be followed to ensure a high-quality audit work. In this case, the adequacy is given by the objectives pursued by the audit. Each Supreme Audit Institution is required to establish a policy by which INTOSAI standards or other specific standards are followed in performing the various types of

work the organization carries out to ensure that its activity and results are of high quality (ISSAI 100, 2001).
The need for ISSAI must also be seen from the perspective of the benefits that may occur. In this context, INTOSAI in the work" *Implementing the International Standards for Supreme Audit Institutions"* (2012) identifies three major benefits, presented in Table 1, for which the Supreme Audit Institutions should adopt and implement ISSAI.

Table 1: Benefits of implementing ISSAI

Criteria	Description of Benefits
Quality	Supreme Audit Institutions need to gain the trust of citizens and stakeholders in the work done, and the application of internationally recognized standards will ensure a certain high level of quality and consistency in audits as credibility builds on the quality offered and represents an important step towards gaining confidence. A high quality standard will reduce auditing risk, will simplify comparative analysis and may help in sharing experiences or continually improving.
Credibility	The use of globally accepted standards leads to increased credibility and increased confidence in the Supreme Audit Institutions, external public auditors, audit results, and auditors' entire work.
Professionalism	Standards provide the foundation for the professionalism of auditors and of the Supreme Audit Institutions by providing a structured process for audit work through opportunities for improvement, exchange of views and professional experiences across national and sectorial boundaries. Standards also provide a common language for public and private sector auditors in similarly responsible areas, strengthening the audit profession.

Source: author's projection after INTOSAI (2012)

The Perspective of the Supreme Audit Institutions
Although the ideal approach would be to apply a uniform using of audit standards, using that would bring a number of benefits, the Supreme Audit Institutions should consider the compliance of its activities with the INTOSAI Auditing Standards. Certain standards may not apply to part of the activities carried out, either due to the structure or organization of the institution or to the non-audit activities performed. A good example is the financial and performance audit that is different as a way of exercising for institutions like the Court of Auditors or those organized within a hierarchical system headed by a General Auditor.
Also, often the Supreme Audit Institutions carry out activities that, by definition, do not qualify as audit activities, but contribute to better governance. As a result, Supreme Audit Institutions are required to set the standards applicable to such works to ensure that they are consistently of high quality (ISSAI 100, 2013).
Surely, in order to ensure high-quality work, it is necessary for the Supreme Audit Institutions to adopt and follow appropriate standards. But to what extent do they apply these standards and how useful do they consider? A question to which the

Professional Standards Committee - the PSC sought a response in 2007 based on a study.
The PSC of INTOSAI conducted the study from November 2006 to February 2007 on the needs and priorities of the Supreme Audit Institutions in the development of professional standards. The purpose of the study was to provide guidance to the Committee on how ISSAI and INTOSAI GOV can be best developed in the coming years. The response rate was 54%, that is, a total of 100 Supreme Audit Institutions, of which 56 are organized in the form of the Auditor General, 20 as Audit Courts or Courts of Auditors, 9 are part of the College model and 15 are parts of other forms of organization.
According to the study, three main questions were followed, with the following results:

1. What standards and guidelines are used by the Supreme Audit Institutions?
The aim was to know the types of standards most commonly used by the Supreme Audit Institutions. A response was received from 76 institutions (out of a total of 100 respondents) using the INTOSAI Auditing Standards for Financial Audit, Compliance Audit, or Performance Audit. Most of them use the standards for all three branches of external public audit (70 - financial audit, 67 - compliance audit, 64 - performance audit) and one uses standards in relation to other tasks (43 by ISA), such as program ratings. The responses reflect that many Supreme Audit Institutions combine guidance materials from multiple sources to perform different tasks. In addition to the INTOSAI standards, the most widely used are the International Auditing Standards issued by IFAC. Practically, 55 institutions use these standards in the field of financial audit, but there are uses for compliance and performance audits.

2. What are the needs for guidance in public sector audit work?
In a declarative way, the questionnaire pointed out that the PSC, through the "double approach", is based on the development of INTOSAI standards and guidelines and on other standards of various widely recognized bodies of the Supreme Audit Institutions. As a result, the PSC will work to harmonize public sector auditing worldwide, INTOSAI will develop complementary guidance if there is a special need and will attempt to influence international standards so that they will address issues of particular interest to external public audit. With regard to this support, 81 Supreme Audit Institutions have stated that the approach is appropriate and 2 have expressed their disagreement. At the same time, the importance of focusing on improving guidance on audit work and the importance of harmonizing public sector and private sector standards have been emphasized. Another consensus was that there are some differences between public and private sector auditing, and therefore special guidance is needed for public sector audit (81 institutions state that the overall purpose of public sector audit is to a certain extent different from private sector auditing).

3*. How can INTOSAI standards and guidelines be improved in the coming years?*
The questionnaire refers to the existing and planned INTOSAI standards and guidelines and contains a number of questions on the need for improvement. According to the replies, 53 Supreme Audit Institutions consider that there are no problems, while 41 suggest a number of problems that could be the objective of new standards. With regard to the orientation guides, the vast majority of the Supreme

Audit Institutions indicate a number or area where a series of guidelines should be developed in the coming years. However, the answers do not show a strong indication on a particular area (INTOSAI / PSC, 2007c: 3-4).

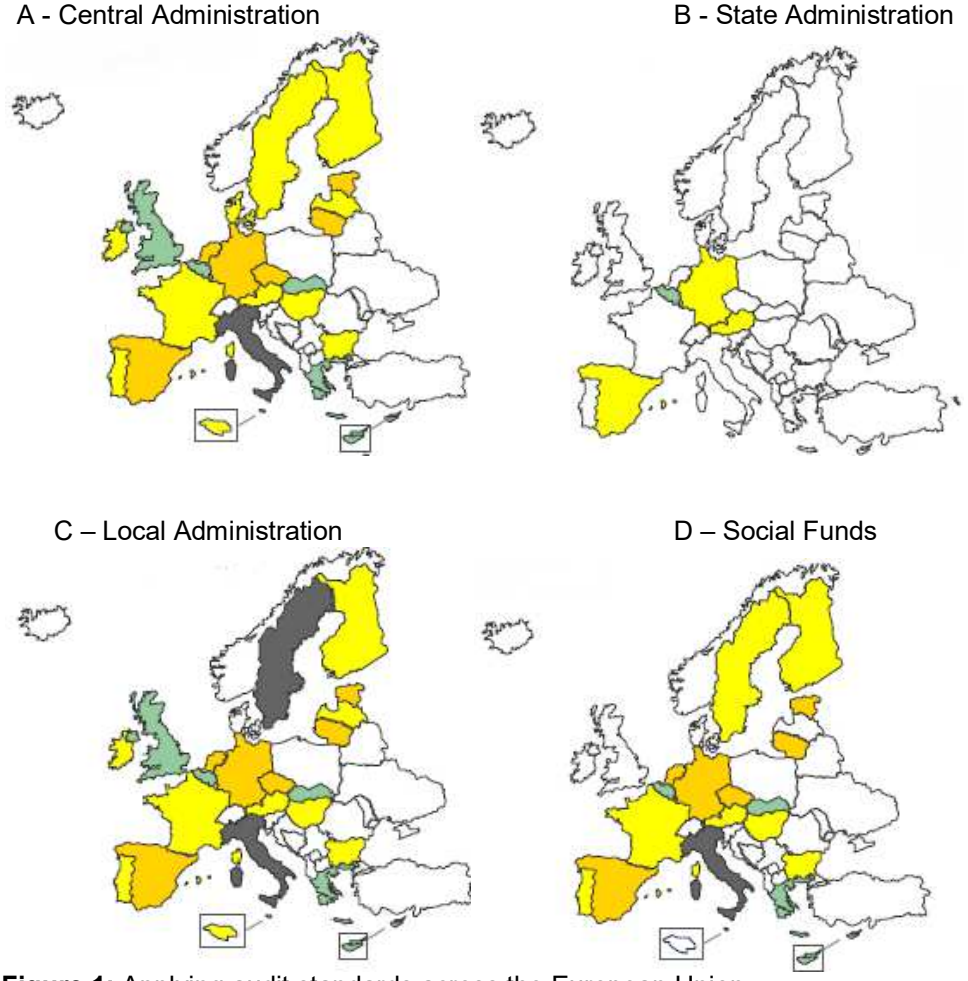

Figure 1: Applying audit standards across the European Union
Source: Ernst & Young 2012:44
Legend:
Different from International Auditing Standards / ISSAI
Closed to the International Auditing Standards / ISSAI
International Standards of Auditing or ISSAI
There is no information

In December 2012, Ernst & Young presented in the report *Overview and comparison of public accounting and auditing practices in the 27 EU Member States* the level of application of the International Auditing Standards and respectively, ISAI's in the financial sector audit to the public sector. Figure 3 reflects the response of the financial auditors of each Member State regarding the application of audit standards,

either identical to or close to the International Auditing Standards and ISSAI, or different.
Only the application of standards by the Supreme Audit Institutions has been considered in the report, even if it is known that in some EU countries the local government is the subject of a financial audit by private firms (e.g. Sweden). The majority of respondents believe that the audit standards applied by the Court of Auditors at the European level are close to or identical to the International Standards on Auditing and ISSAI. According to the results, this situation seems to apply to all governance sub-sectors.
Given the interest in external public audit exercised by the EU's Supreme Audit Institutions, it is relevant to identify, based on the Ernst & Young Report (2012), for each EU Member State, the standards applied in the public financial audit system. So, to determine this, the country reports found in the study were analyzed, and Table 2 compares the results obtained as follows:

Table 2: Synthesis of the results of the standards applied at EU level

Country	Audit standards applied
Austria	International Standards on Auditing and**ISSAI**
Belgium	No information
Bulgaria	**ISSAI**
Cyprus	No information
Denmark	Audit guides that follow the standards of **ISSAI**
Estonia	**ISSAI** and International Standards on Auditing
Finland	Audit guides that follow standards of**ISSAI**
France	International Standards on Auditing
Germany	National regulations. **ISSAI** are accepted as ”Good practice”
Greece	No information
Ireland	International Standards on Auditing
Italy	**ISSAI**
Latvia	National regulations
Lithuania	International Standards on Auditing and**ISSAI**
Luxembourg	Do not apply
Malta	International Standards on Auditing and **ISSAI**
Great Britain	National regulations that follow the standards of the Supreme Audit Institutions
Holland	International Standards on Auditing
Poland	National audit standards
Portugal	International Standards on Auditing (**ISSAI**on a voluntary basis)
Czech Republic	Close to the International Standards on Auditing
Romania	National regulations that follow the International Standards on Auditing and **ISSAI**
Slovakia	No information
Slovenia	National regulations (**ISSAI** on a voluntary basis)
Spain	**ISSAI**
Sweden	International Standards on Auditing
Hungary	International Standards on Auditing and **ISSAI**

Source: Author's projection after Ernst & Young (2012)

According to the results, most member states apply the International Standards on Auditing or ISSAI, which underlines the desire for harmonization in the public sector. At the same time, the countries that have recently joined the European Union seem

to be more interested in reforming the public sector and moreover, reforms in this sector are finalized more rapidly.

Conclusions

Administrative and financial activities of the public sector are governed by laws and regulations, so public external audit needs to verify that asset accounting and management are properly conducted in accordance with applicable laws and regulations.

The public sector becomes the main beneficiary of the application of standards by the Supreme Audit Institutions. Institutions, through their activities, offer a certainty to the public sector that they carry out their activities in good condition and in an economical and efficient way. At the same time, audit activities also provide taxpayers with the good functioning of the public system, and the latter can provide greater confidence to the whole system.

As a result, the use of best practices and a regulatory framework agreed by the Supreme Audit Institutions is becoming a topic of great interest to both the institutions themselves and the public sector as a whole.

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STUDY REGARDING THE IMPACT OF THE FISCAL FACTOR ON THE PROFESSIONAL ACCOUNTANT BEHAVIOURAL MUTATIONS

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Abstract: *The study establishes as objective the identification and analysis of tax changes which occurred in the beginning of 2017, commented particularly in connection with the most significant impact within the mass of accounting professionals. For achieving this objective, a research methodology was used, which was based on inventory of tax related legal norms and of reactions of those affected by legislative amendments. The study subjects were selected, observed, challenged and analyzed by means of groups established based on financial accounting domain within the framework of the most used social network in our country. Even though it was obvious that the policy changes shall automatically generate fiscal changes as well, the accounting professional accuses the speed and lack of consistency of these changes. The essential contributions of the study concern the identification of certain elements according to which, the role and purpose of the professional accountant suffer major changes, mutations which have already been occurring for a long time and merely strengthen the negative trend. The national tax system is further placed, from different points of view, in an extremely volatile area, and it distances itself progressively from the principles which should govern it. Confusions and mixture of accounting and tax rules lead to interpretations and decisions which sometimes severally affect the purpose of financial statements. The taxation trap is felt in all environments of training and development of the professional accountant, and the accounting rule solely becomes subordinated to fiscal exigencies. Professional accountants become so infected with the fiscal aspects that no accounting regulation consideration or professional reasoning can be considered a remedy. Moreover, academia is also affected by the all the more frequent occurrences of the unconditional reflexes of the new principle: the prevalence of the tax system against the accounting rules. Reflections of the study should represent a starting point in identifying, analyzing and reconciling all the factors that erode the economic environment, the role and behaviour of the professional accountant.*

Keywords: *professional accountant; microenterprise; dividend income; social contributions; VAT.*

JEL classification: *M41.*

1. Introduction

The Romanian tax system continues to promote the unpredictability regarding establishment of taxes, dues and mandatory contributions. How many of the accounting professionals anticipated in December 2016 the tax changes that would occur? The answer is obvious. But how many accounting professionals predicted what kind of tax changes would come into force? Currently, the next question could

be added as well: starting which date these anticipated amendments are to be implemented solely as a principle, not as a structure?
We can't help but wonder about the level of observance regarding taxation principles set out in art. 3 of Law no. 227/2015 regarding the Fiscal Code: neutrality of fiscal measures, certainty of taxation, tax equity, taxation efficiency, taxation predictability. Fortunately, the professional accountant is far from naive, but unfortunately this does not seem to help. A law that violates its own principles should be declared unconstitutional from the beginning.
In default mode, any accounting professional with sufficient experience was aware that it shall bear the costs of the political factor in beginning of the financial year. Initially, this cost was metamorphosed into an element which stimulated the economic environment, reactions recorded were extremely positive. Subsequently, awakening was ensured through a series of acts and normative projects, of which the most reactive document is the Emergency Ordinance no. 3 of 6th of January 2017, amending and supplementing Law no. No 227/2015 on the Fiscal Code. Certain changes took immediate effect, others starting 1st of February 2017. This term successfully and from the beginning ensured the general confusion foreseen probably in a (tax) conspiracy theory.
The importance of the study aims at professional accountants, particularly in terms of understanding the motivations and behaviours underlying financial accounting systems' functionality. The main conclusion concerns the idea that inconsistency of the tax system does nothing but alienate the professional accountant from its true purpose, from the accounting rule, from the economic reality of transactions and excessive focus on fiscal rule.

2. Research methodology

Within the meaning of presentation and analysis of the impact of main tax changes, a qualitative research methodology was mainly used. In this sense, desk research, analytical research, opinion and comparative analysis were used as research strategies. Documentation was carried out based on existing regulations in this field today. Furthermore, the behavioural impact was analyzed through some of the many groups set up on the social network Facebook: Accounting all the time (14.128 members), Accountants on Facebook (10.042 members), Financial benefit-tax and accounting debates (6.833 members), Accounting (8.574 members) Tax Advisors Group (7.533 members). Analysis of these groups was achieved by 10th of April 2017. Interviews by means of questionnaires was avoided, considering that the opinions, experiences, solutions, interpretations presented in these groups provide much more relevant information than the answers to a predetermined set of questions related to a questionnaire.
One of the objectives of the study was to demonstrate the serious distortion of the accounting profession. Even the establishment of the aforementioned groups indicates a reaction and an attempt of the professional accountant to adapt to a hostile activity performance environment. The nature of the issues exposed on these groups reveals an excessive focus on fiscal incidence. The number of members, number of posts record explosive increase exactly during the implementation of new tax changes. Accounting regulation amendments have an almost insignificant impact compared to the fiscal ones.

3. Income tax versus microenterprise revenue tax

Changing the threshold from which an entity falls within the category of microenterprises shall lead to an overwhelming exodus of income tax payers to microenterprise income tax payers. The ceiling is increased from EUR 100.000 to the equivalent of EUR 500.000, set at the valid exchange rate at the end of the financial year. In consequence, the ceiling applicable for 2017 is 2.270.550 lei. The rest of the terms defining microenterprises remained valid.

According to Governmental Emergency Ordinance no. 3/2017 for 2017, Romanian legal persons paying income tax and which on December 31st, 2016 meet the conditions set forth for microenterprises, are required to pay microenterprise income tax starting February 1st, 2017, following to inform the territorial fiscal bodies of the tax system change until February 25th, 2017 inclusive. By this term, the income tax statement due for the taxable revenue obtained between 1st and 31st of January 2017 shall be submitted as well. The tax result is adjusted according to this tax period. The following inconvenience is outlined: the 101 annual income tax statement due for the taxable revenue obtained in 2016 has a deadline for submission on March 25th, 2017 (with afferent exceptions under art. 41 and 42 of the Fiscal Code). Hence, the incumbency of forced submission by February 25th, 2016 of the annual statement is outlined. This aspect will have adverse consequences on the time needed to duly complete procedures of annual inventory and shall subsequently translate into a large number of corrective statements.

Another aspect to be noted and stipulated by art. 48 (5^2) of the Fiscal Code related to decreasing the ceiling of registered capital over which an entity may elect the payment of income tax instead of microenterprise income tax: existing microenterprises which registered a share capital of at least 45.000 lei can choose to apply the income tax effective on 1st of January 2017 or the quarter in which this condition is met. The option is final, provided that the share capital value is maintained for the entire period of existence of the respective legal entity. If this condition is not observed, the legal person applies the microenterprises income tax starting with the fiscal year following the one in which the share capital is reduced below 45.000 lei, if the conditions for microenterprises are met. Leaving the taxation system for microenterprises as a result of the option shall be communicated to the competent tax authorities. Calculation and payment of income tax by microenterprises that choose to apply income tax shall be made taking into account revenues and expenditures made in that quarter.

Tax rates for microenterprises have been encouragingly modified: 1% for microenterprises with one or more employees; 3% for microenterprises without employees.

Law no. 170/2016 on specific activities tax (hotels, bars, restaurants etc.) comes into play as well as a maximum culmination of these changes. It is solely applicable to income tax payers. Although the law is clear in this regard, confusions still exist regarding the application of this tax for micro-enterprises as well, confusions maintained also by some communications of National Agency of Fiscal Administration, in response to taxpayers' requests for clarification.

Mixture of conditions defining a microenterprise, altering the ceiling for income, altering the ceiling of registered capital, enforcement of specific tax, lack of methodological norms, different deadlines for submission, different statements generated a true interpretative and declarative chaos in the financial and accounting

environment. This is evidenced by the endless posts on the same subject within professional groups. Situations in which one entity can find itself on 31.12.2016, as well as the manner of transition according to new regulations, are multiple, are not clearly specified and therefore, must be deduced with great consideration. Solely after the expiry of all declarative terms, a plan for classification and implementation of tax systems was posted on the website of the Ministry of Finances not sooner than 27.03.2017, plan which is categorized successfully as a true programming algorithm.

Same as the practical opinions regarding these changes, numerous tendencies for artificially influencing the microenterprises defining conditions are recorded. The occurrence of minimum wage employment contracts shall continue and increase in order to be eligible for the minimum rate of 1%. Influencing income ceiling occurs both ways, either by cancellation of invoices or by issuing additional invoices on behalf of the financial year 2016. Accordingly, efforts will be made for patching up artificial transactions and the breach of the matching principle. More and more applications for change of registered capital and activity codes are recorded by the Trade Register. All these elements are related to forecasting profitability analysis carried out by economic entities. These are entities with high expense structures, complex investment structures, for which a transfer to microenterprises income tax is not profitable. These entities will endeavour to remain in the area of income tax. Other entities will estimate that it is more profitable to become microenterprise income taxpayers. Perhaps many Self Employed Persons shall change their form of activity performance, turning into microenterprises. Pure accounting aspects will be heavily compromised by these manoeuvres occurred in response to tax law.

4. Social contributions or fiscal outlawry

Significant change concerning the social security contribution appears in the wages and assimilated income statement, being represented by the February 1st, 2017 by removing the ceiling of 5 gross average salaries for individual contribution, respectively removing the ceiling of 5 gross average salaries x number of employees for the employer's contribution. High-wage employees will be directly affected and entities' wage costs will increase accordingly, with no direct benefit to those who will pay the increased contribution. In practice, it was demonstrated that the need for social security services is much stronger for those with low income. We shall witness a redistribution of wages, salary changes, other classifications in employment contracts and encouragement for growth of undeclared wages. When the sole purpose is to attract budget financing sources to cover “tax promotions” related to other budget chapters, the consequence is a boomerang effect. This measure shall be penalized in turn by the economic environment, by officially lowering the tax base and by finding alternative and unofficial solutions to avoid the effects of eliminating the Health Insurance Fund ceilings.

Unfortunately for the tax system, eliminating the Health Insurance Fund ceilings will lead to an automatic reduction of the other contributions for wages. Financial statements of entities will continue to erode by presenting undervalued labour costs and by the occurrence of compensatory fictional elements.

An interesting fact is that the fiscal body itself is technically outdated by the existence/inexistence of the Health Insurance Fund and National Insurance Fund ceilings within the same financial year. Who risked preparing the 112 statement for

January in the beginning of February, was greatly surprised by the dreaded occurrence of statement validation errors. Somebody forgot that for the month of January 2017, the ceilings are still in force.

5. Contribution to health insurance fund and the dilemma of exemption/non-exemption of dividend income

A first amendment aiming health insurance contributions is to remove the upper limit of 5 average gross salaries for which the individual contribution was calculated. This measure comes into force on 1st of February 2017. Accordingly, for January 2017 the individual contribution is calculated according to this ceiling. Removal of the ceiling for this contribution as well shall only emphasize the same as for the national social insurance contributions. Regarding health contribution, business environment reactions are even more obvious. Given that it is known that high wage earners rarely resort to public health system, this additional tax shall have an adverse effect. This category of persons always accused inequity of this contribution, since they do not wish to benefit of this health insurance system. Removal of the ceiling will increase this fiscal frustration and the reply: "Why pay for health if I do not want to benefit" is already pervasive. Other categories of persons will not feel the benefits of this measure, especially since there is a growing and overall sliding trend from the public to the private health system. In the end, we all become ill and whether we benefit of the public or private health system services or not, the real costs (including unofficial ones) significantly exceed the individual contribution.

Until December 31st, 2016 investment income as income from dividends obtained by natural entities were subject to social health insurance contributions unless compensated by income of the type stipulated in the Fiscal Code art. 155 (1a-1d, 1g, 1i-1l), except for income from intellectual property rights. In December 2016 it was known that, for income obtained as of January 1st, 2017, monthly calculation basis cannot be higher than 5 times the average gross salary in force in the year for which the contribution is being established (irrespective if the beneficiary obtains other income). No one anticipated what was going to happen starting February 1st, 2017.

If by December 31, 2016 the former fiscal rule generated as reaction the increase of minimum wage employment contacts, starting January 1st, 2017 this strategy seemed antagonized by the new fiscal rule. The business environment was not far behind, strong tendencies to avoid taxing dividends by this contribution were recorded, especially for entities with significant retained earnings. Unfortunately, it was very much overlooked, that the maximum ceiling was entering into force as a compensation of the fact that the dividends were to be taxed by the health insurance contribution, irrespective if the beneficiary obtained other income. Reactions resulted in Decisions of the General Meetings of Associates regarding massive allocations of dividends from retained earnings recorded by 31st of December 2015. These dividends were to be paid subsequently, after January 1st, 2017, according to the needs of associates or shareholders and the available funds of the entities. The manoeuvre is completely inconvenient given that these allocations represent more than significant amounts and seems more appropriate for entities with reduced retained earnings.

Interesting consequences arose for entities which had contracted substantial financing sources with commercial banks. One of the common terms of credit

agreements aims at restricting dividend allocation as well as the prior agreement of the bank regarding this allocation. In this context, commercial banks are buried in risk analysis in order to approve such allocations. The main reason for opposition raised by the banking system is related to entity divestment and impairment of cash flow forecast. All banking system suggested informally the solution of “money return” by conclusion of financing contracts between owners and the company, which represented a genuine banking blackmail.

Other issues frequently lost from sight are related to Company Law and invariably to the Fiscal Code. According to art. 67 (2) of the Company Law no. 31/1990, dividends are paid within the period prescribed by the general meeting of shareholders or, where applicable, as established by special laws, but not later than 6 months from the date of approval of annual financial statements for the concluded financial year. Otherwise, subsequent to this period, the company shall owe penalty interest calculated in accordance with art. 3 of Government Ordinance no. 13/2011 on the legal remunerative interest and penalty interest for financial liabilities, as well as for regulating certain banking financial fiscal measures, approved by Law no. 43/2012, provided that a higher interest was not established according to the memorandum or by means of the decision of the general meeting of shareholders which approved the financial statement afferent to the concluded financial year. It is very difficult to establish a term for owners which have as sole source of income such dividends, and the maximum period of 6 months is insufficient. As for the penalty interest, in most cases, it is out of the question. Furthermore, according to Order of the Public Finances Ministry no. 1802/2014 for approval of accounting regulations on the annual individual and consolidated financial statements, point 310 (4), under accrual accounting, the entities must reflect all income and expenditure in the accounting books, respectively claims and liabilities ensuing as a result of certain legal or contractual provisions. Paragraph 6 inserted by Order no. 166/2017 from 31.01.2017 requires that late penalties and interest, as well as other liabilities of a similar nature, be acknowledged either in the profit and loss account, or in the retained earnings, depending on the period to which they refer and in compliance with accounting regulations.

Funding entities by means of own associates or shareholders, discreetly imposed by commercial banks, carry significant incidents on a fiscal scale, especially since experience demonstrates the preparation of these contracts without interest. Court cases published by National Agency for Fiscal Administration assert that granting interest-free loans cannot be qualified as an onerous judicial document. The consequences affect all owners in terms of interest expenses, limited deductibility and finally, earnings and dividends.

After the implementation of these strategies, the surprise appears: starting February 1st, 2017 health insurance contributions are no longer due if the beneficiary obtains other income (clearly stipulated in the Fiscal Code), yet the maximum ceiling of 5 gross average salaries is repealed. If the monthly calculation basis is below the value of the minimum gross basic salary per country, the health insurance contribution is no longer due. For income whose monthly basis calculation is greater than or equal to the value of the minimum gross basic salary per country, then the contribution payable monthly is calculated on this basis of calculation (if the beneficiary does not obtain other types of income referred to in art. 155 (1a-1d, 1g, 1i-1l). This change cancelled previous efforts of businesses. Fortunately,

Government Emergency Ordinance no. 3/2017 emerged on time to “reverse” the actions already undertaken, where it was possible.
Political unrest at the end of 2016 also generated tax consequences. The simplest solution would have been to wait until the latest January 25th, 2017, the deadline for submission and payment of tax on dividends allocated and paid by 31st of December 2016. Government Emergency Ordinance no. 3/2017 occurred on January 6th, 2017, and many of the changes provided in this order were already circulating in the government program and in the media. This option would have been more difficult to implement if one of the actors were the commercial bank, which usually requires extremely long time periods to complete risk assessments.

6. Depressive VAT and the ghost of VAT registration conditioning

Reducing VAT rate from 20% to 19% early this year still raises many difficulties in practice among professional accountants, even if history repeats itself. The same issues existed in early 2016 as well. Perpetuation of these problems suggests that major deficiencies of perception and understanding the concept and logic of value added taxation, still exist. The business environment accuses ambiguity of fiscal regulations, lack of comprehensibility of the text in many cases, the absence of guidelines and required clarifications. In the context of redundancy of this change, it would have been expected that the number of posts on occupational groups be much lower, the reality demonstrating exactly the opposite.
The basic principles are set out in art. 291 and art. 282 Fiscal Code. Art. 282 stipulates that the tax exigibility occurs on the date when the chargeable event takes place. By exception, the chargeability of the tax occurs on the date of invoice issuance, before the date on which the chargeable event occurs, as well as on the date on which the advance is collected, for advance payments made before the date when the chargeable event takes place. According to art. 291 (4), the applicable rate is the one in force when the chargeable event occurs, except as provided in art. 282 (2), for which the rate in force when the tax becomes chargeable, shall apply. Paragraph (5) stipulates that, for transactions subject to VAT system upon collection, the applicable rate is that in force when the chargeable event occurs, unless an invoice is issued or an advance is collected before the delivery/provision date, for which the rate in force on the date the invoice was issued or the date on which the advance was collected, is applied. According to paragraph (6) in case of a rate change, adjusting shall be used to apply the rate in force on the date of delivery of goods or provision of services for cases referred to in art. 282 (2), as well as in the case under paragraph (5). Methodological rules for the implementation of Law no. 227/2015 provide in section 39 a set of appropriate examples and which refer to actual situations where these provisions must apply.
One of the top traumas of professional accountants was the procedure for VAT registration by means of the famous form 088 on affidavit to assess the intention and ability to carry out economic activities involving VAT related operations. From the series “fiscal good deeds” Order no. 210 / 2017 was approved, on amending the Order of the President of the National Agency for Fiscal Administration no. 3.698/2015 approving the forms for taxpayers fiscal registration and the types of tax liabilities representing the fiscal vector and for repealing the Order of the president of the National Agency for Fiscal Administration no. 3.841/2015 approving the model and content of form (088) Affidavit for assessing the intention and ability

to carry out economic activities involving VAT related operations. From the series "fiscal wonders are elusory", the Order no. 605/2017 is approved on 1st of February 2017, laying down the criteria for conditioning the registration for VAT purposes, for approval of the Procedure for VAT registration according to art. 316 (12e) of Law no. 227/2015 regarding the Fiscal Code of taxable persons, companies with place of business in Romania, established under the Companies Act no. 31/1990, subject to registration with the Trade Register and for the approval of the Procedure for cancellation ex officio, of the VAT registration according to art. 316 (11h) of the Law no. 227/2015 regarding the Fiscal Code of taxable persons, companies with place of business in Romania, established under the Companies Act no. 31/1990, subject to registration with the trade registry that do not justify the intent and ability to carry out economic activities involving VAT related operations. Even going through the denomination of these orders requires intellectual effort.

The so long promised support for the business environment and elimination of the so accused lack of decisional transparency, were resolved by "slaying" the former order. A message of the Service for Communication, Public Relations and Mass-Media of fiscal administration was "injected" as emergency Xanax by means of which are assured that the fiscal administration relies on the principle of good faith when reviewing requests for VAT registration. The issue is that this principle is not yet fiscally regulated. A very interesting statement is stipulated in Order no. 605/2017, according to which, as a result of the evaluation, taxable persons are classified into three risk groups: high, medium and low. In other words, the business sector again shall have the fiscal benefit of the doubt. Moreover, the fiscal administration states that the actual procedure of cancelling VAT registration is performed following a face to face conversation with the taxable person identified with tax risk. These persons are invited to the fiscal administration office to assess the intention and ability to perform economic activities. Before deciding to reject the application for VAT registration or cancellation thereof, the tax authority provides the analyzed taxable person with the opportunity to express their views on the decision to be adopted, under the Code of Fiscal Procedure. As expected, there is a maximum reluctance of the business environment related to the consoling nature of these messages.

7. Conclusions

The aspects referred to herein are just some of the tax changes that have entered or will enter into force this year. Using the inherent subjectivity dosage, some of those issues generating the most virulent reactions among professional accountants and in the business environment, were selected. Adverse and obvious consequences are generated by behavioural changes of the actors on the accounting stage. The true purpose of the professional accountant is virtually infested by the induced fiscal "mutations". The biggest concern limits itself to the statements to be submitted, successful validation thereof structure-wise, eluding certain tax rules. The professional accountant is turned into a slave of the fiscal and political system.

An extremely serious matter is ascertained by analyzing the mass of posts on accounting "social groups". Accounting regulations passed in a marginal plane, suffering a genuine exile. Everything is buried in a fiscal issue infecting exponentially. Professional behaviour is forced to adapt to an extremely hostile

environment. We are forced to return to the land of accounting rules solely in the context of financial statement audit. Financial audit missions manage to bring the professional accountant where it belongs, decontaminating it of fiscal pollution for a certain period of time and reminding it what is its true purpose: to ensure that the financial statements present a fair view, in all material respects, of the financial standing, financial performance and cash flows, in accordance with applicable accounting regulations and accounting policies described in the notes to the financial statements.

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ROLE OF TAXES AND CONTRIBUTIONS IN THE FUND OF THE HUNGARIAN HEALTHCARE SYSTEM

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Abstract: *The essential function of the taxation is to create the revenue required for financing of the social common consumption so, inter alia, it plays role in the sustainability of the healthcare system. Nowadays, sustainability of financing of the health systems is one of the most challenges for each country. At present, the organization and financing of the health care are a matter of national competence in the EU member states; the fund raising assets include the taxes, contributions and the direct payments of beneficiaries. In our article, we will take into account the tax and contribution rules and trends thereof established in the last decade, examining what effects they had on the fund raising structure of the healthcare system. Data in the essay originates from the database, almanacs and reports of OEP and the World Health Organisation (hereinafter WHO) as well as from the budget legislation. Examining the changes in the revenue structure of Health Insurance Fund during in the last two decades, a significant realignment of resources can be observed: the rate of employers' contributions has decreased and the rate of individual contributions has tripled, so it becomes clear that the system is social security system only namely and partially; it is financed by the taxes too, paid by everyone. Based on the revenue structure of the Health Insurance Fund of 2016, it can be seen that contribution revenues and contributions are 60.38%, while budget contributions are 20,3% of the total revenue. The amount and rate of social contribution tax was paid to the Health Insurance Fund increased to 20.50% in 2017. In 2012 accident tax, public health product tax and the health contribution of tobacco industry businesses were introduced, the aggregate amount of these taxes was 2.9% of the total revenue. We have found out that the necessity of a reform in the fund raising is a real problem for the Hungarian healthcare system of nowadays which may be a tool for creating the sustainability.*

Keywords: *tax; contributions; healthcare system; Health Insurance Fund; revenue structure; social contribution tax.*

JEL classification: *M48.*

1. Introduction

1.1 Characterization of the tax system of Hungary

Tax system is the ensemble of taxes and institutions operated in a given period; its each element has been established in such periods which are historically different. Tax is to be paid to the public powers and it is a statutory payment obligation and contribution to the public expenditures for which the taxable entity does not receive remuneration. Only the State and the local governments are entitled to taxation in

Hungary. On behalf of the State and local governments, the tax authorities exercise the rights related to taxation. The essential function of the taxation is to ensure revenues required for financing of the social common consumption so, inter alia, for the sustenance of the healthcare system. Contributions are payments to the insurer by the insurant or for the account of the insurant, in order to obtain the security of identified services (healthcare package) (Herczeg, 2015).
Extent of the tax burden varies according to the public expenditure. If a country has higher budgetary expense then more revenue will be required that can be funded, inter alia, by increasing the tax burden.
The Hungarian income tax rates are differing, on several important points, from the extents considered as internationally general. Weight of direct taxes (including especially PIT, its tax rate is 15%) is far beyond the European average and the weight of indirect taxes (especially VAT, its tax rate is 27%) are far exceeding the EU average as well as the rate of social security contributions is also high. At the same time, it cannot be ignored that the international comparison is the most uncertain just in case of the social security contributions: in addition to the differences in incomings, the content of each type of contributions and the relating services are strongly different by country. In 2017, the extent of social contribution tax paid by the employer was decreased from the previous 27% to 22% but the extent of vocational training levy remained 1.5%. Extent of the pension insurance contribution to be paid by the employer is 10%, the healthcare contribution is 7% and the labour market contribution is 1.5%. Monthly amount of the healthcare contribution was HUF 7 050 in 2016 and is HUF 7 110 in 2017.
Structural specificities of the Hungarian tax system include the high rate and relative predominance of the so-called indirect taxes on consumption to GDP ratio as well as the fact that the so-called tax wedge is over-sized despite the relatively smaller role of the direct taxes and, furthermore, the fact that the share of taxes on revenue from capital in the tax revenue is low. These specificities are partly resulting from the objective conditions of the domestic economy, due to their unfavourable effects on the competitiveness and these are undoubtedly problematic from the perspective of justice. Contribution of the social groups with the highest income to the burden sharing is far from the proportional.

Table 1: The most significant tax revenues of Hungary, relative to GDP

GDP: 33 999 012 (m) HUF	**Income of Central Budget (2015)**	**Rate corporate to GDP**	
		2014	**2015**
Personal Income Tax	1 639 700 (m) HUF	5,30%	4,82%
Corporate Income Tax	341 400 (m) HUF	1,30%	1,04%
Value added Tax	3 220 385 (m) HUF	10,10%	9,47%
Összesen:	**5 201 485 (m) HUF**	**16,70%**	**15,29%**
Tax burden in rate of GDP		38,90%	37,90%
The rate of the three biggest taxes compared to the rate of GDP		**43%**	**47%**

Source: own calculation from the data of Central Statistics Office

Tax burden of EU-28 to GDP ratio is 39-40% which is almost equal to the present burden of our country. Based on statistical data, it can be stated that the measures of tax centralization of countries within the Community are very extreme but the

measures of differences can be considered as minimal if those countries are observed which acceded during the same period.

1.2 Financing approach of the healthcare system

Theoretical background of the health financing system is built on the assumptions of two basic models. Bismarck's health insurance, which is based on compulsory participation, was firstly established in Germany in 1883. Its aim was to stabilize the situation of social groups being volatile due to the risk of disease in the healthcare system mainly built on contributions; a significant proportion of the population is insured in this kind of system. (Ragány, 2014)

In Great Britain, the aim of Beveridge's model established in 1946 was to provide each member of the society with same healthcare services, mainly using tax revenues1946. (Ragány, 2014)

Since the basic models were established, the system of health insurance has been permanently developing and has covered more and more groups of the population as well as numerous variants thereof have emerged. (Ágoston et al, 2011)

In most countries of Europe, such decentralized healthcare systems are functioning which are multi-insurance or organized at regional level while the collection of resources is concentrated at the level of countries, in order to expand the resources and reduce the administrative burden (Asthana, 2008).

In the health care systems, the source flow can be realized in several ways. This source flow shows very large differences by country, according to which the healthcare and health financing system are also implemented in totally different environments. (ÁGOSTON et al, 2011) In the domestic and international specialized literatures, more and more studies are written in the subject-matter related to the fund creation of healthcare systems. In Hungary, the utilization of healthcare services are granted by the State from the central government budget or the Health Insurance Fund, under different conditions e.g. there are such services which can be used in return for specific or additional usage fees even if we are insured. Thus, at present, the financing of healthcare services are carried out from the Health Insurance Fund, based on the system described in the Act LXXXIII of 1997 on the Benefits of Compulsory Health Insurance; this is a task of the National Health Insurance Fund (hereinafter OEP).

2. Material and method

Aim of this treatise is to examine how the tax and contribution rules established in the last decade have affected the fund raising structure of the healthcare system. Data in the essay originates from the database, almanacs and reports of OEP and the World Health Organisation as well as from the budget legislation.

3. Results

Creation of the financial balance of the social care system is a huge challenge not only for Hungary but for all welfare states.

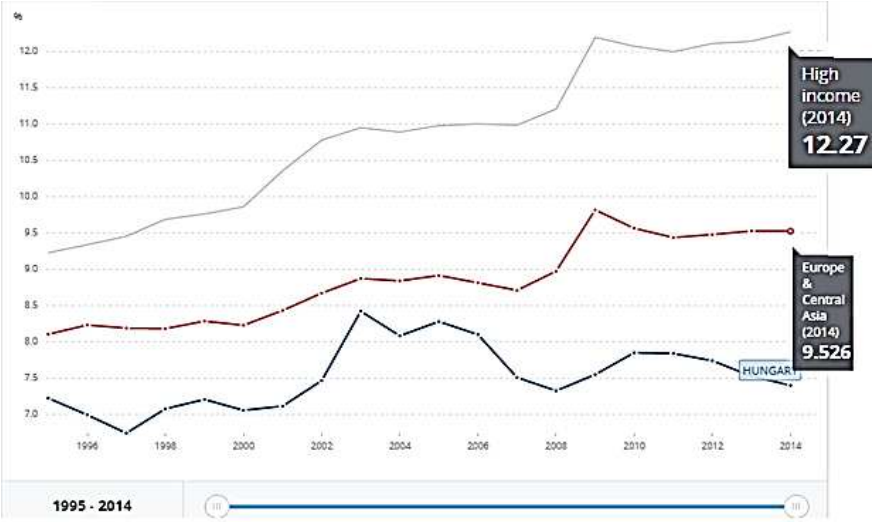

Figure 1: Health expenditure, public (% of total health expenditure)
Source: http://data.worldbank.org

Considering the data of WHO from almost the last 2 decades, Figure 1 shows that, in Hungary, only a little part of the gross domestic product (GDP), namely 7.4%, is spent on the health care and the share of healthcare expenditures should be increased in GDP, like in case of developed countries (Wynand,2007). The health expenditure is the amount of public and private health expenditure, which covers the provision of health services, family planning activities, nutrition activities and emergency aid designated for health. (I1)

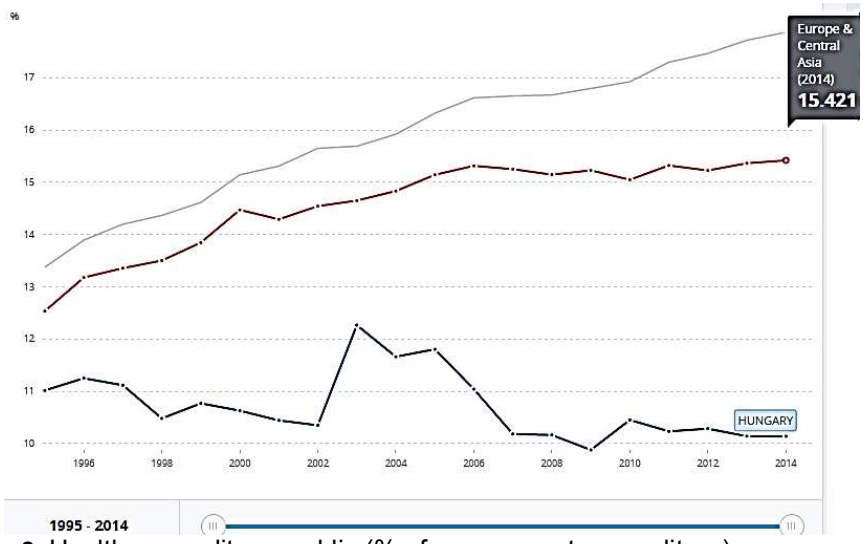

Figure 2: Health expenditure, public (% of government expenditure)
Source: http://data.worldbank.org

If we examine the healthcare expenditures on the basis of government expenditures then it can be determined that the share of health care is continuously declining within the government expenditures in Hungary (its value was 10.1% by 2014) while the rate of government expenditures spent on the health care is increasing in Europe (it was 15.42% in 2014) (Figure 2).

Tendency in the financing role of tax revenues in Hungary

Examining the changes in the revenue structure of Health Insurance Fund during in the last two decades, a significant realignment of resources can be observed: the rate of employers' contributions has decreased and the rate of individual contributions has tripled (Boncz, 2005).

Examining the revenue structure of Health Insurance Fund, it becomes clear that the system is social security system only namely and partially; it is largely financed by the taxes paid by everyone (Szigeti, 2007). Extent of tax revenues is sizeable in the system; the former rate of around 5-10% was already more than 50% in 2011. Viewing the data of 2014, rate of the contributions and tax revenues is also balanced and the revenue structure has transformed again due to the realignment of the social contribution tax (Figure 3.).

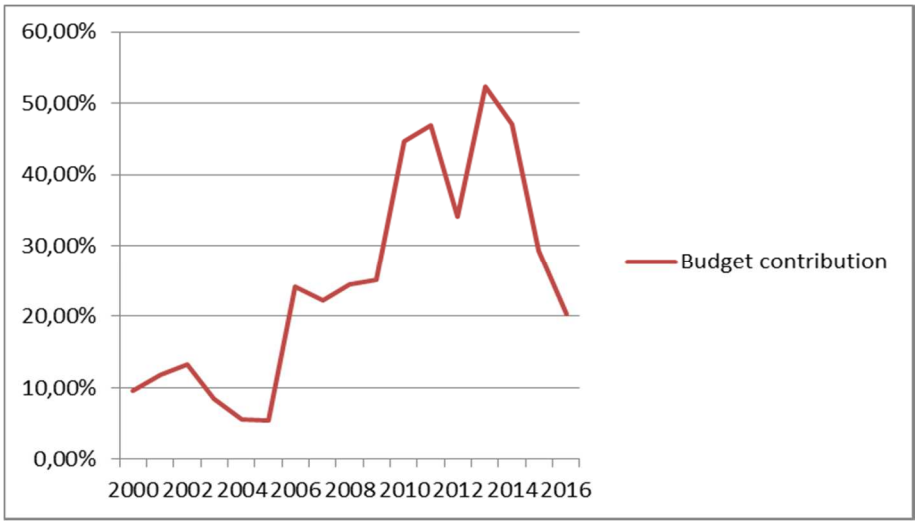

Figure 3: Budget contribution to the Health Insurance Fund
Source: own calculation from the database of National Health Insurance Fund

After 1 January 2012, the employers' pension contributions have been discontinued and changed into social contribution tax. A characteristic of the payments changed into tax from contribution is that it does not confer a right to social security benefits**;** it provides security for ensuring those government resources which are required for maintaining the social security as well as some social benefits serving the exercise of the right to the physical and mental health and each State pension system. The government revenues from this tax cannot get exclusively into the Pension Fund but these ones are distributed between each financial fund of the social security (Health Insurance Fund, Pension Insurance Fund) and the separate state funds described in law (according to the rates described in the Act on the Central Budget) (Szigeti,

2011). Examining the distribution rate of the social contribution tax, it has become clear that the social contribution tax increased as the planned tax revenues increased year by year and the part of the planned amount, which was set aside for the pension fund, has spectacularly decreased since 2014. In 2012, 88.89% of the amount of social contribution tax (planned revenue: HUF 2 019 billion) was directed to the Pension Insurance Fund, 7.41% of the rest to the Health Insurance Fund and 3.70% to the National Employment Fund. In 2013, the total amount of the social contribution tax (planned revenue: HUF 2 130 billion) was directed to the Pension Insurance Fund. There has been no example of this since then. In 2014, 3.7% of the social contribution tax (planned revenue: HUF 2 132 billion) was paid to the Health Insurance Fund and this rate increased further to 14.54% in 2015 while 20.57% was given again to the health insurance in 2016.

Table 2: What amount does go to the Health Insurance Fund?

Year	Social Contribution Tax - total amount(billion HUF)	Rate to the Health Insurance Fund (%)	Amount of the social contribution tax within the HIF (billion HUF)
2012	2019	7,41	149,6079
2013	1847	0,00	0
2014	2132	3,70	78,884
2015	2391	14,54	347,6514
2016	2536	20,57	521,6552
2017	2779	20,50	569,695

Source: own calculation from the database of National Health Insurance Fund

Based on the revenue structure of the Health Insurance Fund of 2016, it can be seen that part of the social contribution tax due for the Health Insurance Fund and the employers' health insurance contribution are HUF 535 297 million, the health insurance contribution revenues of insurants are HUF 698 957 million which are 60.38% of the total revenue.

Total yearly amount of other contributions is HUF 53 683.6 million in 2016. Within that, there is a decisive item i.e. the employers' sick pay contributions which is HUF 22 946.6 million as well as the healthcare service contribution whose planned amount is HUF 30 187.8 million. In 2016, amount of the healthcare contribution is HUF 187 316.2 million which is 9.1% of the total revenue. Amount of 2016 of the budget contribution subtitle is HUF 414 967.6 million, 20.3% of the revenues. A decisive part of the revenue originates from the so-called "national risk communities" under which the budget hands over cash to the Health Insurance Fund by way of contributions (HUF 374 464.0 million).

In the year of 2016, the aggregate amount of other revenues related to health insurance activities is HUF 147 247 million which is 7.2% of the total revenue. Its part is the accident tax and the public health product tax as well as the health contribution of tobacco industry businesses which were introduced in 2012.

Table 3: What amount does go to the Health Insurance Fund?

m HUF

	2015	2016
Revenues	**1 926 057 925**	**2 043 907 657**
Contribution revenues and contributions	**1 223 991 587**	**1 479 548 346**
Part of social contribution tax due for Health Insurance Fund and employers' health insurance contribution	352 166 353	535 297 374
Health insurance contribution of insurants	652 182 483	698 957 162
Other contributions	49 286 054	53 683 606
Healthcare service contribution	29 145 020	30 187 802
Contribution of payers by agreement	333 363	332 890
Employers' sick pay contribution	19 607 477	22 946 651
Parafiscal tax due to simplified employment	200 194	216 262
Healthcare contribution	166 361 766	187 316 246
Surcharge for late payment, penalty	3 994 931	4 293 958
Budget contributions	**564 935 300**	**414 967 600**
Budget contribution related to healthcare tasks	5 400 000	5 400 000
Cash received by way of contributions	374 224 000	374 464 000
Cash received for partly security of disability and rehabilitation benefits	155 311 300	
Planned reception of cash	30 000 000	35 103 600
Other revenues related to health insurance activities	**135 121 249**	**147 247 837**
Accident tax	27 492 668	32 488 026
Public health product tax	28 891 381	29 229 493
Health contribution of tobacco industry businesses	539 912	-539 573
Revenue of asset management	**13 505**	**14 054**
Operating revenue	**1 996 284**	**883 552**

Source: Database of National Health Insurance Fund

4. Conclusion

The necessity of a reform in the fund raising is a real problem for the Hungarian healthcare system of nowadays which would be a tool for creating the sustainability. Summarizing the effect of changes in the Hungarian tax rules in respect of the fund raising side of the healthcare system, it can be determined that we are witnessing

the reduction of employers' contributions compared to the increasing measure of the individual contributions, with the aim of improving the competitiveness. An increasing rate of the tax revenues can be observed compared to the contribution revenues, including the introduction of special taxes (accident tax and the public health product tax), in order to distribute the risk. Extent of the social contribution tax of today is 22%; the current budget specifies, in an opaque and non-pre-recorded way, how much of the aforementioned tax will be spent on the healthcare. The necessity of a service contribution to be compulsorily paid by everyone can be proposed and requires further investigations. Or, some currently missing personal groups should be involved in the payment of contributions, pushing the mode of fund raising towards a tax-based system, linking it not to exclusively the income of natural persons.

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DO GROUP AFFILIATED AND UNAFFILIATED FIRMS HOLD CASH DIFFERENTLY? THE CASE OF PAKISTAN

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Abstract: *This study analyses the effect of business group membership on cash holding pattern of affiliated firms listed at Pakistan Stock Exchange from 2009-2014. Group affiliation can increase benefits for affiliated firms by providing an access to internal capital markets, particularly in emerging economies where institutional control is weak and access to external financing is difficult and expensive. Using panel data of public limited group affiliated firms and comparable standalone firms, the empirical results show that group firms hold less cash than standalone firms. The results are in line with the view that access to internal capital markets enables group affiliated firms to manage their operations with low cash reserves.*

Key words: *Group affiliation; cash holdings; affiliated firms.*

JEL Classification: *G30; G32.*

1. Introduction

Cash holding is an important measure for households and firms. Investors, analysts, and firms pay much attention to firm's cash holdings; it determines the liquidity position of a firm. Firms should hold an optimal cash for several reasons, looking back at Keynes (1936), he proposed three basic reasons for cash holdings, (i) transaction motive, need for managing everyday transactions, (ii) precautionary motive, money is needed to cover unexpected future events, (iii) speculative motive, money is held to catch any attractive investment opportunity.

The literature suggests two conflicting explanations of how business groups' affiliation affects corporate cash holdings. First, the existence of internal capital markets and due to lower financial constraints the group affiliated firms favour to keep lower cash reserves (Schiantarelli and Sembenelli, 2000). Chang & Hong (2000) found that group reputation and intra-group guarantees support the access to external funds. Second, the prevailing view in corporate finance is based on the availability of free cash flows, due to agency problems; firms prefer to keep excess cash but at the expense of shareholders (Jensen, 1986). Resultantly, the complex organizational and ownership structure of business groups have a higher level of information asymmetry as compare to standalone firms, which in turn intensifies the agency conflicts between shareholders and managers. Therefore, the net outcome of group affiliation on cash reserves count on which aspect of group dominates the other. In relation to corporate cash holdings, group affiliated firms have better opportunities to approach external funds both from inside and outside of the group, and this makes them less financial constrained as compare to standalone firms.

The economy of Pakistan presents an ideal setting for current study, there are four appealing reasons. First, groups cover the major part of the economy in the private

sector and have an advantage for overall economic development and political landscapes (Saeed et al., 2015). Second, group member firms are affiliated with one group, thus deciding about group affiliation is easier and clear. Third, many business groups migrated from India and are operating since the independence of Pakistan 1947. Fourth, owners of business groups are parliamentarians and playing a key role in planning and designing of economic policies. A business group is defined as a set of legally independent firms bound together by some formal and informal ties (Khanna & Yafeh, 2005).

The aim of the study to examine the effect of group affiliation on firm's cash holdings while comparing with standalone firms. The main findings suggested by using the panel data of 243 Pakistani non-financial public limited firms, that group member firms hold considerably less cash as compare to standalone firms. All of the control variables significantly explain firms' cash levels. Overall, the presence of internal capital markets and lower level financial constraints are encouraging motivators for group member firms to hold less cash.

The reminder of this paper is arranged as follows: Section 2 describes theoretical framework and hypothesis development. Section 3 discusses data and methodology. Section 4 contains results. 5. Conclusion.

2. Theoretical framework and hypothesis development

Several studies have examined the business groups by recognizing different theoretical perspectives such as resource-based view (Guillen, 2000), exchange theory (Kiester, 2001), institutional voids theory (Khanna & Palepu, 1997), transaction cost theory (Hoskisson et al. 2005), agency theory (Claessens et al., 2000) and risk sharing theory (Khanna & Yafeh, 2005). Studies have explored the effect of business groups in Pakistan by considering a limited number of different indicators like financial constraints (Saeed and Sameer, 2015), financial performance (Ghani et al., 2011) and political connections (Saeed et al., 2015). A limited research evidence of business groups' studies is available in Pakistan.

Business groups are an important business form that is prevailing in many emerging economies as well as developed market. But the performance comparison results are different in different economies in relation to standalone firms e.g. in India, Chile, Korea and Turkey group affiliation improves performance for member firms but in contrary Japanese standalone firms outperform group companies. In emerging economies, most of the literature is available with reference to Khanna and Rivkin (2001) and Khanna and Palepu (2000a, b) relied on the notion that groups are widely available in countries with weak institutional control (Granovetter, 2005) and imperfect market conditions.

Knowing that perfect capital markets do not have transaction cost, this is the assumption of perfect capital markets that the cost of internal and external funds are equal and firms can easily access to their financing needs or to meet cash deficit. In this case, firms should not hold significant cash. But in contrary, capital markets are imperfect, given asymmetric information between borrowers and lenders. It depends on the characteristics of the firm; information asymmetric might be smaller for one firm and greater for other firms. He et al., (2013) reported that business groups help to alleviate the asymmetric information as well as legal issues that appear while approaching external capital markets.

A firm's optimal cash holding level is that when the marginal benefit is equal to marginal cost. A number of studies have focused on cash holdings in various forms such as determinants of cash holdings (Dalbor & Oak, 2011; Kim et al., 2011; Gao et al., 2013; Al-Najjar & Belghitar, 2011), effect of corporate governance on cash holdings (e.g. Ozkan & Ozkan, 2004; Ferreira & Vilela, 2004; Chen & Chuang 2009; Drobetz & Gruninger, 2007; Huang, Elkinawy & Jain, 2013), adjustment of cash holdings toward target levels (Opler et al., 1999; Venkiteshwaran, 2011), impact of cash holdings on firms' market value (Pinkowitz et al., 2006; Martinez-Sola et al., 2013, Kalcheva & Lins, 2007).

Studies of cash holdings in Pakistan remains limited; mainly by (Afza and Adnan, 2007; Rizwan and Javed, 2011; Shabbir et al., 2016) examined the determinants of cash holdings. They found that reinvestment, dividend payment, precautionary motives and pecking order theory are key determinants of cash holdings in Pakistan. In different studies, looking at the impact of corporate governance measures on cash holdings, they found the managerial ownership is negative related to cash holdings. This implies that managerial ownership would decrease cash and helpful in avoiding agency problems (Masood, A., and Shah, A., 2014; Basheer, M. F., 2014; H. et al., 2014).

In business groups internal capital markets are considered as a key source to channelize the resources between affiliated firms, it enables the flow of cash from one affiliated firm to other affiliated firms. Transferring excess cash from member firm to another reduces dependency on external capital markets and benefits of holding cash. Internal capital markets are different from external capital markets due to transactions cost, control rights, assets specificity, incentives and information (e.g. Gertner, Schafstein and Stein, 1994; Stein 1997).

Subramaniam et al., (2011) documented that diversified firms hold considerably lower cash as compare to focused firms. This is due to easy access to internal capital markets and better prospects for selling assets. W.Cai et al. (2016) suggested that precautionary objectives to hold cash are to respond unexpected future cash flow surprises. Business groups help affiliated firms to avoid the problem of uncertainty of future cash flows in different manners. First, groups allow the development of internal capital markets, to some extent internal markets help to replace the external markets to meet the financial needs of affiliated firms. Funds from group member are collected into a pool and then reallocated them to the most money-making projects. Essentially, business groups are providing a valuable forum for an efficient allocation of financial and managerial level resources among group member firms. Moreover, it is more beneficial when external markets are not developed. Khanna and Yafeh (2005) provided empirical facts that business groups help member firms in sharing their risks. On average, it is executed by transferring resources from profitable affiliates to non-profitable affiliates; this practice is common during times of financial difficulty. Prowse (1992) already provided empirical evidence that group affiliated firms help member firms particularly those which are suffering due to financial problems; it is done for the survival of a group in the long run. Verschueren and Deloof (2006) provided an evidence that intra-group guarantees support member firms to meet financing needs by way of using corporate bonds and bank loans.

Ferreira and Vilela (2004) documents that development of capital markets has a negative effect on cash holdings. Denis & Sibilkov (2010) finds that cash value increases with increasing financial constraints. Locorotondo et al. (2014) reported a

contradictory relationship of cash holdings and group affiliated firms based on a sample of Belgian firms. Pinkowitz et al. (2006) examined that Japanese business groups hold less cash than other firms.
Based on the literature, it is expected that group affiliation provides better access to financing requirements along with it enables to generate more constant future cash flows to avoid uncertainty. Resultantly, precautionary motives are weakening and group firms prefer to keep less cash. Together, relying on this intuition and presence of internal capital markets, it is proposed that group firms should hold significantly less cash as compare to standalone firms. Therefore, it is expected that negative association is present between cash holdings and group affiliation.

H1. Business group member firms hold less cash than standalone firms.

3. Data and Methodology

3.1 Data

This study sample is based on the public limited firms listed at Pakistan Stock Exchange during 2009-2014. A sample of study includes 34 business groups, 132 firms are group affiliated and 111 standalone firms have been selected. In total 243 firms including group affiliated and standalone firms have been selected to study cash holding behavior of firms. The sample includes only those firms which are owned purely by Pakistani nationals. Firms with dual ownership are excluded from the sample. Only manufacturing firms are part of the sample. Financial services firms are excluded from this sample since their accounting scheme is not compatible with that of firms in other industries.
A firm's group affiliation is identified by using the book of Rehman (1998), who reported the list and details of business groups and their affiliated firms in Pakistan's economy. This book is a primary source to separate the affiliated firms from standalone firms. Moreover, group membership is also confirmed by following He et al. (2013) that group affiliation in each year is based on whether its controller has also more than one listed firm at a same year. Data of business group's affiliation and standalone firms has been collected manually from the annual reports of listed firms. The data is also collected from Financial Statement Analysis of Non-Financial Sector. This data is administered and published by the State Bank of Pakistan (SBP), the Central Bank of Pakistan. Moreover, this data is comparable to the annual reports submitted to the Securities and Exchange Commission of Pakistan (SECP). Firms in Pakistan have to report their data to the SECP annually; hence transparency and accuracy of data are needed as per law.
Table 1 summarizes the sample selection process and industries based on the classification of Pakistan Standard Industrial Classification (PSIC). The sample of study is 243 firms, 132 of which are affiliated with the business group and 111 are standalone firms. The total numbers of observations in this study are 1458. A textile industry comprised the major share with 570 observations, 312 of which are affiliated with business groups. There is no group affiliated firm from Information, Communication & Transport industry.

3.2 Methodology

The study explores the relationship between cash holdings and business group membership based on the framework applied by W.Cai et al. (2016), one main

characteristic i.e. group affiliation is used to test the issue related to cash holdings. This study used panel data analysis technique and pooled ordinary least squares (OLS) regression method to estimate the relationship of group membership and cash holdings for public limited firms for 2009-2014. A model can be described by the following equation:

$$CASH_{i,} = \beta_o + \beta_1 GROUP_{i,} + \beta_2 LEV_{i,} + \beta_3 CF_{i,} + \beta_4 LIQ_{i,} + \beta_5 DIV_{i,} + \beta_6 SIZE_{i,} + \varepsilon_{i,}$$

Table 1. Sample Selection and Industry Distribution

Industry	Total	Group affiliated sample (Group = 1)	Stand-alone sample (Group = 0)
Textile	95	52	43
Chemicals & Pharmaceuticals	27	12	15
Cement	13	9	4
Fuel & Energy	12	10	2
Motor Vehicles & Auto parts	16	13	3
Sugar	20	7	13
Coke & Refined Petroleum Products	5	5	0
Manufacturing	20	6	14
Paper, Paperboard & Products	8	5	3
Food	11	6	5
Mineral Products	7	3	4
Other Services Activities	3	3	0
Electrical Machinery	4	1	3
Information Comm. & Transport	2	0	2
Total	243	132	111

Source: Pakistan Standard Industrial Classification

Table 2. Variables definitions.

Variables	Acronym	Definition
Cash Holdings	(*CASH*)	Cash and cash equivalents/(total assets minus cash & cash equivalents)
Business Group	(*GROUP*)	Dummy variable - one for group member firms and zero for standalone firms.
Leverage	(*LEV*)	Total debt divided by total assets
Cash flow	(*CASHFLOW*)	Operating cash flow divided by total assets
Liquid substitutes	(*LIQ*) total	Working capital minus cash & cash equivalents divided by assets
Dividend	(*DIV*)	Net operating profit minus tax provision divided by total amount of dividend
Firm size	(*SIZE*)	Natural logarithm of total assets

The dependent variable *CASH* is referred to cash holdings, the independent variables - *GROUP* refers to dummy variable that equals 1 if a firm is affiliated with group and 0 for standalone firm; *LEV* refers to total debt divided by total assets; *CF* refers to operating cash flows; *LIQ* refers to working capital minus cash and cash equivalents divide by total assets; *DIV* is the ratio of net operating profit minus tax provision divided by total amount of dividend; *SIZE* is measured by natural logarithm of total assets. If H1is supported and group affiliated firms hold less cash than standalone firms, and then it should be observed that β_1 is significantly negative.

4. Empirical Findings

4.1 Correlation Matrix

Table 3 presents the results of the correlation. Since, group affiliation is negatively correlated with cash, indicating that member firms prefer to hold less cash as compare to standalone firms. This relationship is consistent with H1. CASH is negatively correlated with leverage, dividend, and size, and positively correlated with cash flow and liquidity. This shows that control variables are key determinants of firm's cash policy. Overall, most of the independent variables are weakly correlated with each other. Moreover, the values of variance inflation factors (VIF) of the explanatory variables are less than 2. Rogerson (2001) recommended a maximum value of VIF is 5. In this study, overall main variables mean value of VIF is 1.11 i.e. less than maximum recommended value of 5.

4.2 Descriptive statistics

Table 4 showing the results of descriptive statistics for both affiliated (Panel A) and unaffiliated (Panel B) firms. The average cash ratios of affiliated and unaffiliated samples are 0.058 and 0.295, respectively. Another key observation is affiliated firms keep less cash on their balance sheets than standalone firms; this can be seen at mean levels. This is the first support to H1. On average, member firms have higher levels of leverage, cash flow, size and dividend payments.

Table 3: Correlation matrix for main variables. Table 2 presents description and acronyms for each variable.

	CASH	GROUP	LEV	CASH FLOW	LIQ	DIV	SIZE
CASH	1.000						
GROUP	-0.0955	1.000					
LEV	-0.5295	0.0002	1.000				
CASHFLOW	0.0466	0.0523	0.0140	1.000			
LIQ	0.0379	0.0796	-0.3586	0.0765	1.0000		
DIV	-0.0983	0.1117	0.0357	0.0572	0.0627	1.0000	
SIZE	-0.0549	0.3062	-0.0840	0.0543	0.2104	0.0527	1.0000

4.3 Group affiliation and cash holdings

In this part, by using Pooled OLS regression, it is examined whether group affiliated firms hold significantly less cash or not. Table 5 presents results of regression with dependent variable cash and group affiliation as the independent variable.

Regression in Table 5 quantifies the impact of group membership on cash holdings including control variables as well as a dummy variable for group affiliation, which is one for group membership and zero for standalone firms. Table 5 includes t-statistics, R-square (R^2) and F-significance value. It is observed that R^2 value is = 0.3249 or 32.49%, that explains the variation in cash holdings i.e. a dependent variable in this study. The R^2 is a coefficient of determination; it measures the variation of a dependent variable due to independent variables. Thus, group affiliation, leverage, cash flow, size, dividend, and liquidity are used as independent variables; together they have 32.49% impact on cash holding pattern of group affiliated firms. The F-significance value measures the overall fitness of model whether the model is statistically significant or not? The F-significance value is 116. 39 ($p<0.0000$); it shows the overall fitness of model. This confirms the fitness of model used in this study.

Table 4: Descriptive statistics for main variables. Table 2 presents description and acronyms for each variable.

Period	Obs.	*CASH*		*LEV*		*CASH FLOW*		*LIQ*		*DIV*		*SIZE*	
		Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
Panel A. Group Affiliated Sample (Group = 1)													
2009	132	.059	.151	.648	.430	.080	.137	-.021	.379	2.265	6.894	14.677	2.729
2010	132	.072	.187	.632	.481	.085	.133	-.013	.450	4.203	10.452	14.739	2.756
2011	132	.050	.133	.651	.546	.030	.094	-.003	.524	5.374	15.965	15.245	1.599
2012	132	.051	.141	.646	.695	.082	.112	-.003	.681	2.787	5.667	15.291	1.651
2013	132	.063	.197	.615	.722	.072	.128	.024	.698	4.803	13.967	15.365	1.610
2014	132	.056	.287	.602	.696	.062	.096	.012	.708	3.164	7.322	15.453	1.636
Avg.	132	.058	.183	.632	.595	.068	.117	-.001	.573	3.766	10.044	15.128	2.000
Panel B. Group Affiliated Sample (Group = 0)													
2009	111	.297	1.803	.681	1.679	.065	.105	-.045	.418	-3.329	48.003	13.585	2.069
2010	111	.289	1.808	.608	2.111	.063	.114	-.034	.444	1.350	4.631	13.655	2.102
2011	111	.314	1.814	.657	1.485	.050	.126	-.059	.445	.999	4.243	13.899	1.676
2012	111	.285	1.824	.710	1.708	.058	.157	-.100	.562	.562	2.974	13.953	1.707
2013	111	.290	1.822	.650	2.707	.057	.118	-.153	.749	1.106	4.367	13.981	1.716
2014	111	.294	1.856	.482	4.552	.041	.112	-.196	.972	.764	3.347	14.045	1.727
Avg.	111	.295	1.821	.631	2.374	.056	.122	-.098	.598	.242	11.261	13.853	1.833
Panel C. Full Sample (Group and Standalone firms).													
2009	243	.168	1.226	.663	1.175	.073	.123	-.032	.406	-.289	32.877	14.179	2.505
2010	243	.175	1.232	.621	1.467	.075	.125	-.023	.447	2.900	8.421	14.243	2.532
2011	243	.170	1.234	.653	1.079	.039	.110	-.029	.489	3.375	12.285	14.630	1.764
2012	243	.158	1.239	.675	1.260	.071	.134	-.047	.630	1.771	4.758	14.680	1.801
2013	243	.167	1.242	.631	1.900	.065	.124	-.056	.726	3.114	10.847	14.733	1.794
2014	243	.165	1.274	.547	3.112	.053	.104	-.083	.844	2.068	5.962	14.810	1.816
Avg.	243	.167	1.241	.632	1.666	.063	.120	-.045	.590	2.157	12.525	14.546	2.035

As reported in the table the impact of GROUP on cash holdings is statistically significant and negative (-.158, *t*-stat. = -2.80). In economic term, a one unit increase in the likelihood of being group affiliated expects a roughly 15% decrease in the cash ratio. Therefore, the results confirm that impact of group affiliation is together statistically and economically significant. Group member firms prefer to keep essentially less cash as compare to standalone firms even after controlling well-determined control variables such as leverage, liquidity, cash flow, dividend, and

size. Furthermore, a finding is consistent with the view that existences of internal capital markets and due to lower financial constraints group member firms favour holding less cash (Schiantarelli and Sembenelli, 2000).
All of the control variables significantly explain firms' cash levels. As reported, the coefficient of leverage *(LEV)* is statistically significant and negative (-.405, t-stat = -25.45), which is consistent with earlier studies (Afza & Adnan, 2007; Bates et al., 2009). The result of this study shows more levered firms carry considerably a smaller amount of cash.

Table 5: Results estimation, effect of group affiliation on cash holdings. The *t-statistics* are in parentheses. Table 2 presents description and acronyms for each variable.

OLS		Full Sample
Dependent Variable:	*CASH*	
GROUP		-.158** (-2.80)
LEV		-.405*** (-25.45)
CASH FLOW		0.784*** (3.54)
LIQ		-.323*** (-6.74)
DIV		-.004** (-2.83)
SIZE		-.031** (-2.26)
Intercept		0.909*** 4.630
Number of companies		243
Obs.		1458
R^2		0.3249
Adj.R^2		0.3221
F-Value		116.39

Note: ***, ** and * denote significance at the 1, 5 and 10 percent level.

The coefficient of cash flows *(CASH FLOW)* is statistically significant and positive (0.784, t-stat = 3.54), which is in line with previous studies (Al-Najjar & Belghitar, 2011; Afza & Adnan, 2007). According to the view of Myers and Majluf (1984), firms with higher level of cash flows carry more cash. Firms with more cash flow variations prefer to hold extra cash to avoid the risk of cash flow. The presence of more liquid assets on balance sheet other than cash also impact the cash holding pattern of group affiliated firms; because non-cash liquidity substitutes are considered as an

alternative to cash. Conversion cost of other liquid assets into cash is comparatively low to other assets, as a result in presence of more liquid assets firms prefers to hold less cash reserves. Non-cash liquid substitute *(LIQ)* has a negative influence on cash holdings; estimated coefficient is statistically significant. Ferreira and Vilela (2004) provided empirical evidence that if a firm has a problem of cash shortage; liquid assets used as a substitute for cash. Using internal favourable transactions, group member firms can easily liquidate their non-cash liquid substitutes. Consistent with other studies (e.g. Al-Najjar and Belghitar, 2011; and Ullah, Rehman, Saeed, and Zeb, 2014) the coefficient of dividend (*DIV*) is negative and statistically significant. Dividend paying group member firms hold less cash as compare to standalone firms. Firm Size *(SIZE)* is another key determinant of cash holdings; consistent with (Bates, Khale, & Stulz, 2009; Mulligan, 1997) because of economies of scale firms hold less cash. Size coefficient is negative and statistically significant.

5. Conclusion

This study investigates the effect of business group affiliation on cash holdings of member firms. Using data of Pakistani public limited firms listed at Pakistan Stock Exchange from 2009 to 2014, the results show that group member firms prefer to hold less cash comparable to standalone firms. The findings of the study show that group affiliation, leverage, liquidity, dividend and size have negative significant impact on cash holdings. Several reasons for weakening in the demand for cash of group affiliated firms as compare to standalone firms (i) existence of internal capital markets (ii) having a bank in the group supports better access to funds and provision of guarantees (iii) group diversification favours lower cash balances.

Nevertheless, the study has a number of limitations. First, this study addressed the behavior of cash holding pattern of a group affiliated and standalone firms, but it did not cover the behavior of cash holding of groups as a whole. The absence of availability of consolidated financial statements prevented to pursue that direction. Second, the sample of study is limited to manufacturing firms. Third, only those firms are part of the sample which is purely owned by the Pakistani nationals. Fourth, this study has not incorporated many other variables that may also differentiate the cash holding pattern between group affiliated and standalone firms. Future studies are expected to enhance the scope of such studies by including different variables related to the characteristics of a group affiliated and standalone firms. Lastly, the future researchers should compare the dynamics of cash holdings of group affiliated firms between developing and developed economies; this may also yield new insights.

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ESTIMATION OF THE PROBABILITY OF DEFAULT BASED ON RELEVANT ECONOMIC AND FINANCIAL INDICATORS

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Abstract: *The credit risk is one of the main banking activity risks, with direct impact on the bank performance. Approaches based on internal rating models introduced by the Basel II agreement allow banks to use their own estimates for credit risk quantification, with direct effect on capital adequacy. This study aims to develop a scoring model for quantifying the probability of default dependent on the non-performing loans rate evolution based on quantitative information and determination of the power of prediction to determine non-reimbursement situations. Also, it was considered the determination of some qualitative variables impacting on the reimbursement capacity of companies. The financing sources, in essence, in-house or attracted, condition the profitability of any business and influence the financial position of the company, both in the short and long term. This study aims at an understanding of the inter-conditioning relationship between the financing sources, profitability and default risk. The estimation of the default probability is the first step to determining and assessing the credit risk. Major issues in the estimation of the default probability are generated by the limitation of the required information. The approach based on internal rating models relies on the accuracy of the default probability estimation.*

Keywords: *probability of default; financial performance; credit risk; qualitative variables; macroeconomic environment; credit scoring.*

JEL classification: *J08.*

1. Introduction

In the current financial conditions, banks must be prepared to promote change. One area that requires special attention and priority in action is the stronger link between the capital of a bank and the risks it can take, to prove that it is a stable, efficiently run financial institution.

The credit risk is one of the main risks to the banking business and its management has a major impact on the bank performance.

The Basel Committee proposes three basis methods to be used by the banks to compute the credit risk:

- The average external rating of the counterparty;
- The credit card models estimation;
- The calculations based on historical data or rating categories related to the bank's loan portfolio.

Basel II provides banks with a wider range of options for determining the capital requirements for the credit risk coverage. The three proposed approaches have varying degrees of complexity, giving banks the opportunity to choose one of the

options according to their needs, the risk profile and the strategy of the national supervising authorities.

2. Literature Review

In the series of problematical approaches on the topic dealt we find inquiries on the validity and quality of information sources used as support for the performance analysis, and query about the instruments used in the analysis (financial or non-financial indicators), in the context of information asymmetries and governance issues.

Integrated accounting information have been treated in numerous papers by authors such as Balakrishnan, Bartov and Faurel (2010), Hall (2010) Elbashir, Collier, and Sutton (2011), Weissenberger, Angelkort (2011), Grande, Estebanez and Colomina (2011) Soudani (2012), Kargin (2013), Gullberg (2014), Frias-Aceituno, Rodriguez-Arizaşi Garcia Sanchez (2014), Steven E. Salterio (2015).

The empirical research carried out by Jing et al. (2010) analyses the attitude of managers on information provided by the managerial accounting in the Romanian companies, and believes that the accounting information "is essential in achieving the competitive advantage throughout the lifecycle of an entity".

The estimation of the default probability is the first step to determining and assessing the credit risk. Major issues in the estimation of the default probability are generated by the limitation of the information required.

The credit risk modelling and the determination of the default probability were subjects developed by many researchers, who used the linear discriminant analysis for predicting the bankruptcy of a company.

The integration of macroeconomic indicators in the analysis of the credit risk was addressed, among others, by Vitor Castro (2013), who caught the relationship between the evolution of the macroeconomic indicators and the credit risk for a number of countries - Greece, Ireland, Portugal, Spain, and Italy (GIPSI), affected by the economic and financial crisis. Using a dynamic panel approach, he noted that the credit risk is significantly affected by the macroeconomic environment: the credit risk increases when the GDP decreases, but the unemployment rate or the interest rate increases, and is positively influenced by an appreciation of the real exchange rate.

The statistical techniques were used extensively in the construction of the models of classification and credit scoring, Dănila (2012) designing a scoring model for quantifying the probability of default based on quantitative information and the determination of the power of predictively of non-reimbursement situations, with respect to the determination of some qualitative variables impacting on the repayment capacity of companies.

Masahiko Egami (2013) highlights a number of precautions to credit risk management using Levy processes, and Yunpeng Sound (2011) applied Marshall-Olkin multivariate exponential distribution on credit risk. At the same time, Montgomery, Hanh, Santoso and Besar (2005) investigated bank bankruptcies in Japan and Indonesia using the logit model, while Canbas, Cabuk and Kilic (2005) proposed an integrated prediction system combining the discriminant analysis, logit, probit and the main components analysis. A major work is provided by Konstandina (2007), who used the logit model for the classification of companies and the prediction of bankruptcy, identifying the main features of such an event.

Among the most used basic models are included the credit scoring models. These are meant to determine a correlation between the economic and financial situation of the company and the non-reimbursement cases. The financial indicators used in credit scoring are considering profitability, leverage, liquidity, debt service, etc. The variables selected are those that have discriminatory power to determine the frequency of non-reimbursement after the completion of some univariate analyses.
Basel II provides banks with a wider range of options for determining the capital requirements for the credit risk coverage. The three proposed approaches have varying degrees of complexity, offering banks the possibility to choose one of the various options according to their needs, the risk profile and the strategy of the national supervising authorities.

3. Scoring Model to Estimate the Probability of Default

Over the time, some of the largest global banks have developed sophisticated systems in their attempts to model the credit risk generated by various business lines.
In designing these models, it was considered the quantification, aggregation and management of risks by geographical area and field of activity, estimates of these models being used for risk management and business performance measurement.

3.1 Data Used

An important step in developing the scoring model for quantifying the probability of default is the data collection process. Data used to build the model referred to in this study consist of financial reports for 2014 of a number of 187 companies selected from a sample of 700 companies in the category of small and medium enterprises extracted from the TPSoft database, an online database of companies from Romania.

3.2 Selection of Variables

Exogenous variables that were considered aim at selecting some relevant financial indicators for each of the five categories (profitability, liquidity, indebtedness, interest coverage and activity) reflecting the economic and financial situation of a company (Altman et al., 2005).
First we considered selecting a total of 10 economic and financial indicators relevant to each of the five categories reflecting the economic and financial situation of a trading company, as follows:

Table 1: Indicators relevant for the economic and financial situation

Category	Indicators
Profitability	Commercial profitability (profit margin)
	Return on Equity (ROE)
	Return on Assets (ROA)
Liquidity	Current ratio
	Quick ratio
Indebtedness	Debt-to-equity ratio

Category	Indicators
	Degree of financial leverage of total assets from equity
Interest coverage	EBITDA/ Interest expenses
	EBIT/Interest expenses
Activity	Turnover/ Interest expenses

1. In order to determine the discriminatory power of each variable, univariate analyses for each of the 10 indicators were performed.
2. After the analyses, we retained in the analysis the weakly interrelated variables: return on sales, return on assets, current ratio, debt-to-equity ratio and interest coverage.

It is envisaged that the relationship between the selected variables and the frequency of non-reimbursement to be clear and viable economically, namely, that the relationship between each of the variables: the return on sales, the return on assets, the current ratio, the interest coverage and the frequency of non-reimbursement is inversely proportional, respectively, an increase of these indicators implies a lower non-reimbursement frequency, while the debt-to-equity ratio and the non-reimbursement frequency is directly proportional, an increase in this indicator implying a higher non-reimbursement frequency.

3.3 The Scoring Model

To determine the probability of default, the logit model proposed by Altman et all. in 2005 was used, as follows:

$Y_{it} = f(\beta_k, X^k_{it-1}) + e_{it}$,

where:

Y_{it} – dependent variable;

X^k_{it-1} – independent variables - represent the values for the indicators selected for the i (187) companies.

The multiple correlation between variables is presented in Table 2.

Table 2: Estimation of the regression model

	Return on sales	Return on assets	Current ration	Debt-to-equity ratio	Interest coverage from EBIT
SUMMARY OUTPUT					
Regression Statistics					
Multiple R	0.1130917	0.1005618	0.6285546	0.6820124	0.0112693
R Square	0.0127897	0.0101127	0.3950809	0.4651410	0.0001270
Adjusted R Square	0.0074421	0.0047651	0.3897333	0.4597934	-0.0052206
Standard Error	0.1714525	0.1716848	0.1342109	0.1261998	0.1725486
Observations	188	188	188	188	188

The results obtained based on the logit function estimating for the 5 variables retained in the analysis (return on sales, return on assets, current ratio, debt-to-equity ratio and interest coverage) are:

Table 3: Results of the research in relation to the analysed variables

Variable	Coefficient	Std.Error	t-Statistic	Prob.
Return on sales	-0.001175	0.171453	-1.556492	0.0331
Return on assets	0.076950	0.171685	1.382168	0.1867
Current ration	-0.020558	0.134211	11.05134	0.0242
Debt-to-equity ratio	0.133928	0.126200	12.75244	0.0154
Interest coverage from EBIT	-1.881640	0.172549	-0.154115	0.8776

Considering that the result obtained for the *"return on assets"* variable, respectively, the plus sign obtained (an increase of this variable causes an increase in the non-performing loans rate) is not economically correct, and in the case of the *"interest coverage"* variable - the obtained probability of 0.877685 exceeds the permissible threshold of 0.05%, we considered that the model obtained cannot be revealed. So we removed the two variables from the analysis.

Using only three indicators: return on assets, current ratio, indebtedness, for estimating the multivariate logit function, the result obtained is statistically relevant, as evidenced by the values of probabilities, less than 0.05%, obtained in the three variables.

The results obtained show that between each of the indicators, i.e. return on sales, current ratio and non-performing loans rate there is an inversely proportional relationship, so as the values of these indicators are higher, the more the non-performing loans rate decreases, while between the debt-to-equity ratio and the non-performing loans rate there is a directly proportional relationship, an increase in the value of this indicator determining an increase in the non-performing loans rate, that is, the default probability.

These results are also correct in terms of economic interpretation.

Analysing the influence of indicators on the default probability, it is noted that the *return on sales* has the greatest influence on it (obtaining a higher trade margin having a positive influence on the reimbursement capacity of the company) while *debt-to-equity ratio* has a less significant influence (a high degree of indebtedness adversely affecting, but to a lesser extent the reimbursement capacity of the company).

4. Qualitative Variables and Final Rating

To achieve a performing rating system with good power of predictability, it is necessary to also include qualitative information.

For this purpose, there have been considered four dimensions that have a direct impact on the credit decision, namely: market, shareholders, management and business, choosing for consideration those qualitative variables that have a significant impact on the reimbursement capacity of the company: market share (evolution of market share), commercial risk (degree of cashing from customers and average period of cashing from customers), risk management, dependence on suppliers, dependence on customers, dependence on supply and sale markets.

Each qualitative variable is assigned a scoring, depending on the risks involved and their development. The criteria considered are:

1) *Market share* – an increase implies better positioning of the company on the market, so a lower risk;
2) *Risk management* – it is lower if the company management has a very good experience, with direct impact on the economic and financial situation of the company;
3) *Dependence on suppliers, respectively, dependence on customers* – The higher the dependence on a supplier or customer, the more the business risks increase as any risks associated therewith also spreads on the company concerned.
4) *commercial risk (degree of cashing from customers and average period of cashing from customers* – The higher the degree of cashing from customer and the average period of cashing, the higher the commercial risk.
Thus, according to the scholarly literature, it results that a dependency to a single supplier can be considered satisfactory if it is not exceeding 25% (supplier weight in total suppliers), over this value being high, and even critical if more than 50%. In the case of customers, a weight of a single customer in total turnover of no more than 20% is considered satisfactory, above this level being high and critical above 40%.
The scoring of each variable depending on the risks involved is presented in Table 4.

Table 4: Scoring qualitative variables

No.	Qualitative variables (X_i)	Values	Score
1.	Market share	Increase	3
		Stagnation	2
		Decrease	1
2.	Risk management	Low (very good experience)	3
		Medium (good experience)	2
		High (questionable experience)	1
3.	Dependence on suppliers	Critical (weight in total suppliers of a single supplier >50%)	0
		High (25% - 50%)	1
		Satisfying (5% - 25%)	2
		Low (< 5 %)	3
4.	Dependence on customers	Critical (turnover weight to a customer >40%)	0
		High (turnover weight to a customer: between 20%-40%)	1
		Satisfying (turnover weight to a customer: between 5% - 20%)	2
		Low (turnover weight to a customer <5%)	3
5.	Degree of cashing from customers - GIC	Low (GIC > 90%)	3
		Medium (70% < GIC ≤ 90%)	2
		High (GIC ≤ 70%)	1

No.	Qualitative variables (X_i)	Values	Score
6.	Average period of cashing from customers – PMIC	Low P PMIC ≤ 30 days	3
		Medium 30 < PMIC ≤ 60 days	2
		High PMIC > 60 days	1
Total score			Σ $Xi^6 i=1$

For qualitative variables, there have been considered three risk categories: 1 - low risk, 2 - medium risk, and 3 - high risk. Depending on the score obtained, the corresponding degrees of risk are:

Table 5: The risk degrees of qualitative variables

Risk degrees	
1	13 – 18 points
2	6 – 13 points
3	< 6 points

The final rating shall be determined by correlating the financial rating with the risk degrees corresponding to the qualitative variables.
Thus, by summing the points obtained by customers for each indicator the total score is to be obtained, based on which classification into a performance category is made, as follows:

Table 6: Categorization by creditworthiness

Category	Score	Category definition
A	80-100 points	STANDARD
B	60-79 points	UNDER OBSERVATION
C	40-59 points	BELOW STANDARD
D	20-39 points	UNCERTAIN
F	<20 points	LOSS

It was considered the design of a sufficient number of rating classes within that range to avoid excessive concentration of debtors under a particular rating class.

5. Conclusion

The scoring model obtained, which is based on quantitative information (indicators of creditworthiness on return on sales, liquidity and debt-to-equity ratio), has a good power of determination of the default probability, which means that, based on only quantitative information (economic and financial data), it is possible to realize a scoring system for companies with a good power of predictively of non-reimbursement situations.
To achieve a rating system that accurately reflects the probability of default, it is necessary to also include qualitative information. Based on the analysis performed, four non-financial dimensions that have a direct impact on the reimbursement capacity of companies shall be determined: *market, management, shareholders and*

business. The final rating results from the interplay of the financial rating resulted based on quantitative variables (indicators of creditworthiness according to economic and financial situations of companies) with risk degrees corresponding to qualitative variables.

The analysis conducted reveals that the influence of qualitative variables on the reimbursement capacity of the company is maximum 25%.

At the same time, a performing rating system must be appropriately validated through the collection, storage and analysis of historical data - in our opinion a great challenge for banking companies is the access to historical data, their quality and achieving some results in a relatively short period of time and at moderate financial costs.

As future lines of development, we propose:

- the use of the research results in developing the new scoring model applied to new entry firms to reduce the adversity of banking institutions in terms of lending to this business sector;
- introducing more macro variables expressing the aggregate state of the economy at different moments in time and that have an influence on the probability of default;
- the development of the macro-prudential framework and the promotion of financial stability aiming at the implementation of Basel III proposals on capital requirements (buffer capital).

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DISCLOSURE OBLIGATIONS RELATED TO THE BALANCE SHEET IN THE HUNGARIAN AND INTERNATIONAL ACCOUNTING

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Abstract: *Nowadays, the accelerated globalisation influences the behaviour of numerous economic operators; in this connection, it can be certainly said that the globalisation affects the accounting regulation as well. It can be said about each entity that the awareness is a sine qua non for the successful operation thereof. To obtain this, both the enterprise and its environment require a reliable and uniform information system so that the enterprises can be judged and assessed. This need is met by the accounting of enterprises which appears in Act C of 2000 on Accounting in Hungary and mainly in the standards of IFRS and US-GAAP in other countries. The Hungarian and international accounting rules are divergent from each other on numerous points. There is a criticism of reports appearing in the Accounting Act that the balance sheet and income statement include historical data thus the extractable information therefrom is less suitable for possible rapid interventions. However, its aim is not to do so but to include such information about the property, financial and profitability situation which are needed for the owners, investors and creditors in order to present a true and fair view; this is greatly facilitated by the Notes on the Accounts. The abovementioned criticism does not necessarily apply to the reports according to IFRS. In nature, the reports similarly pertain to a specific date i.e. the balance sheet date; however, the report itself tries to display the vision of the enterprise in several places. In my treatise, I will highlight a part of the report, namely the Notes on the Accounts, which provide text information in addition to the numerical data. In the Hungarian system, the Accounting Act includes the entities' compulsory elements in the Notes on the Accounts while the structure of IFRS is divergent from this: the disclosure obligations presented in the Notes on the Accounts relating to the given standard are defined at the end of each standard. Within this, I will present those mandatory disclosure obligations related to the balance sheet which are indispensable tools of informing the external and internal operators adequately.*

Keywords: *accounting report; disclosure obligations; Notes on the Accounts.*

JEL classification: *M41.*

Generally Introduction

Today, rapid capital flows are characteristic in the economic life thus international borders are increasingly losing their importance as a result of the corporate relationships. Large multinational corporations are present anywhere in the world as well as ever greater capital is waiting for investment through the stock exchanges of the world. There are significant differences between the economic operators' accounting reports prepared according to the rules of their countries thus their performances which are difficult to compare by external operators. The main reason is that, as far as possible, a uniform accounting harmonisation takes place which

increasingly concerns Hungary as well (Beke, 2014). Furthermore, it can be said about each entity that the awareness is a sine qua non for the successful operation thereof. To obtain this, both the enterprise and its environment require a reliable and uniform information system so that the enterprises can be judged and assessed. This need is met by the accounting of enterprises which appears in Act C of 2000 on Accounting in Hungary and mainly in the standards of IFRS and US-GAAP in other countries.

Approached from one angle, accounting is an internal information system while, looked at from another angle, the principal function of accounting is to provide information towards the external environment in accordance with the legal requirements. Accounting Act determinates the following elements for those entities which are falling within the scope of that: bookkeeping and reporting obligations, principles to be compulsorily applied in the course of keeping the books and compiling the report, rules built on the aforementioned principles as well as the publishing, disclosing and auditing obligations. They provide the market operators with information ensuring a true and fair overall picture of the entities' property situation, assets and resources, the changes therein, financial and profitability situation as well as future plans (Böcskei, 2014; Musinszki, 2016). In addition to the numerical data disclosed as a part of the report, the Notes on the Accounts, which also include text information, can provide data and information required for the assessment, comparison and investment based on the accounting reports of enterprises. Accounting Act determines the mandatory data content of the notes on the account but it is not disclosed in sufficient detail in all cases. However, the Notes on the Accounts of the accounting reports prepared on the basis of the International Financial Reporting Standards and the Framework are more detailed.

1. Parts of the reports in Hungarian and international contexts

According to the requirements of Accounting Act, the annual report as well as the simplified annual report and the consolidated annual report shall compulsorily include the complementary, explanatory and evaluation Notes on the Accounts, in addition to the balance sheet and income statement. Consequently, the following elements are parts of the reports: the balance sheet; the income statement and the notes on the accounts; the business report which is not disclosed as a part of the report but at the same time therewith. Inter alia, the business report has information content about the future plans and opportunities. Since the Notes on the Accounts are indispensable tools in compiling a true and fair overall picture of the entity, these ones therefore include text explanation in addition to the numerical data. (Böcskei et al., 2015a). Furthermore, it is important to mention that the details of information in the Notes on the Accounts of different reports are dissimilar. While the Notes on the Accounts of the annual report are detailed and the Accounting Act specifies the mandatory content as well as the cash flow statement is also included, the Notes on the Accounts of the simplified annual report are less detailed and more generous as well as the source of information is limited (Kardos, 2009). There is a criticism of reports appearing in the Accounting Act that the balance sheet and income statement include historical data and pertain to a specific date i.e. the balance sheet date thus the extractable information therefrom is less suitable for possible rapid interventions. However, its aim is not to do so but to include such information about the property, financial and profitability situation which are needed for the owners,

investors and creditors in order to present a true and fair view; this is greatly facilitated by the Notes on the Accounts (Fenyves et al., 2015).
The abovementioned criticism, namely the reports are built on historical data and the enterprises' future plans and ideas are not presented, does not necessarily apply to the reports according to IFRS. In nature, the reports similarly pertain to a specific date i.e. the balance sheet date, however, the report itself tries to display the vision of the enterprise in several places, for instance Non-current Assets Held for Sale and Discontinued Operations represented in a separate row in the balance sheet as well as the obligations related thereto. Also, aim of the report is expressed from another view: the emphasis is on providing the stakeholders and potential investors with useful information and on the usefulness. Standard IAS 1 includes the parts of the financial statement which are not other than Statement of Financial Position, Statement of Total Comprehensive Income, Statement of Changes in Equity, the accounting policy and the list of Notes. In accordance with the requirements of Standard IAS1, Notes of the reports according to IFRS shall be systematic and reference therein shall be made to all items of the elements of financial statements. Given that the majority of the reports prepared according to IFRS are consolidated reports, the presentation of interests in other entities also plays a key role among the disclosures (Fenyves et al., 2015).

2. Ensuring a true and fair view according to the Hungarian and international requirements. Specific additions of Notes on the Accounts

Several articles in the Act C of 2000 on Accounting include those additions relating to the balance sheet and income statement that the company shall compulsorily share with the public. And, requirements of the standard relating to the item of the balance sheet and income statement shall include those elements which are compulsorily disclosed in the Notes of entities preparing reports according to IFRS.

Disclosure obligations related to fixed assets

Intangible Assets

In connection with the intangible assets, the following items thereof shall be disclosed in the report under the Hungarian law:

- Opening stock, increase, decrease and reclassification of gross value.
- Opening stock, increase, decrease and reclassification of accumulated depreciation.
- Amount of depreciation in the current year, broken down at least by balance sheet item as well as the method of the planned depreciation.
- Recognised and reversed accelerated depreciation.
- Opening value, increase, and decrease and closing value of value adjustment, broken down at least by legal title of property rights and intellectual products.
- Costs of research and experimental development in the current year (Baracskainé et al., 2003; BDO 2015)

In connection with the intangible assets, the company shall equally use general and special disclosure rules according to Standard IAS 38, which are as follows:

- Method for determining the useful life. Description of the applied amortisation methods. Gross value and accumulated amortisation at the beginning and end of the period.

- Reconciliation of the book value through movement table.
- Basis of forming the undetermined useful life.
- Limited and simultaneously significant intangible assets.
- Date of the asset evaluation. Book value of the revalued assets. Movements of the revaluation reserve.
- Intangible assets which are fully depreciated but still in use.
- Significant intangible assets which are under the control of the entity but not recognised as asset (Beke, 2014).
- Expenses incurred during the research and development as well as the costs of the research shall be debited to the result while the costs of the development shall be capitalised in all cases (this is not an option but an obligation).
- Presenting that 5 conditions of the recognition of experimental development as asset are met (whether it is technically feasible; whether there is the intention to realize; whether the technical, financial and other conditions are available; whether there is the ability to use or sell; whether it can demonstrably generate profits) (Fenyves et al., 2015).

Tangible Assets

In connection with the tangible assets, the following items thereof shall be disclosed in the Notes on the Accounts prepared on the basis of the Hungarian regulations:

- Opening stock, increase, and decrease and closing stock of gross value.
- Methods of accounting for depreciation. Opening stock, increase, and decrease and closing stock of accumulated depreciation. Amount and method of depreciation in the current year, broken down at least by balance sheet item as well as the method of the planned depreciation, Recognised and reversed amount of accelerated depreciation.
- Opening stock, increase, and decrease and closing stock of the recognised value adjustment, broken down by legal title (Böcskei et al., 2015b; Baracskainé et al., 2003).

The international accounting distinguishes the IAS 16 Tangible assets as well as the Investment properties falling under IAS 40. Furthermore, the following standards are also connected with the tangible assets: IAS 17 Leases, IAS 20 Accounting for Government Grants and Disclosure of Government Assistance, IAS 23 Borrowing Costs, IAS 36 Impairment of Assets as well as IFRS 5 Non-current Assets Held for Sale and Discontinued Operations.

Disclosures of Standard IAS 16 are as follows:

- In connection with the historical cost and the depreciation, the following items shall be presented: basis of assessment when determining the gross value; applied depreciation methods; useful life; depreciation rates; opening and closing values of the gross value and the accumulated depreciation; amount of the expenses of investments.
- Legal restrictions on the assets and their amount; assets and real estates serving as security i.e. collateral for the liabilities; obligations concerning the purchase of real estates, machinery and equipment.
- Basis and record date of the revaluation to fair value; index used when defining the replacement costs; book value of the asset before revaluation; amount of the revaluation reserve and the changes in stocks thereof.

- Additional information for the accounting estimates and the changes in accounting policy, Information of impairment, Book values of the temporarily unused assets and the assets held for disposal (Rózsa, 2015)

Disclosure obligations of Standard IAS 40:

- Whether the models of fair value or historical cost are used.
- Circumstances of the real estate included relating to an operating lease.
- Criteria for separating the individual real estates (investment property, owner-occupied property and property held for sale).
- Whether the assessment has been carried out by a qualified, recognised and independent asset evaluator.
- Method for determining the fair value and the assumptions used during the assessment.
- Revenue from renting out the investment property and the direct operating charges in case of the properties generating the income of the rent and the real estates not leased out.
- Movement table which deduces the closing book value from the opening value of the investment properties (Madarasiné – Bartha, 2016).

Fixed Financial Assets (Securities)

In connection with the fixed financial assets, the content provisions of the Accounting Act are as follows:

- Equally with regard to the long-term shares, long-term debt securities and long-term loans: amount of reclassifications, dividends received, related undertakings and ownership shares; futures, options and swaps; movement tables of recognised and reversed impairments and value adjustments (Baracskainé et al., 2003; Sallai, 2016).
- Groups and fair values of the financial instruments. Groups, extent (at contract value) and expiry date of the derivatives and the expected impact (fair value) thereof on the cash flow and the result. Changes of the current year in the revaluation reserve of the fair valuation. Effectiveness of the hedges; how large losses (or rather profits) have been offset in the equity. Total amount of the financial liabilities which are of importance for the purposes of assessing the financial situation but are not presented in the balance sheet. The nature, business purposes and financial impacts of those off-balance sheet items and agreements not included in the balance sheet whose arising risks or benefits shall be subject to a presentation in order to judge the financial situation of an entrepreneur (Fenyves et al., 2015).

The international accounting regulates the disclosure of financial instruments in the IFRS 7 IAS. It includes requirements for the entity that such disclosures shall be presented which enable the users to know how the financial instruments determine the entity's financial situation and performance, the nature and extent of risks during a given period and when preparing the report as well as how the management manages the risks.

- The entity shall disclose the range and content of information related to the balance sheet. For instance, the groups of financial instruments and liabilities and the book values thereof. Disclosures related to the FVTPL assets and obligations as well as the FVTOCI financial assets. Reclassifications and derecognition of financial assets. The nature and

extent of safeguards. Allowance account for credit losses. Characteristics of the capital, liability and embedded derivative. And, information of the non-compliances and breaches of contract.

- In connection with the income statement and equity, items of the revenue, expenses, profits and losses. Separating the individual financial instrument groups, detailing the result impacts of the given year. Furthermore, fee income and expense differing from the amounts in the effective interest rate reset.
- Other disclosure obligations of the enterprise are as follows: information related to the accounting policy; methods and information concerning the fair value; information of the hedge accounting, nature and extent of the risks arising from the financial instruments (qualitative and quantitative risk disclosures, credit risk, liquidity risk, market risk) (Lakatos et al., 2013; Madarasiné – Bartha, 2016).

Disclosure obligations related to current assets

Inventories

Mandatory content elements stipulated in Act C of 2000 in connection with the stocks, equally with regard to the inventories purchased and own-produced:

- Applied assessment procedures, the changes therein and the impact of changes on the results.
- By balance sheet item, the impaiment recognised and reversed in the given financial year (Jogtár, 2017).

Standard IAS 2 regulates the disclosure obligations of the inventories:

- Presenting the applied accounting policy for the inventory assessment and the method thereof.
- Grouping the inventories according to varieties.
- Summing the book values in total and by inventory group.
- Book value of the inventory recognised at net realisable value.
- Amount of inventories affecting the transit items.
- The amount recognised as a reversal of the impairment loss in the given period, outlining the circumstances causing the reversal.
- Value of inventories reserved for covering the liabilities.
- The value of inventories recognised as expenses in the given period (Beke, 2014).

Receivables

According to the requirements of the Hungarian accounting act, the presentation of receivables in the Notes on the Accounts is as follows:

- Assessment of the evolution of items of the receivables; elements concerning the accounting policy receivables, the changes therein and the affects thereof on the results.
- Considerable amount of faults explored during the verification, broken down by year.
- Original registration value of receivables broken down at least by balance sheet item.
- Amount of accumulated depreciation recognised and reversed in the business year, broken down at least by balance sheet item.

- In the balance sheet rows ‘Long-term loans in the related undertaking’ and ‘Receivables against the related undertaking, how many receivables are there against the parent companies and the subsidiaries?
- In connection with the foreign establishments, amount of the receivables arising from the foreign management.
- Amount of advances and loans paid to the senior officials, management body and the supervisory committee members; the guarantees on their behalf, combined by group; simultaneous communication of the interest, substantial other conditions; repaid amounts and conditions of the repayment (Andor – Tóth, 2017)

Disclosure obligations of receivables according to IFRS

- Amount of the trade receivables in the given financial year as well as the impairment loss thereof
- Impairment loss of trade receivables broken down by legal title
- Distribution of trade receivables according to aging
- Value and effective interest of loans
- Gross value of other receivables and evolution of impairment loss thereof
- Value of receivables arising from financial and operative leases

Disclosure obligations related to equity

In connection with the equity, disclosure obligations under the Hungarian Accounting Act:

- Changes in equity within one year and the reasons thereof, particularly with regard to the subscribed capital.
- In the subscribed capital, value of amounts subscribed by the parent company, subsidiary, jointly controlled company and associated company as well as the changes there.
- In case of public limited company, number and nominal value of the issued shares, by share variety.
- Number and nominal value of the issued convertible bonds.
- Value adjustment thus the evaluation of the revaluation reserve; valuation methods.
- Committed reserves by legal title; reasons for commitments if those ones are not based on statutory requirements.
- Those amounts which, as a result of the assessment, are adjustment items when determining the corporate tax as well as the future impacts thereof if these are of transitional nature.
- Method of calculating the dividend payment.
- Whether the amount of dividend approved for payment is more or less than the amount suggested by the senior official; the non-accepted amount shall be presented while the accepted amount appears in the appropriate row of the balance sheet and income statement (Jogtár, 2017; Kardos, 2009)

In the international accounting, there is no separate standard concerning the equity but the disclosure obligations thereof are as follows:

- Number and nominal value of ordinary shares of the subscribed capital
- Method of calculating the dividend payment.
- Presenting the changes in other reserves.

Disclosure obligations related to provision

According to the Hungarian Accounting Act, in case of the provisions, amount of the reserved provisions and uses shall be disclosed by legal title in the Notes on the Accounts and the justification thereof if there are significant differences from the previous years.

In the international accounting, Standard IAS 37 standard falls within the scope of regulation of provisions and suspense items. Their disclosure obligations are much more detailed than the ones in the Hungarian accounting.

According to the standard, the following information shall be disclosed related to the provisions:

- Provisions by group; opening and closing value thereof by legal title; changes thereof in stock in the current period, by legal title.
- Amount of provisions used and released during the period, by group.
- Increase during the period in the discounted amount arising from the passage of time; effect of changes in discount rate.
- Expounding the nature of liabilities and the pace of the outflow of economic benefits arising therefrom.
- Uncertainties related to the amount and schedule outflows; assumptions related to the future events.
- Amount of any expected returns (Madarasiné – Bartha, 2016).

Disclosures related to the contingent liabilities:

- Groups and short presentation of the contingent liabilities.
- Estimated financial effects of their fulfilments. Uncertainties related to the outflow of assets. Possibility for returns (Lakatos et al., 2013).

If the inflow of assets is likely in connection with the contingent liabilities, the entity shall disclose the following:

- Nature and short presentation of the contingent liabilities.
- Expected financial effect (Lakatos et al., 2013).

Disclosure obligations related to liabilities

In connection with the subordinated long-term and current liabilities, an entity has the following disclosure obligations in the Notes on the Accounts:

- Subordinated and long-term liabilities against the related undertakings.
- Total amount of those liabilities whose residual maturity is more than 5 years.
- In order to present the financial risks, those liabilities whose duration is more than 5 years, or liabilities secured by pledge or other similar rights.
- Item reclassified from long-term liabilities to current liabilities, owing to the due within one year.
- Amount of those financial liabilities which are of great importance for the purposes of assessment, mainly the future pension liabilities, redundancy liabilities as well as liabilities against the related undertakings.
- Debts due to bond issuance or other liabilities and debts of bill of exchange.
- Amount of contingent and certain future commitments by legal title.

- Off-balance sheet items and items not included in the balance sheet, the risk arising therefrom is significant and substantial. (Baracskainé et al., 2003; Kardos, 2009; Sallai, 2016)

In the IFRS, there is no separate standard created for the liabilities but mandatory disclosures apply to the entity in the Notes, which are as follows:

- Amount of long-term loans broken down by legal title
- Items of long-term liabilities reclassified to current liabilities in the given year, owing to the due within one year.
- Evolution of the average interest rate of long-term loans.
- Items presented among the provisions can be reclassified to the liabilities.
- Suppliers and other liabilities broken down by legal title.
- Amount of short-term loans broken down by legal title.
- Evolution of the average interest rate of short-term loans.

Disclosure obligations related to accruals and deferrals

Disclosure obligations of an entity according to requirements of the Hungarian Accounting: Act:

- In case of an entity preparing simplified annual report, details of 'Accruals and deferred income' and 'Accruals and prepaid expenditure'.
- In case of negative goodwill, details thereof if the write-down is longer than 5 years.
- Reasons for impairment loss of 'Accruals and prepaid expenditure'.
- Presenting the debt of bill of exchange and the interest therewith.
- Accrued amount of the unrealised exchange losses.
- Amount of the deferred income and expenses (Jogtár, 2017).

In the IFRS, the accruals do not appear in a separate row. Those ones are presented in the same row as the receivables and current liabilities and the companies specify the content of individual rows as well as significant elements thereof in the Notes (PWC, 2015).

Conclusion

The main goal of each enterprise is the successful operation and its essential tool is the adequate acquisition of information. This is facilitated by the Notes on the Accounts in the accounting system of any country; its aim is the systematic disclosure of such information about the enterprise which assists the market operators analysing the report to create a true and fair picture of the enterprise's property, financial and profitability situation. Both in Hungary and at international level, Notes on the Accounts in different detail are belonging to the different reports. In our country, in the course of an amendment introduced on 1 January 2016, the disclosure data content was expanded but it still does not reach the volume which is required by the standards of IFRS. In this respect, the aim would be that the market operators can obtain every numerical and text data, information and explanation about the enterprise which are needed in order to assess the management adequately.

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AN EMPIRICAL ANALYSIS OF THE EFFECTS OF THE 2007-2008 FINANCIAL CRISIS ON CHANGES IN THE VALUE CREATION OF FIRMS IN INDIVIDUAL INDUSTRIAL SECTORS

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Abstract: *The main goal of this paper to answer the question: what are the factors that influence the value of the firm and how does the influencing force of these factors take shape in the various sectors of ten industries, in the light of the aftermath of the 2007-2008 global financial crisis. Regarding the effects of the crisis, are there any differences among the examined industrial sectors? In this study I examined the validity of my hypothesis with using the available database which I have set according to the related literature reviewed and research objectives. After the literature review I conducted statistical research to answer the research question of this paper. This study proceeds as follow. The first section classifies the firm value drivers based on the related literature. The second part describes the economic crisis, introducing its financial aspects. The next section is the empirical part of the paper, I reveal the database used for my own study. The third part illustrates the panel regression model, the applied method of empirical analysis and the results of the research. Finally, the fourth section includes the concluding remarks. In this paper it is not my purpose to compare the earlier published and already existing research results with my own results.*

Keywords: *value creation, value chain, firm valuation, global financial crisis*

JEL classification: *G32*

1. The Firm's Creation of Value

"The process of value creation is the procurement, management and use of resources with the aim of creating value for the customer." (Chikán& Demeter, 2006, p.3)

Porter (1998), in his theory of the value chain, focuses on the creation of value. In his opinion all companies carry out their activities in order to create value. These activities can be divided into two large groups; primary and support activities. Primary activities are involved in the physical creation of the product and its sale and transfer to the buyer as well as after-sale assistance. Support activities support the primary activities and each other by providing purchased inputs, technology development, and human resources, and various firm wide functions. The generic value chain is seen in the Figure 1. (Porter, 1998, pp.36-43)

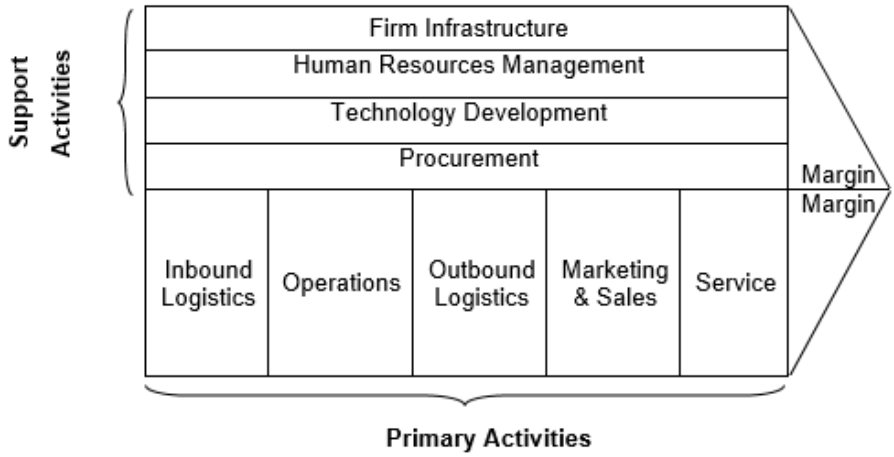

Figure 1. The Generic Value Chain
Source: Porter (1998:37)

2. Identifying of Value Drivers

According to Rappaport (1998), the first task of the leaders of the firm is to grow the shareholder value, which can be achieved by creating a strategy and deciding on operative performance criteria.

The shareholder value approach can be considered universal; it can be used for the analysis of strategies and product lines in private and public limited companies and business units. The direct relationship between the analysis of strategy and shareholder value expresses the idea that the business strategies are "converted" to the amount of finance they create. For the operational managers, one of the most important results of the shareholder value-based analysis is that it helps to decide which activities should receive most attention during the operation of the business. The seven value drivers are the macro value drivers according to Rappaport. There are the follows:

1. sales growth rate,
2. operating profit margin,
3. income tax rate,
4. working capital investment,
5. fix capital investment,
6. cost of capital,
7. value growth duration. (Rappaport, 1998, pp.55-56)

To achieve this, the main evaluation characteristics of the system used to measure performance are, at the company level, the shareholder return, at the operative level the shareholder value added and the indicators which predict value, and at the lower organisational level, the key value drivers. (Rappaport, 1998)

Copeland and co-authors (1999) are of the opinion that the firm's value is determined by its ability to generate cash flow and the return of the invested cash flow, and the determining factors of value are referred to as key value drivers. When comparing the firm's performance indicators they emphasise that there are two methods, the entity DCF-model and the several year economic profit model, which correspond to

the achievement of a long term approach and the capital intensive criterion. (Tóth& Herczeg, 2015)

Damodaran (2006) identifies four valuation models:

1. discounted cash flow valuation,
2. relative valuation,
3. contingent claim valuation,
4. asset-based approach.

Damodaran (2006, pp.406-407) demonstrates two methods of deducing free cash flow. According to one method, we add together all cash flows which belong to the firm's financers, i.e. the free cash flows due to the owners from their own capital, the capital repayments due to creditors, interest expenditure and newly acquired credit, and the preference payments to preference shareholders. With the other method, we add together all cash flows before redistributing them to resource providers. This latter version appears to be easier to use.

$$FCFF = EBIT * (1 - T) - Net\ Capital\ Expenditures - Change\ in\ non\ cash\ Working\ Capital$$

Damodaran (2006) considers the discounted cash flow-based analysis to be the basis of all methods of analysis, the one on which all others are built. In order to understand and use both the relative and the option-priced models, we must start with the DCF process.

Summarising what can be learnt both theoretically and practically from the above sections, we can state that there is a logical relationship between these processes, starting from Porter's (1998) value chain theory – i.e. that aim of the firm's operation is to create value, so the source of the firm's value creation is its operation –, through Rappaport's (1998) shareholder value network and the concept of maximizing shareholder value – with the help of which we can identify value creators –, through Copeland and co-authors' (1999) key value drivers – which determine the values which are closely related to the firm's ability to generate cash flow –, to Damodaran's (2006) evaluation models – including discounted cash flow-based, relative and option analysis and the asset-based analysis models. On all of these theoretical bases we can establish the factors which create the firm's value.

I. FCFF (Free Cash Flow to Firm)= $\mathrm{EBIT} * (1 - \mathrm{T}) - \mathrm{Net\ Capital\ Expenditures} - \mathrm{Change\ in\ non\ cash\ Working\ Capital}$
   a. EBIT (Earnings Before Interest and Taxes)
   b. Tax Rate
   c. Reinvestment=$(\mathrm{Net\ Capital\ Expenditures} + \mathrm{Change\ in\ non\ cash\ Working\ Capital})$
II. Invested Capital
III. ROIC (Return on Invested Capital)

$$ROIC = \frac{EBIT(1-t)}{Invested\ Capital}$$

IV. Net Margin

$$Net\ Margin = Net\ Income\ /\ Sales$$

V. Cost of Capital

$$\text{Market ROA} = \frac{Net\ Income}{Market\ Values\ of\ Equity + Market\ Value\ of\ Debt}$$

VI. Sales Growth Rate

3. The Empirical Analysis of the Role of Factors Influencing Firms' Value

The objective of this article is to answer the question of which factors affect the firm's value, and what changes occurred to drivers related to the value creation of firms in the effects of the 2007-2008 global financial crisis.

With this in mind was analysed a database featuring data from 18 European countries, 10 sectors and 1553 firms in the period between 2004 and 2011, which can be considered a strongly balanced panel, containing few missing observations. The database is found on Aswath Damodaran's website, and several adjustments were made in relation with the database. (http://pages.stern.nyu.edu/~adamodar/, 2014)

The firm value was used for the value of the firm value category, which is the sum of the market capitalization – the best estimate of the market value of equity – and the value of market debt. The factors influencing firm value – as a dependent variable – are those value drivers mentioned above which most determine the value of the firm. In the case of firm value, EBIT, reinvestment and invested capital, were used natural logarithms of the variables, while the natural logarithms of the revenue difference was used for the sales growth rate, since in this way the distribution of the variables approached a normal distribution.

As a continuation of the empirical research, the specification of the panel model was carried out. The panel model – also referred to as longitudinal data analysis –, accompanied by the use of time series and cross-sectional data, is the most tried and tested method. With the help of the panel model it becomes possible to observe the development over time (time series) of the same firm characteristics (cross-sectional data), since the panel database contains several time periods and several individual category entries (firm, industrial sector, country) in tabular form. (Ramanathan, 2003, pp.498-501)

The next step was to specify the multivariable regression model:

$$\begin{aligned} LnFV_{i,t} = \alpha + \beta_{lnEBIT} lnEBIT_{i,t} + \beta_{tax} tax_{i,t} + \beta_{lnReinv} lnReinv_{i,t} + \beta_{lnInvC} lnInvC_{i,t} \\ + \beta_{ROIC} ROIC_{i,t} + \beta_{NetM} NetM_{i,t} + \beta_{MROA} MROA_{i,t} + \beta_{dlnRev} dlnRev_{i,t} \\ + u_{i,t} + \varepsilon_i \end{aligned}$$

The analysis was prepared with the help of the STATA 11 statistics programme, which is able to produce statistical and econometric calculations and graphic presentations of data.

I restructured this panel database so that it would be able to examine the changes caused by the crisis in the different industrial sectors. Consequently, I examined the sectors separately. The earlier researches were published in my previous article. (Kiss, 2015)

In my current research I examine how the 2007-2008 financial crisis affected the relationship between firm value and value drivers. To do this I used a random effect panel regression model, in such a form that alongside the predictors, I introduced the effect of the years as a "time dummy" variables into the model, and also inserted the one-year delayed dependent variable into the independent variables, which assisted me in analysing of impacts. The three most significant effects of the panel regression results are contained the Table 1.

It is characteristic of the **financial sector** that among the factors affecting the value of firm, the firm value in the preceding period, the LnEBIT and the sales growth rate can be considered to be significant and to have a positive effect. The other

independent variables have no effect on the dependent variable. Among the different years in this sector, 2008 had the greatest negative influence, while 2005 had a positive effect on value; the other years were not significant. Analysing the cross effects, it is clear that the multiplication of the LnEBIT*2008 time dummy variable had a negative effect, while the multiplication of LnInvested capital and the 2008 time dummy variable had a positive effect on firm value.

Table 1: Results of panel regression between 2004 and 2011 in the different industrial all sectors

	Financial sector	Energy sector	IT sector
	lnFirm_V	lnFirm_V	lnFirm_V
	Coef.	Coef.	Coef.
lnFirm_V L1.	0.4038***	0.3455***	0.4381***
lnEBIT	0.3711***	0.4122***	0.2884***
Tax_r	0.0126 ns.	-0.0328 ns.	0.0071 ns.
lnReinv	0.0787 ns.	0.0935*	0.1029***
lnInv_C	0.0372 ns.	0.0595 ns.	0.0897***
ROIC	0.0747 ns.	0.0084 ns.	0.0186**
Net_M	0.0027 ns.	0.0233 ns.	1.1144***
MROA	-0.9676 ns.	-4.4935***	-1.7851***
dlnRev	0.2620***	0.2286***	0.2993***
Dummy of 2005	0.3260**	0.4321***	0.4966***
Dummy of 2006	0.0890 ns.	0.1807*	0.5059***
Dummy of 2007	0.0893 ns.	0.1981**	0.2015***
Dummy of 2008	**-2.8200*** **	**-2.6032*** **	**-1.5875*** **
Dummy of 2009	0.0828 ns.	0.2665***	0.4853***
Dummy of 2010	-0.0760 ns.	0.0902 ns.	0.4417***
Dummy of 2011	omitted	omitted	omitted
lnEBIT*2008 dummy	**-0.3305** **	**-0.3619*** **	**-0.1942** **
Tax_r*2008 dummy	0.9401 ns.	0.2875 ns.	-0.1357 ns.
lnReinv*2008 dummy	-0.0518 ns.	**-0.1873*** **	**-0.1599*** **
lnInv_C*2008 dummy	0.5392***	0.6293***	0.4374***
ROIC*2008 dummy	-0.0229 ns.	3.5956***	1.3911***
Net_M*2008 dummy	0.5173 ns.	-0.4445 ns	-0.2263 ns.
MROA*2008 dummy	-1.5253 ns.	1.1746 ns.	-0.3142 ns.
dlnRev*2008 dummy	-0.0024 ns.	0.0651 ns.	0.0949 ns.
cons.	2.1550***	2.2856***	1.4417***
R^2 overall	0.9334	0.9448	0.8973
R^2 within	0.7772	0.7979	0.6868
R^2 between	0.9493	0.9571	0.941
Wald (chi^2)	7942.81***	23001.48***	6916.08***
Number of observations	210	232	607

Source: own calculation
Note: At the levels of significances *** 1 %, ** 5 %, * a 10% respectively

For the **energy sector** it can be stated that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnReinvestment and the sales growth rate can be considered to be significant, and to have a positive effect, and

the return on the assets taken at market value is also significant, but has a negative effect. The other independent variables have no effect on the dependent variable. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it can be observed that the multiplications of the LnEBIT*2008 time dummy variable, and the LnReinvestment*2008 time dummy variable have a negative effect, while the multiplications of the LnInvested capital and the ROIC 2008 time dummy variables have a positive effect on value.
The characteristics of the **IT sector** include the fact that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnReinvestment, the LnInvested capital, the ROIC, the net margin and the sales growth rate can be considered to be significant, and to have a positive effect, and the return on the assets taken at market value is also significant, but has a negative effect. The tax rate has no effect on dependent variable. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it is noticeable that the multiplications of the LnEBIT*2008 time dummy variable, and the LnReinvestment*2008 time dummy variable have a negative effect, while the multiplications of the LnInvested capital and the ROIC 2008 time dummy variables have a positive effect on value.
The characteristics of the **basic consumer goods sector** include the fact that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnReinvestment, the LnInvested capital, the ROIC, the net margin and the sales growth rate can be considered to be significant, and to have a positive effect, and the return on the assets taken at market value is also significant, but has a negative effect. The tax rate has no effect on dependent variable. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it is noticeable that the multiplications of the LnEBIT*2008 time dummy variable, the LnReinvestment*2008 time dummy, and the net margin*2008 time dummy variables have a negative effect, while the multiplications of the LnInvested capital and the ROIC 2008 time dummy variables have a positive effect on firm value.
The characteristics of the **raw materials sector** include the fact that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnReinvestment, the LnInvested capital, the ROIC and the sales growth rate can be considered to be significant, and to have a positive effect, while the tax rate and the return on the assets taken at market value have a negative effect on the dependent variable. The LnReinvestment and the net margin have no effect on dependent variable. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it is noticeable that the multiplications of the LnEBIT*2008 time dummy variable and the LnReinvestment*2008 time dummy have a negative effect, while the tax rate, the LnInvested capital and the net margin multiplied by the 2008 time dummy have a positive effect on firm value.
Among the characteristics of the **health services sector** is the fact that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnInvested capital, the net margin and the sales growth rate can be considered significant, and have a positive effect, and the return on the assets taken at market value is also significant, but has a negative effect. The other variables have no effect on the dependent variable. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it is noticeable that the multiplications of the LnEBIT*2008 time dummy variable, the net margin*2008 time

dummy, the MROA*2008 time dummy, the net margin*2008 time dummy and the sales growth rate*2008 time dummy have a negative effect, while the multiplications of the LnInvested capital and the ROIC 2008 time dummy have a positive effect on firm value.

The characteristics of the **public works sector** include the fact that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnReinvestment, the LnInvested capital, and the sales growth rate can be considered to be significant, and to have a positive effect, while the tax rate is also significant, but has a negative effect. The ROIC, net margin and the return on assets taken at market value have no effect on the dependent variable. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it is noticeable that the multiplications of the tax rate*2008 time dummy variable, the LnInvested Capital*2008 time dummy and the net margin*2008 time dummy have a positive effect, while the multiplication of the sales growth rate with the 2008 time dummy has a negative effect on the firm's value.

The characteristics of the **industrial sector** include the fact that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnReinvestment, the LnInvested capital, the ROIC, the net margin and the sales growth rate can be considered to be significant, and to have a positive effect on dependent variable, while the return on assets taken at market value have a negative effect. The tax rate has no effect on the dependent variable. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it is noticeable that the multiplications of the LnEBIT*2008 time dummy, and the LnReinvestment*2008 time dummy have a negative effect, while the multiplications of the LnInvested Capital, the ROIC and the sales growth rate with the 2008 time dummy have a positive effect on the firm's value.

For the **consumer goods sector** it can be stated that all factors affecting firm value are significant. The firm value of the preceding period, the LnEBIT, the LnReinvestment, the LnInvested Capital, the ROIC, the net margin and the sales growth rate have a positive effect, while the tax rate and the return on the assets taken at market value have a negative effect. 2008 had a negative effect on firm value, while the other years had a positive effect. Analysing the cross effects it is noticeable that the multiplications of the LnReinvestment*2008 time dummy variable and the MROA*2008 time dummy variable have a negative effect, while the multiplication of the ROIC with the 2008 time dummy variable has a positive effect on the firm's value.

For the **telecommunications services sector** it can be stated that among the factors affecting firm value, the firm value of the preceding period, the LnEBIT, the LnReinvestment, the LnInvested Capital, the ROIC, the net margin and the sales growth rate can be considered to be significant and to have a positive effect on dependent variable. The tax rate and the return on the assets taken at market value have a negative effect on dependent variable. This is the only sector where the panel regression carried out does not support the negative significance of the year 2008 on the dependent variable, since its effect on firm value is significantly positive, as in the other years. Analysing the cross effects it can be observed that the multiplications of the LnEBIT*2008 time dummy and the tax rate 2008* time dummy have a positive effect on the firm's value, while the multiplication of the return on the assets taken at market value with the 2008 time dummy has a negative effect on the its value.

4. Conclusions

On the basis of the results it can be said that among the 10 sectors, it was in the financial sector that there was felt the greatest negative effect in the year 2008, i.e. this was the worst affected sector. The next sectors in the list were the energy sector and information technology, followed by basic consumer goods, raw materials, the health services sector, and then public works and industrial, and finally, consumer goods. On the basis of the regressions it can be stated that the year 2008 had no significant effect on the business value of the telecommunications sector.

If we look at the sectors to see what effect the individual value-creating factors have on business value, we can see that there are differences between the sectors and between the individual sectors and the cross-sectoral branches. While in the regression model which included all sectors (see Kiss, 2016) all the value-creating factors had a significant effect on the dependent variable, the significant effect was not characteristic when examining the individual sectors one by one.

Summarising the analysis of the variables following the effects of the crisis in the 10 industrial sectors, I formulated the following: Examining the effects of the 2007-2008 financial crisis in individual industrial sectors also shows that, with the exception of the telecommunications sector, 2008 was the year of the crisis in all sectors. The crisis was felt most keenly in the financial sector. Among the factors influencing value many predictors lost significance, and only in the consumer goods sector did all independent variables have a significant effect on firm value.

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THE COMPARATIVE RISK ANALYSIS OF SMALL AND MEDIUM ENTERPRISES

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Abstract: *This paper is dealing with the comparative analysis of corporate risk by applying of different risk quantifying methods used both in national and international literature. The investigation is based on selected number of anonymous small and medium sized enterprises' simplified financial annual report. In Romania, as in other Central European countries, the small and medium-sized enterprises play an important role on aspect of GDP stimulation and jobs creation. For this research, the data will be ensured by simplified financial reports of 173 small and medium-sized enterprises registered in County Bihor between 2011 and 2012. The selected enterprises are 135 trading firms (78,03%) and 38 manufacturing firms (21,97%). For the corporate risk quantification, firstly, I will use the dynamic risk measures: degree of operating leverage (DOL), degree of financial leverage (DFL) and the product of them degree of combined leverage (DCL). The first two risk ratios will be used further as main features in investigated enterprises grouping. The grouping of investigated enterprises will be carried out by using of K-means non-hierarchical cluster analysis. In the second part of research, I will also calculate the main dispersion measures of Return on Assets (ROA) for each clusters. So, I will carried out the quantification of corporate risk by the following dispersion indicators: standard deviation, semi-deviation, (semi-standard deviation), mean absolute deviation and median absolute deviation. For the better illustration of differences and similarities between each clusters, I will apply metric multidimensional scaling (MDS). The calculations will be carried out in R statistics software program by using kmeans and cmdscale functions. The results of analysis are different in case of investigated methods. According to cluster analysis, the major problem of enterprises is the operating risk, because the value of degree of operating leverage (DOL) shows extremely high (cluster 3.) and low (cluster 1.) values. In term of financial risk, we can conclude that enterprises are well situated, because the values of degree of financial leverage (DFL) are relatively low, only the firms from cluster 1. and cluster 3. should be careful in term of debt level. While the cluster analysis by dynamic risk indicators considers the firms from cluster 1., cluster 3., and cluster 11 as the most risky, the investigated dispersion measures class firms differently. According to this, the firms from cluster 1., and cluster 6. represent an average position and can be considered appropriate in term of risk. The enterprises from cluster 3. and cluster 11. are quite different on aspect of risk, because their points of MDS graphical representation are so far situated.*

Keywords: *risk; degree of operating leverage; degree of financial leverage; risk analysis; standard deviation; semi-deviation; mean absolute deviation*

JEL classification: *G3; G30; G32.*

1. Introduction

In case of majority of enterprises' life cycle, it is difficult to determine a short period in which the risk is absent. Achieving profit and thus shareholder's capital maximizing is a prerequisite of risk-taking, so the identification and measurement of risk is essential at company. In addition, rapid and unpredictable changes in the economic environment, the globalization, the increased competition put even more the importance of dealing with the risk assessment. In order to productive financial management, beside the main activities decisions, the company managers have to invest time and capital for risk management, which is a quite complex task. In the international literature, we can read about risk management as a holistic and business system integrated activity, which affects all divisions of the company. The definition of the main tasks of risk management is quite different from author to author, but I think that one of the key part consists in mapping and quantification of company's threatening risks factors. The aim of this paper consists in comparative analysis of results obtained by applying of different enterprise risk quantifying methods used in national and international literature.

2. Review of literature

Regarding to risk quantification, several questions arise, on one hand what is the meaning of risk and what distinguishes the risk from uncertainty. Another question is also how can we measure something what we don't know with certainty. After reviewing the international literature about this topic, it's difficult for researcher to decide about the most coherent measure of corporate risk, because the opinions about this are so different. Another difficulty related to risk quantification is the fact that the risk itself is difficult "to measure", because directly it's really can't be measured. This is why we often try to capture it through the changes of an economic variable (Kovács, 2011). In practice, the decision-makers often consider the risk as "the probability of negative event occurrence. According to Mun (2006), under the concept of risk, we can understand the probability that the achieved, real value of returns, yield is different from the expected, planned value. Therefore, in the risk quantification we can often find the concept of probability. This approach is simple and can be effective in risk measurement. We should take into account that this deviation from the desired return can be positive or negative, so this is why the researchers characterized the risk as a symmetric concept. Gallati (2003) try to accent both the positive and negative side of risk.

One of the most common method for risk measuring is variance and its root square, the standard deviation and the coefficient of variance. According to Eftekhari et. al. (2000) the most commonly used risk quantification measure in the financial area is the variance. One of the major disadvantages of the standard deviation is that it doesn't measure the risk directly, so the calculation of it is based on the deviation from mean of an economic variable (yield, return) selected by the researcher. According to Holton (2004) we can't put the sign of equality between risk and changes in return, or another selected economic variable, because the variances of return can be interpreted only as a proxy of risk.

In my opinion, the great financial changes from recent years have emphasized the need for the dynamic methods in financial risk investigation. One of the great merit of the dynamic methods is that there are able to take into account the temporal variability of risk factors, which is essential today. Regarding to these, in my paper

on risk analysis, I used risk quantification methods that are commonly used in both domestic and international analysis for determining company's financial and operating risk. In case of enterprises, the result is the main variable in which the amplifier effect of leverage appears, so the degree of operating leverage (DOL) and the degree of financial leverage (DFL) are often used to quantify the operating and financial risks. First, I will use the above-mentioned dynamic risk indicators (DOL, DFL) which further will be used as main features in firms grouping. In the second part of paper, I also intend to explain the companies' risk with main dispersion measures of Return on Assets (ROA): standard deviation, semi-deviation, (semi-standard deviation), mean absolute deviation and median absolute deviation. The reason of using this profitability indicator is that the changes in Return on Assets (ROA) is also essential in term of risk analysis.

3. Research methodology

In this article, the risk analysis is based on simplified financial reports for 2011 and 2012 of Romanian small and medium enterprises registered in County Bihor. Regarding to the economically dominant role of SMEs sector, for present research I use SMEs. In Romania, like in other Central and Central-Eastern European countries, SME's has essential role both in term of great level of GDP contribution and high level of employment rate. According to Romania Statistical Institute's publications, in 2008 were 18 798 companies registered in County Bihor at which the number of employees does not exceed 249 people. The major part of small and medium sized enterprises (39%) registered in County Bihor were trading companies, companies dealing with real estate transactions (16,09%), followed by manufacturing firms (11,92%) and transportation, storage and communication companies (10,06%). The great part of total turnover of Romanian SMEs' is provided by trading companies (nearly 50%), followed by manufacturing enterprises (nearly 20%). In this article, the risk analysis was performed by the k-means cluster analysis based on 173 simplified financial reports of small and medium enterprises registered in County Bihor for the years 2011 and 2012. The sample consists in 135 trading firms (78,03%) and 38 manufacturing firms (21,97%). According to Molak (1997) approach one of the most important component of risk is variability, which means temporal and spatial heterogeneity of values. After investigation of main statistics of degree operating and financial leverage ratios and some financial ratios it is clear that the analyzed sample presents great heterogeneity (high coefficient of variance) so the average value cannot be used for sample characterizing. The high values of coefficient of variance of the investigated ratios clearly show a strong volatility and riskiness of the analyzed firms. In order to obtain more homogeneous samples, I chose for enterprises grouping with k-means non-hierarchical cluster analysis. This was carried out by using the results of degree of operating leverage (DOL) and degree of financial leverage (DFL) indicators. The cluster analysis is used in many research fields such as science, medicine, economics, etc. (Härdle - Simar, 2011). The great merit of this method is that with researcher's specified criteria explores well the similarities and differences between analyzed individuals. In contrast to the hierarchical clustering methods, the non-hierarchical methods are considered more flexible. In this study, I applied non-hierarchical clustering, which allows the ulterior transfer of an object from one group to another (Johnson - Wichert, 2014). Among the non-hierarchical methods, one of the most well-know is the K-means clustering

in which the elements of sample is assigned to k-number of groups defined by the researcher (Szűcs, 2002). The method of non-hierarchical clustering method works on iteration principle. The iteration process aims to reduce the variability within the established clusters and to increase the spread between clusters. During the grouping of elements, the measurements of distances are based on Euclidean's distance algorithm.

In this paper, the calculations were carried out in an open source statistical software system, the R statistics, by using kmeans function. In R, the k-means clustering could be performed with several algorithms (Hartigan-Wong, Lloyd, Forgy, MacQueen), but the default and the most commonly used as well is the first from the enumerated before.

One of the disadvantages of classical risk measurement methods (standard deviation, variance, coefficient of variance) is that, they ensure so called symmetrical approach of risk, because they treat same the values situated below and above the mean. So, these methods do not make difference between profit and loss and during the calculation of risk, treat them similarly. According to these risk measurement methods, the enterprises' profit is considered as risky as companies' loss. The solution for this inconvenient is provided by semi-variance or semi-deviation (semi-standard deviation), which works only with values situated below the average. In this approach, only the firms' losses are considered unfavorable, risky event. So, both semi-variance and semi-deviation (semi-standard deviation) are named one-sided or asymmetrical risk indicators. According to Eftekhari et. al. (2000) one of the inconvenient of standard deviation and semi-deviation is that are relatively sensitive to outliers. This problem can be avoided by usage of mean absolute deviation, which works with the arithmetic average of absolute deviation from mean. While the majority of the researchers consider as advantage the fact that mean absolute deviation is less sensitive to outliers, Bugár and Uzsoki (2006) considered this as a disadvantage, because it underestimates the probability of high losses occurrence in critical periods like crisis. As the variance and standard deviation, the mean absolute deviation can be considered a symmetric, two-sided dispersion indicator. In addition to the indicators mentioned above, I calculate the median absolute deviation, which is an arithmetic average of deviation from the median. The four dispersion indicators will be calculated for each cluster, which contains more than 10 enterprises. In order to improve the transparency on differences and similarities between clusters I used multidimensional scaling (MDS). Multidimensional scaling is a statistical method, which includes elements in at least two-dimensional system, in order to illustrate the differences between the analyzed data. One of the major merit of this method unlike other methods is that the similarities and differences between analyzed elements are visualized in a graphical representation, in two or more dimensions coordinate system. The analyzed elements appears as points, and the similarities and differences between the points are indicated by the distances between points (Kruskal – Wish, 1978).

In this study, I applied metric multidimensional scaling, because the indicators used for scaling are variables explained by ratios (Kovács, 2006). Against to other statistical method, one of the major advantage of multidimensional scaling (MDS) is that doesn't assumes any requirement for the sample data, except the fact that the data have to be expressed in the same unit and these have to bear some information, features about investigated sample. Another merit of this method is that the efficiency of it isn't affected by the presence of outliers and by the correlation between data

(Kristof, 2008). In this paper, the classic two-dimensional scaling is applied by using cmsdscale function from R statistics statistical software. According to Takács (2013) by using the Euclidean's distances algorithm, the classical multidimensional scaling provides also the optimal solution and graphical representation.

4. Results of research

As I mentioned before, in this study I made the grouping of companies by k-means non-hierarchical analysis. The k-means cluster analysis is based on County Bihor SMEs' simplified financial reports for 2011 and 2012. The grouping of firms were carried out by two factors, according to the values of the degree of operating (DOL) and financial leverage (DFL) indicators. Among the obtained clusters, were selected for further analysis only the clusters which ones contained more than 10 companies. According to this, in 2012, four clusters was analysed in details. Over 80% (142 enterprises) of analysed sample were classified in these four groups.

The distribution of enterprises after clustering is the following:

1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**	**12.**
37	1	**10**	2	4	**82**	8	3	6	2	**13**	5

The mean values of degree of operating and financial leverage of the selected clusters are presented in the following table. We can see in Table no. 1 the main risk and financial characteristics of clusters containing more than 10 enterprises. We can observe among the indicators liquidity, indebtedness, profitability ratios, which can be associated with the analysed leverage indicators.

Table 1. The analysed clusters risk and financial indicators in 2012

Indicators	**Cluster 1.**	**Cluster 3.**	**Cluster 6.**	**Cluster 11.**
Number of enterprises	37	10	82	13
Risk indicators				
Degree of operating leverage (DOL)	-463,28	106,23	0,75	31,65
Degree of financial leverage (DFL)	1,95	1,61	0,74	0,54
Degree of combined leverage (DCL)	-904,86	171,07	0,56	16,97
Financial ratios				
Liquidity ratio	1,30	1,28	1,42	1,57
Total indebtedness (%)	66,19	68,95	62,67	62,99
Return on Assets (ROA - %)	5,16	0,53	6,66	3,86

Source: Own calculations

In 2012 the cluster 1. contains 21,39% of the analyzed sample. The cluster 1. contains enterprises which can be characterized by extreme operating because the degree of operating leverage takes negative value. This extremely low value of the indicator attract attention to an extremely high degree of volatility, which can be a signal for very high operational risk. This high value means that an increase in turnover with 1% causes a substantial decrease in operating result. This extremely high sensitivity of results are probably caused by the high value of operating costs. For this reasons, the companies belonging to the cluster 1. should pay more attention to the operating cost optimization. Better coverage of costs can be achieved by increasing of revenues and with reducing of operating costs. The negative value of degree of operating leverage (DOL) also attract attention to the sales volume which is below the break-even sales volume which can be interpreted as an unfavorable situation. The degree of operating leverage shows the greatest fluctuation near the break-even point, so this extremely high change in operating results indicates that companies sales is near to the break-even sales, but it doesn't reach it.

In case of companies from the cluster 1. can be seen a high level degree of financial leverage (DFL), which shows considerable variability in the net income. In comparison with other clusters, this group shows the highest value of financial leverage which indicates significant financial risk. It is clear, that the leverage ratio exceeds the upper limit of recommended value 1,33 so 1,5, which means an unfavorable situation. The unfavorable situation is also shown by the interest coverage ratio, which can be calculated as a fraction between earnings before interest and taxes (EBIT) and the financial expenses. The practice shows that the average value of this ratio is between 1,5 and 2,5. However financial institutions expect a higher value to their customers, around 5. The value of 1,95 of the financial leverage is associated with a lower interest coverage rate (2,05), which refers to a limited financial freedom in term of results utilization, so the interest expenses represent a great proportion of the operating result (48,72%). This means that only 51,28% of the results can be used for other purposes. But companies should take into account that in addition of interest expenses, they have also the obligation of loan repayment, what should be covered from the net income. According to the literature, there is direct correlation between the value of degree of financial leverage (DFL) and the level of indebtedness. According to this, the higher foreign capital may lead to financial risk increasing. This rule is clearly true in case of cluster 1., because the level of total indebtedness reached 66,19%. Bigger value of credit means higher value of interest expenses, resulting in lower interest coverage rate, what indicates a lower financial freedom.

The program listed in cluster 3. the companies with extremely high operating leverage, because in this case the ratio exceeds 100 points. The high operating leverage indicate increased variability which could be assessed as a very dangerous situation in term of risk. We can read in the literature that close to the beak-even point, the operating leverage is most sensitive, so the more sales volume exceeds the break-even sales volume, the value of operating leverage decrease. In case of positive result, the considerable variability take an amplified effect on operating profit, but if the conditions take negative turn, the same degree of profit decrease can be achieved. The decision makers should take into account the importance of solving the above mentioned problems in a short time and in appropriate manner, because otherwise the increasing of operational risk even more will result. We can

see in Table 1., that the extremely high operating leverage ratio can be associated with the very low value of return on assets (ROA).
In the cluster 3., were included the firms which score slightly exceed the 1,5 acceptable value of financial leverage (DFL). Although, the value of financial degree is higher than 1,33, I consider that this value can still be considered as acceptable. The obtained value indicates relatively moderate net income sensitivity caused by operating result changes. This level of variability is still acceptable, because it shows an assumable level of financial risk, which can be linked to 'healthy' business growth. It is clear that the companies, which use foreign capital for their activities financing, also have to deal with the financial risk, but companies should be careful in term of mentioned indicator's level. It is essential, that companies take also into consideration the cost of foreign capital, because if it exceeds the return on the assets (ROA) the effect of result multiplication cannot be achieved. It is also important for companies to evaluate the interest coverage ratio and if it is high, an extra borrowing may be allowed. In case of this cluster, value of financial leverage (1,61) can be associated with the average level interest coverage ratio (2,64). This means that the operating result represents the threefold of interest expenses which is admissible. This also means that companies dispose free the 62,11% of operating leverage. This shows an average, acceptable financial freedom in term of result usage. Despite of relatively high indebtedness of enterprises from cluster 3., the degree of financial risk remains at reasonable, bearable level. We can see that in case of this cluster, the foreign capital plays an important role. This is well illustrated by the value of the total indebtedness, which takes the highest value from analyzed clusters.
The cluster 6. contains the major part of enterprises, the 47,40% of the investigated sample. In the case of this cluster, the operating leverage (DOL) is below 1, which means that the leverage effect cannot be interpreted. This is the result of the fact that the change of sales does not cause any change in operating result. If we examine the data, it is clear that in case of this cluster the leverage effect is absent. Similar situation can be seen by the examination of financial leverage (DFL) because this not reach the value 1. This also means that the degree of financial leverage cannot be interpreted. Despite the fact that, we susceptible to characterized the above mentioned situation as a favorable, in fact this shows the absence of amplifier effect. This is basically the consequence of fact that the operating leverage decrease is higher than the net income decrease.
The cluster 11. contains the enterprises with extreme working, because the operating leverage (DOL) exceeds 30 points. The significant value of operating value attract the attention on exceptionally high risk level. This high value also indicates that fix costs of companies aren't on adequate control. The high level of fix operating costs determine a very high operating leverage, reflecting an unfavorable situation. Based on the received value, serious operating fluctuation can be observed as the effect of sales changes. The positive value of operating leverage, shows a very high amplifier effect, which can be interpreted as favorable, but also very dangerous in term of risk. The great value of operating leverage also denotes, that the companies sales volume do not exceed the break-even point sales volume, which can lead to serious functioning problems. Improving present situation is essential in order of better functioning. The high operating leverage can be connected with low assets efficiency, revealed by the return on assets ratio (ROA).

By analyzing the financial leverage (DFL), we can conclude that in case of companies from cluster 11. the results show the absence of amplifier effect, because the value of this indicator is less than 1. It may be noted, that in this cluster, the great part of developments are financed from fix costs, rather than foreign borrowing.
As we can see from Table 1., the degree of combined leverage (DCL) shows extremely low (cluster 1.) and high (cluster 3.) which means that this groups can be considered as outliers on aspect of risk. The cluster 11. which represents the 7,51% of investigated enterprises, also takes high risk level because of great level of operating risk (31,65). The great part of investigated sample is classed in cluster 6. (59,85%). In case of this group the result amplifier effect, the leverage effect can't be interpreted.
We can conclude, that at the big part of investigated companies, the operating leverage (DOL) is the indicator which takes extremely high values (cluster 1., cluster 11.) or very low values (cluster 1.). According to this, a very radical position it draws in term of companies functioning, which can be appreciated as unfavorable situation. In some cases very high, sometimes too low operating leverage values, indicates the deficiencies in term of fixed cost covering. But the problem is that this gap should be covered and the big part of companies resort to borrowing, which may increase considerably the degree of financial leverage (DFL). The high foreign capital costs, which exceed the value of return on assets (ROA) value may have destructive effects on the results. Therefore, the collective and systematic monitoring of both operating and financial leverage can be the key for success, because in this way can be revealed interrelated problems to the decision-makers that otherwise remain hidden. Detection of this can be essential, because it can avoid the less efficient operating, the insolvency, and the more dangerous the companies' bankruptcy.
It were been calculated the following dispersion measures of return on assets (ROA) – financial indicator for each cluster: standard deviation, semi-deviation, mean absolute deviation, and the median absolute deviation. The values of below mentioned measures are presented in Table 2. The reason why I use the return on assets (ROA) is the fact that the risk can be explained as the fluctuations in results.

Table 2. The investigated clusters main dispersion measures in 2012

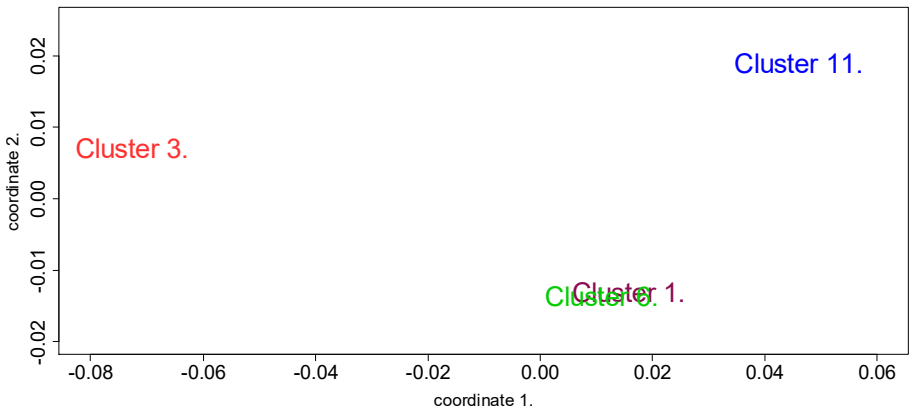
	Cluster 1.	Cluster 3.	Cluster 6.	Cluster 11.
Standard deviation	0,11	0,16	0,11	0,11
Semi-deviation	0,07	0,14	0,07	0,04
Mean absolute deviation	0,07	0,09	0,09	0,06
Median absolute deviation	0,07	0,08	0,07	0,04

Source: Own calculations

As we can see from Table 2., in case of three clusters from the four investigated no significant differences can be observed in term of standard deviation (cluster 1., cluster 6. and cluster 11.). According to this, in 2012, the highest level of risk can be seen in case of enterprises included in cluster 3. It is clear, that the standard deviation is not the most coherent indicator for explaining risk, because it doesn't shows any differences in term of risk in case quite different enterprises groups. If we explain the risk level only with the deviation situated below the mean (semi-deviation) the riskiness of analyzed clusters seems to be different. According to semi-deviation, the enterprises belonging in cluster 1. and cluster 6. are similar in term of risk, while the cluster 11. is least risky. Both standard deviation and semi-deviation class the cluster 3. as the most riskiness. By analyzing of the mean absolute deviation

indicator, we can see the greatest values in case of cluster 3. and cluster 6., which means that these are the most risky. In case of cluster 1. and cluster 11. a lower mean absolute deviation can be observed. According to median absolute deviation similar risk level can be observed at the cluster 1. and cluster 6. The median absolute deviation also characterized the cluster 3. as the most riskiness.
The median absolute deviation is lowest in case of cluster 11., which means that the enterprises from this cluster are the least riskiness. According to the last three investigated dispersion measures, the companies from cluster 11. can be considered the less riskiness. For the better illustration of similarities and differences between each analyzed clusters, I applied multidimensional scaling by below analyzed four dispersion measures. The spatial localization of each investigated clusters, is presented in the following two-dimension coordinate system. For the multidimensional scaling of the objects (clusters) I used as main features the four dispersion indicators.

Graph 1. The result of multidimensional scaling by the four dispersion measures (2012)



Source: Own calculation

As it is shown in Figure 1., the four clusters are located in different points in the two-dimensional coordinate system. The distance between cluster 3. and cluster 11. is larger, because of significant differences between them. At the opposition side, the cluster 1. and cluster 6. are relatively closer, which indicates the similarities between these groups. From the localization of cluster, we can see that the cluster 3. and cluster 11. are characterized by extremely high and low risk, so there is significant difference between them. In contrast with this, are clusters 1. and cluster 6., which represent an intermediate situation regarding risk, because they are located between two extreme positioned clusters. Essentially, we reach similar findings from the above investigated dispersion measures presented in Table 1., but I think that representing clusters in this way ensures much more relevant and transparent view of the main differences and similarities between analyzed objects (clusters).

5. Conclusion

The comparative analysis of corporate risk provides quite different results. The dispersion of investigated enterprises is quite different in case of cluster analysis by dynamic risk indicators and multidimensional scaling by the main dispersion measures. The results of dynamic risk indicators shows that operating risk is which one may be a problem for analyzed enterprises, because the degree of operating leverage (DOL) shows high values. In term of financial risk, the enterprises from cluster 1. and cluster 3. have to be careful in the future. The high values of degree of financial leverage (DFL) at this clusters can be also connected with higher level indebtedness.

According to cluster analysis and the degree of combined leverage (DCL), the firms from cluster 1. (21,39%) and cluster 3. (7,29%) can be considered the extremist on aspect of risk, while the cluster 1. reached the lowest value of DCL, in case of cluster 3. the highest value can be observed. In case of companies from cluster 11. representing 7,51% of investigated sample, the risk is also high as a consequence of great level of operating risk (31,65). The major part of investigated firms were classed in cluster 6. (59,85%) and can be characterized as firms where the result amplifier effect, the leverage effect can't be interpreted.

The multidimensional scaling by main dispersion measures shows another hierarchy of investigated companies. According to this method, the enterprises from cluster 3. and cluster 11. can be considered as extremist in term of risk, because the distance from points representing them are so far from each other. By the results the cluster 3. is the most risky and the cluster 11. can be considered the less risky. The firms from cluster 1., and cluster 6. support an average position and can be considered appropriate in term of risk.

In conclusion, I consider that the results of this research also confirm that researchers have a great task when they choose the best fitting, the most coherent risk quantification measure. As we can seen from results of present research, the dispersion, the hierarchy of companies may be different. I consider that the effectiveness of investigated methods is not questionable, but the choosing between risk measurement methods seems to be a great task for researcher. In my opinion, before we choose the best fitting risk measure, we have to clarify the main aim of research. According to the researchers goals, can be used dynamic risk methods or the main dispersion measures.

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STUDY REGARDING ETHICS IN THE BANKING SERVICE INDUSTRY IN THE CITY OF RESITA

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Abstract: *Every business must consider ethics as a guideline for the development in the future. The banking service sector is no exception. The present paper aims at studying the attitude of individuals in Resita towards the aspect of ethics in the banking service industry. The first part of the paper consists in presenting general theoretical considerations regarding the concept of ethics and banking, while the second part presents a research based on a questionnaire, applied on a representative sample of individuals.*

Keywords: *ethics; banking sector; service; clients; finance.*

JEL classification: *G21; L21.*

1. Introduction. General aspect regarding ethical issues in the banking sector

Literature states that banking represents "one of the oldest industries of the world" (Goyal, Joshi, 2011). We can thus trace the history of banking, in several sources, to the very first evidence of this kind of service, way back in 2000 BC, in regions like "Assyria and Babylonia", but also Ancient Greece or the Roman Empire.

Still, no business can be successfully performed if we face a lack of honesty, trust or even ethical principles. The banking industry is no exception. Thus we must speak about ethics mainly as a necessary aspect, but also a "must have" for the initiators of any type of business. Ethics have since become not only an issue due to be respected, but also a field of study and, largely, a science (Resnick, 1998), which is considered by various authors (Gisler, 2007) as the one that deals with the study of "moral principles (…) and their role in the society" (Medar, 2011).

Researches also define ethics as "a system" (Gilman, 2005) consisting in several criteria and also measures which have the main purpose of studying the basic rules, values or concepts as "good, bad, right, wrong" (Thomson, Schmoldt, 2001), but "underlying the individual and social relations on such moral grounds" (according to www.isbank.com.tr), while aspects like trust and integrity are considered valuable "moral goods", that must be widely taken into account, no matter of which field or domain we speak about. Boatright (Boatright, 2011) considers these as essential for any activity, because very few businesses could be "possible without them", while the mutual relationships between individuals and also between a person and society are under the influence of professional and general ethics. The behavior of an individual both inside an organization and as a member of society are defined by rules and regulations, materialized as personal and institutional ethical guidelines.

The banking industry has faced a series of difficulties during the latest years, some even consider that now "it finds itself at a crossroad" (Carboni, 2011), mainly because of the financial crisis worldwide, as the failure of various financial

institutions only led to the loss of trust from the actual and potential customers. So, ethics in the field of finance, in a time of great challenges worldwide may become a challenge itself (Gonzalez, 2013). Clients represent the center of existence for any business, but when speaking about banks, there are surely “sets of rules on working with them” (Burkova, 2009), on the basis of shared values, the banking practice establishing certain “additional legal and ethical laws and regulations” (Burkova, 2009), in order to safely ensure quality financial service providing for the customers. Surely, the perception of clients regarding these aspects vary from a case to another, but certain standards are necessary in order to ensure quality when providing these services, even if uncertainty is generated sometimes and also distrust, based on previous ethical mistakes.

One of the main characteristics of the European banking industry is that there are multiple choices from which a client can select an entire service system, whether the financial purpose is to make a deposit of to take a loan. Carboni (Carboni, 2011) even describes it as a “multifaceted landscape”, with a “wide range of actors and practices”, in which the issue of ethics is destined to “create rules of behavior” (Medar, 2011) for the whole industry, as we face a market splitting between the public and private system of banking.

When speaking about banking industry, we must first understand the concept of bank, as a financial institution, which develops a purpose of “financial intermediation among various components of our society” (Goyal, Joshi, 2011).

Literature (Goyal, Joshi, 2011) identify the acceptance of deposits and loan providing for sustainable activities as the main “tasks” for a financial institution, but the “failure of markets, institutions and morality calls for an ethical framework” (Kung, 2013). It is expected for both the private and public financial institutions to play an important role in ensuring sustainability worldwide.

According to Carboni, the global economic crisis created a general financial meltdown in 2008 (Carboni, 2011), but banking institutions are still “fundamental to development” (Gonzalez, 2013), organizations like OECD pleading for “truthfulness, honesty, transparency”.

In recent years, finance and also banking activity became a “lightning rod” for the effects of the general financial crisis. (Banffi, 2013) Ethics in the banking sector, already partially different from other businesses (Boatright, 2011) thus refer to “the moral and ethical relations, but they are closely related to the legal norms that comprise the banking legislation” (Fetiniuc, Lucian, 2014), while the infringement of these leads to a more severe conflict.

Mainly, banking remains one of the most closely studied fields (Banffi, 2013), the main ethical elements taken into account being the laws that govern the overall financial activity, but also the specific set of rules and regulations that manifest influence over the business behavior (Medar, 2011).

2. The methodology of research

The research methodology included three phases, namely:

1. The preliminary stage, consisting in discovering the problem, establishing the purpose and the objectives of the research
2. The designing stage, consisting in choosing the sources of information and the ways of collecting the latter

3. The stage of realization, consisting in collecting information, analyzing it and drawing conclusions.
Nowadays, in the context of the consequences of the economic crisis, the relations between the customers and the banks have cooled, and the banking services are often avoided by the clients, which on the one hand show a lack of confidence in this type of services, and on the other hand manifest very high demands regarding the overall quality.
The aim of the research was to know the level of clients' trust, the satisfaction and the importance given to the services provided by the banking institutions in the city of Reşiţa, the objectives consisting in:
- determining the extent to which consumer perceptions regarding the quality of banking services influence their perceptions regarding their relationship with the bank, and thus their behavior towards the bank
- the development of marketing strategies for the promotion of banking products and services, which aims at: increasing the clients' trust in the services offered by the banking institutions, the satisfaction of the client by improving the offer of services, increasing service performance, and increasing revenue, promoting the global product.
The assumptions we start from are the following:

H1. The relationship between client and bank relationship needs to be closer so that the bank guarantees and executes the contracts concluded between the client and the bank
H2. Customers get certain facilities from the bank, namely checking the debit and credit accounts.
H3. The bank must allow customers to make transactions online at any time they wish.
H4. Clients evaluate the attitude of the staff as overall good, determining a degree of at least acceptable satisfaction, but it can be improved by highlighting the most important (psychological, social, moral, physical and professional) qualities that an employee of the banking system should have.

As a method of communicating with the subjects, our survey is based on direct personal investigations of subjects (face to face), which gives us the advantage of being able to persuade subjects to participate in the interview (inquiry) and to answer questions that would otherwise remain without response, thus ensuring a high rate of participation of the subjects in the conduct of the investigation.
In the present marketing research, the information is obtained from individuals who are active in the banking system in Resita. The sample consisted in 72 persons, and the questionnaire comprised ten closed questions, with variants of responses, as presented in the following part. We will analyse only four of the questions mentioned, considered representative for the present study.

3. The analysis and interpretation of results

Following the centralization of the results obtained in the questionnaire, we can conclude that:

Q1. Have you requested products / services from the banking units in Resita? If the answer is „Yes", which products did you request?

a. credit product
b. savings product (bank deposit)
c. payment order (bank payment service)
d. cash operations (banking and cash receipts in foreign currency and lei).

- After analyzing the data, it is found that men requested most of the times a bank deposit from a financial institution in Resita - 20.83%, but women often demand the same product - 16.67%. The least demanded by both sexes are cash operations, 5.56% by men and 6.94% by women.

Table 1: Centralization of results for Q1

Respondents	Credit product	Bank deposit	Payment order	Cash operations	Total
Men	11	15	6	4	36
Women	9	12	10	5	36
Total respondents	20	27	16	9	72
Total Share	27.78	37.50	22.22	12.50	100.00
Men	15.28	20.83	8.33	5.56	50.00
Women	12.50	16.67	13.89	6.94	50.00

Source: processing made by authors

- If we analyze the data, we notice that people between the ages of 18 and 30 have often requested to deposit banking products. Persons aged between 31 and 59 have most frequently (13.89%) applied for bank deposits, and people over the age of 60 have applied for bank credit several times (in a proportion of 12,50%). The second most requested service for people between the ages of 18-30 and 31-59 is the payment order, whereas for persons aged 60 and over, the most demanded is the bank deposit.

Table 2: Centralization of results for Q1 – age criteria

Respondents	Credit product	Bank deposit	Payment order	Cash operations	Total
TOTAL age 18-30	4	9	5	2	20
SHARE age 18-30	5.56	12.50	6.94	2.78	27.78
TOTAL age 31-59	7	10	7	3	27
SHARE age 31-59	9.72	13.89	9.72	4.17	37.50
TOTAL 60 and over	9	8	4	4	25
SHARE age 60 and over	12.50	11.11	5.56	5.56	34.72
Total subjects	**20**	**27**	**16**	**9**	**72**

Source: processing made by authors

- As a result of the questioning of the subjects, it was found that persons with income below 1.250 lei opt in a share of 11.11% for the bank deposit (saving product) and 8.33% for credit (credit product) and payment order (Bank payment service by bank account) and only 5.56% choose cash operations (bank payment and cash collection in foreign currency and lei). Subjects with income ranging from 1,250-1,750 lei also choose in a proportion of 16,67% the bank deposit (saving product), 11,11% choose bank credit, 6,94% prefer payment order and only 2,78 % choose cash operations. Subjects with the income of over 1,750 lei prefer in a proportion of 9,72% the bank deposit, while 8,33% opt for the bank loan, 6,94% choose the payment order and only 4,17% cash transactions.

Q2. Are you satisfied with the attitude of the staff employed in the banking units in Resita?

a. very satisfied
b. satisfied
c. acceptable
d. dissatisfied

- As a result of the study it was found that the majority of the subjects, in proportion of 31.94%, consider the attitude of the employees in the Resita banking units acceptable, while 30.56% of the subjects are satisfied with the attitude of the employees, 29.17% are very satisfied and 8.33% of the subjects are dissatisfied.

Table 3: Centralization of results for Q2

	Very satisfied	Satisfied	Acceptable	Dissatisfied	Total
Scale	**4**	**3**	**2**	**1**	
Total Subjects	21	22	23	6	**72**
Share	29.17	30.56	31.94	8.33	**100.00**

Source: processing made by authors

Q3. Please specify which are the criteria underlying the decision to consume the products / services offered by the banks in Resita.

- According to the analysis, we observe that the subjects (40.28%) believe that the ratio between the quality of the products / services offered and the costs is very good, 47.22% think that the bank's location is good, 19.44% consider that the service is neither good nor bad, and 8.33% believe that the diversity of banking products / services is poor.

Table 4: Centralization of results for Q3

Criteria	Very good	Good	Neither good nor bad	Poor	Very poor	TOTAL
	5	**4**	**3**	**2**	**1**	
The ratio between the quality of products and costs	29	28	10	4	1	**72**
Shares [%]	40.28	38.89	13.89	5.56	1.39	**100.00**
Diversity of banking products	27	28	11	6	0	**72**
Shares [%]	37.50	38.89	15.28	8.33	0.00	**100.00**
Serving staff	25	21	14	7	5	**72**
Shares [%]	34.72	29.17	19.44	9.72	6.94	**100.00**
Location	22	34	13	2	1	**72**
Shares [%]	30.56	47.22	18.06	2.78	1.39	**100.00**
TOTAL RESPONDENTS	**103**	**111**	**48**	**19**	**7**	**288**
TOTAL SHARES	**143.06**	**154.17**	**66.67**	**26.39**	**9.72**	**400.00**

Source: processing made by authors

Q4 – How do you assess the level of commissions in the banking units in the city of Resita?

- As a result of the survey, we observe that half (50%) of the respondents think that the commissions in the banking units are high, 33.33% of the subjects claim that the commissions are very high, 15.28% think that they are not Neither small nor large, and 1.39% think they are small.

Conclusions

Although the emphasis is on the presentation of banking products or services, there are also important aspects regarding their promotion strategies. In dealing with the issue, we started from the idea of knowing and understanding the specifics of banking products and services as fundamental elements on which a bank's marketing activity is based.

The bank-customer relationship is and must be supported by the ambience of two factors: the bank's offer with everything that may be specific to banking services and the human factor capable of materializing this offer. In this combination the dynamic element is the bank worker. By the way he conceives the relationship of the bank with the client, it can cause the desired effects in the bank's business, or vice versa. The behavior and attitude of the banks towards the client are not accidental, they must be well-led and well-informed. If banks really want to demonstrate the efficiency and close relationship between the bank and the client, then they have to understand that the determining factor is the quality of this relationship.

Financial institutions are motivated to have “ethical conduct based on the following considerations” (Fetiniuc, Luchian, 2014):

• Ethical behavior
• Reputation and positive image
• Qualified and honest employees
• Additional capital.

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ANALISYS OF FINANCIAL POSITION IN DETERMINING THE GENERAL INHERENT RISK

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Abstract: *The auditing of financial statements is a complex process which besides knowledge of accounting nature, also uses other disciplines from the economic area, having the purpose of obtaining necessary samples for justifying the opinion which is to be given by the auditor. In this way it is justified that the financial statements do not contain major distortions caused by fraud or error, and thus, the users of finance accounting are provided with a higher level of trust. The economical – financial analysis represents one of these disciplines through which the auditor may obtain information concerning the audited entity's financial position. For expressing opinion concerning financial situations, the statutable auditor identifies and evaluates the risks which may point out the fact that, these may contain significant distortions, which are likely to influence the decisions taken by the users of the information. One of these risks, evaluated and determined by financial auditor, is the inherent general risk. The auditor uses worksheets for identifying the level of this risk which support him in establishing some risk factors' degree of influence upon the information given in the financial situations, factors which are not always of economical nature. These risk factors refer to aspects concerning managerial environment, accounting environment, operational environment of the audited entity. Among risk factors concerning managerial environment, financial position and the dissolution of audited entity are worth mentioning. In order to determine the level of risk for these factors, the auditor utilizes elements of economic – financial analyses such as structural analysis of balance sheet liability, analysis of financial equilibrium, analysis of financial risk, analysis of bankruptcy risk – Altman Model, solvency analysis and liquidity analysis. After accomplishing these analyses, the auditor establishes the level of general inherent risk for the financial position and dissolution of the audited entity, using a professional reasoning. Thus, the paper follows the presentation of these aspects from a theoretical point of view and then making am analysis of financial position and dissolution of the audited entity and presenting the degree of general inherent risk made by the statutable auditor.*

Keywords: *financial position; dissolution; solvency; general inherent risk.*

JEL classification: *M41; M42*

1. Introduction

The entities whose financial situations are certificated by the statutable auditors, offer a high trusting level to the users of financial – accounting information. The auditor has to provide an adequate audit opinion of the fact that financial statements do not present significant errors, and this aspect has to be sustained by the audit samples.

In the process of auditing the financial statements, the auditor evaluates the risks having the purpose of making an opinion concerning the situation of the audited entity and of establishing if the information provided by it are significantly distorted. "The auditor has to take into consideration if the sum of the uncorrected distortions is a significant one. If the auditor reaches the conclusion that the distortions may be significant, this has to take into consideration the abatement of audit risk by expanding the audit procedures or to ask the leadership to adjust the financial statements". (Todea and Stanciu, 2009: 43-44).
For evaluating general inherent risk, among the risk factors which have to be analyzed, according to *The guide Concerning the Audit Quality*, emitted by ICAS and IFAC (in Bucharest, 2012: 64), there are also the following: financial position and entity's dissolution. Within the study of this paper, the analysis of the main indicators has been done, in order to establish the entity's financial position, respectively the structural analysis of assets and liabilities of balance sheet, the analysis of financial equilibrium, analysis of financial risk, analysis of liquidity and solvency and analysis of bankruptcy risk determined based on the Altman model. Following this analysis, the degree of general inherent risk has been established corresponding to financial position and liquidity of the audited entity.

2. Methodology of the Scientific Research

The purpose of this paper is to present the usage of economical – financial analysis in determining the general inherent risk. Thus, the quantity of audit samples is being determined based on which the auditor justifies the provided opinion and some aspects which gain the auditor's attention are identified and which may present risks of significant distortion.
The used methodology was presented from a theoretical point of view of the aspects linked of the audit risk, general inherent risk, respectively aspects concerning the analysis of financial position, met during studying the specialty literature and Audit International Standards. In the same time, the analysis of an entity's financial position was presented from a practical point of view, in order to determine the general inherent risk.

3. Aspects Concerning the Determination of General Inherent Risk

"The auditor has to correctly appreciate the quantity of audit samples which must be collected in order to ensure that he / she will not express an inadequate audit opinion when the financial statements contain significantly distorted information. The key to his / her workload is a subtle but correct appreciation of the audit risk and ensuring that this is reduced up to an acceptable level." (Briciu, Socol, Rof, 2010: 29).
"Risk identifying is the most important aspect in making an audit of financial statements. Risk identifying itself has no significance at all if not accompanied by the evaluation of the way in which the risks may generate significantly wrong presentations in the financial statements. The reasoning of audit implies that risk identifying and evaluation are nothing but ways of establishing those aspects which will arouse the auditor's attention, that are believed that would contain a risk of significantly wrong presentation." (Briciu et al, 2014: 110).

Audit risk, according to ISA 200 (in Bucharest, 2016: 84), represents "the risk that the auditor expresses an improper audit opinion when the financial statements are significantly distorted. This is a significantly distortion risk and detection risk function."
Significant distortion risk ISA 200 (in Bucharest, 2016: 87), represents "the risk that the financial statements are significantly distorted before the auditing. This is consisted of two components, inherent risk and control risk. Inherent risk represents the susceptibility of an affirmation concerning a transaction class, balance account or presenting as being significantly distorted, either individually or cumulated with other distortions, before taking into consideration any check linked to these".
"Financial auditor has to make an evaluation of the context in which the entity operates and of the characteristics of the audited environment. Thus, the inherent risk evaluation is being made with the purpose of elaborating the audit plan, referring to professional reasoning and to the financial auditor's experience, following the analysis of the factors which influence the inherent risk. The importance of evaluation inherent risk is worth mentioning in establishing or modifying the quantity of audit samples in the auditing segments. A generally risk evaluation and a specifically inherent risk one are made in the preliminary phase of auditing." (Dănescu, 2007: 79).
"For estimating the inherent risk, when elaborating the action plan, the professional realizes an environment evaluation (of the context) in which he / she operates - on one hand, and on the other hand he / she realizes an evaluation of the characteristics and warrant's requirement of the audited entity." (Domnișoru, 2011: 229).
"The purpose of evaluating the inherent risk is to allow the financial auditor to form a preliminary opinion about the entity which is complied to be audited, opinion which is to be considered in the planning process. The profound inner checks realized by conformity tests within the audit global strategy are not to be confounded with the global check of inherent risk." (Dănescu, 2007: 79).
From the typology point of view, the inherent risk may be a general inherent risk and specific inherent risk. In this study we follow the position of the entity's financial analysis in evaluating general inherent risk.
The manner of evaluating general inherent risk is mentioned *in the Guide Concerning the Quality's Audit*, delivered by ICAS and CAFR (in Bucharest, 2012: 64), where there is a worksheet destined to this evaluation, containing risk factors which have to be analysed by the auditor in order to determine the general inherent risk. Two of these risk factors are the financial position of the audited entity and its dissolution. Thus, after factors' analysis, the auditor must appreciate if the analyzed and documented risk factor, generates a very low risk, a low risk, medium, high or very high one, identifying the grade in which the identified distortions may produce effects on the financial statements.
After analysis and documentation of all risk factors provided in the worksheet, concerning the general inherent risk evaluation, according to *Guide Concerning the Quality's Audit*, delivered by IACS and CAFR (in Bucharest, 2012: 64), the risk with the greatest weight in the obtained results is determined, this being established as general inherent risk.

4. Theoretical Aspects Concerning the Financial Position Analysis

For analysing the risk factors, financial position and dissolution, for determining the general inherent risk, the auditor has used structural analysis of the assets and liabilities of the balance sheet, financial equilibrium analysis, financial risk analysis, liquidity and dissolution analysis and bankruptcy risk analysis made by the Altman Model.

"Financial position is evaluated according to the economic resources that the enterprise controls, to the financial structure which sustains these resources, its liquidation and dissolution, as well as the capacity of adapting to the environmental changes." (Petcu, 2009: 411).

"The analysis of patrimonial structure as a component of financial position analysis, follows the share analysis of different patrimonial elements in the sum of balance sheet, as well as the report between different asset components, respectively liabilities ones. This completes the study of absolute size indicators and allows comparisons for situating the enterprise more correctly in its competitive environment." (Păvăloaia et al, 2010: 300).

For financial position analysis, Burja (in Cluj-Napoca, 2005: 237) points out the following aspect: "the structure of financial balance sheet allows the equilibrium analysis from the point of view of respecting dome main financing principles, according to which the fixed assets will be financed from permanent equities, and the circular assets (temporary needs) have to be financed from temporary resources. Violations of these principles will determine a state of financial disequilibrium."

In the financial position analysis, financial risk analysis is one of its components. So, Burja (in Cluj-Napoca, 2005: 278), defines financial risk "as being the variability of result indicators, under the company's financial structure incidence. Financial risk produces when borrows do not generate financial efficiency namely when the ratio of economical profitability obtained by utilising the borrows is inferior to the ratio of borrowed capital".

"The enterprise's short term financial equilibrium analysis is made with the help of liquidity ratio which offer a static vision of the situation on a limited time horizon. "The enterprises which have a reduced liquidity ratio, but have a quite high cash flow may have a comfortable liquidity degree; on the other hand, the enterprises which have high liquidity rates but low cash flow, may have difficulties in honouring the obligations. Long term solvency analysis supposes correlating the total liquidity and assets with total chargeability, thus calculating the report between the total assets and the total credit. This ratio is the relative expression of the enterprise's net asset, which represents the warranty of owner and creditors' thrust in its management and financial health." (Petcu, 2009: 441-442).

"Financial analysis by classical methods based on patrimonial statements, on financial performances evolution, on the working capital situation and on working capital requirement or based on table funding, offers partial information about bankruptcy risk and a general appreciation on a past situation." (Burja, 2017: 156).

"Bankruptcy risk, the one of incapacity or liquidity is a major risk because as opposed to the risk of loss it is juridical sanctioned; an enterprise which registers losses may continue its activities as long as it is able to pay / cover its debts; instead the fact that it seizes the payments makes it enter in a juridical process which may lead to its disappearance" (Colasse, 2009, 111).

"Internationally, there have been developed certain score functions, starting with Beaver's study (1996), who used the univariate analysis and continuing with Altman (1968), the most famous name in the field of bankruptcy prediction methods, the first author who used multiple discriminate analysis in bankruptcy prediction. The most often cited are Altman Model, Conan and Holder Model, the Model of Central Balance from the Bank of France etc." (Vâlceanu, Robu and Georgescu, 2005: 381-382).

5. Study Concerning Financial Position Analysis in Determining General Inherent Risk

Based on indicators of financial statements of SC ALFA SA and respecting the worksheet for evaluating general inherent risk provided in *The Guide for Quality Control* issued by ICAS and IFAC (in Bucharest, 2012: 64), the auditor has realised the audit sample upon which he will demonstrate the level of risk factor (very low risk, low, medium, high and very high) established by this, concerning the financial position and the entity's liquidation, as a result of these analyses.

The entity's financial position analysis was realised starting from the structural analysis of assets and liabilities of balance sheet, from financial equilibrium analysis, financial risk analysis, liquidity and solvency analysis and bankruptcy risk analysis realised using the Altman Model.

Table 1: Financial position analysis of SC ALFA SA entity

Indicators	2013	2014	2015
Total assets	253.878.930	306.422.578	331.749.758
Fixed assets	157.968.523	192.664.106	196.414.800
Tangible assets	108.593.258	143.256.111	137.505.149
Financial assets	48.714.404	48.712.986	58.375.756
Current assets	95.825.754	113.487.036	135.057.068
Stock	27.281.030	23.056.938	39.627.118
Commercial claims	52.163.620	59.307.749	58.688.649
Cash and deposits	4.266.471	14.711.465	10.549.463
Total debts / liabilities	132.119.416	183.333.599	197.806.022
Current liabilities / debts	98.572.405	132.552.913	151.558.118
Bank credits	17.050.495	10.987.516	4.706.206
Personal capital	121.759.514	123.108.979	133.943.736
Permanent capital	149.568.049	168.462.544	172.364.464
Total of liabilities	253.878.930	306.422.578	331.749.758
Medium and long term liabilities	27.808.535	45.353.565	38.420.728
Financial debts	42.360.948	67.038.898	82.143.234
Net income	9.150.871	10.500.453	15.374.248
Reinvested income	545.906	605.935	444.319
Gross profit	10.918.116	12.300.030	17.857.204
Fiscal value	429.806.098	528.981.984	593.636.395
Structural Analysis of Balance Sheet Asset			
$R_{AI} = \frac{Fixed\ assets}{Total\ assest} \times 100$	62,22%	62,88%	59,21%
$R_{IC} = \frac{Tangible\ assets}{Total\ assets} \times 100$	42,77%	46,75%	41,45%
$R_{IF} = \frac{Financial\ assets}{Total\ assest} \times 100$	19,19%	15,90%	17,60%
$R_{AC} = \frac{current\ assets}{Total\ assest} \times 100$	37,75%	37,04%	40,71%
$R_{St} = \frac{Stock}{Total\ assest} \times 100$	10,75%	7,52%	11,95%
$R_{CC} = \frac{Commercial\ claims}{Total\ assest} \times 100$	20,55%	19,35%	17,69%

Indicators	2013	2014	2015
$R_{DB} = \frac{Cash\ disponibility}{Total\ assest} \times 100$	1,68%	4,80%	3,18%
Structural Analysis of Balance sheet Liabilities			
$R_{SF} = \frac{Permanent\ capital}{Total\ liabilities} \times 100$	58,91%	54,98%	51,96%
$R_{afg} = \frac{personal\ capital}{Total\ liabilities} \times 100$	47,96%	40,17%	40,37%
$R_{aft} = \frac{Personal\ capital}{Permanent\ capital} \times 100$	81,41%	73,08%	77,71%
$R_{sf} = \frac{Personal\ capital}{Long\ term\ debts} \times 100$	437,85%	271,44%	348,62%
$R_{ig} = \frac{total\ debts}{Total\ liabilities} \times 100$	52.04%	59,83%	59,63%
$R_{ig} = \frac{Long\ term\ debts}{Personal\ capital} \times 100$	22,84%	36,84%	28,68%
$R_{dt} = \frac{Financial\ liabilities}{Own\ capital} \times 100$	34,79%	54,45%	61,33%
$R_f = \frac{Net\ Income}{Personal\ capital} \times 100$	7,52%	8,53%	11,48%
Financial Equilibrium Analysis			
$Net\ situation = Total\ assets - Debts$	121.759.514	123.088.979	133.943.736
$FRF = Net\ current\ assets - Short\ term\ debts$	-2.746.651	-19.065.877	-16.501.050
$NFR = Temporary\ necesities - Temporary\ Sources$	-12.784.024	3.723.949	5.843.257
$RNFR = \frac{NFR}{Fiscal\ value} \times 360$	-10,70	3,16	3,59
$TN = FRF - NFR$	-15.530.675	-15.341.928	-68.314.321
Financial Risk Analysis			
$Lever = \frac{Financial\ debts}{Personal\ capital}$	34,79%	54,45%	61,33%
$Lever\ effect = (R_{EC} - R_d) \times \frac{Fiancial\ debts}{Personal\ capital}$	0,89%	0,74%	0,85%
$R_{EC} = \frac{Gross\ income}{Total\ assest} \times 100$	4,30%	4,01%	5,38%
Interest rate*	1,75%	2,75%	4,00%
Liquidity Analysis			
$R_{LC} = \frac{Current\ assets}{Current\ debts} \times 100$	97,21%	85,61%	89,11%
$R_{LP} = \frac{Current\ assets - Stock}{Current\ debts} \times 100$	69,54%	68,22%	62,97%
$R_{LI} = \frac{Cash\ and\ bank\ accounts}{Current\ debts} \times 100$	4,33%	11,10%	6,96%
Solvency Analysis			
$R_{SG} = \frac{Total\ assets}{Total\ liabilities} \times 100$	192,16%	167,14%	167,72%
$R_{SP} = \frac{Personal\ capital}{Personal\ capital + Bank\ credits} \times 100$	87,72%	91,81%	96,61%
Bankruptcy Risk Analysis – Altman Model			
$R_{AC} = \frac{Current\ assets}{Total\ assets} \times 100$	37,75%	37,04%	40,71%
$R_{PR} = \frac{Reinvested\ profit}{Total\ assets} \times 100$	0,22%	0,20%	0,13%
$R_{EC} = \frac{Gross\ profit}{Total\ assets} \times 100$	4,30%	4,01%	5,38%
$R_{sf} = \frac{Personal\ capital}{Medium\ and\ long\ term\ debtd} \times 100$	437,85%	271,44%	348,62%
$VRA = \frac{fiscal\ value}{Total\ assets} \times 100$	162,29%	172,63%	178,94%
$Z = 1{,}2 \times R_{AC} + 1{,}4 \times R_{PR} + 3{,}3 \times R_{EC} + 0{,}6 \times R_{sf} + VRA$	4,85%	3,93%	4,55%

Source: own processing

Following the accomplished analysis, the auditor has reached the next conclusions:

- *Structural analysis of balance sheet asset*

The ratio of fixed assets *(R_{AI})* register, in the period of analysis a relatively constant value of around 60%, this being specific in industry because any evolution of fixed assets has a major influence on the assets' total value.
Tangible assets rate *(R_{IC})* suggests an increase in their value in 2014 as compared to 2013, due to the entity's investments in purchasing fixed assets. The diminishing value in 2015 at a level which is close to the one in 2013 is due to the selling of some fixed assets.
Financial assets rate *(R_{IF})* registers relatively constant values and points out the ownership of financial assets in the capital of other entities, having the purpose to expanding and developing the manufacturing capacity on the market in which the entity operates.
Current assets rate *(R_{AC})* registers approximately equal value during 2013 and 2014, and in 2015 registers an increase caused by the increased value of stock and claims. Claims' value is influenced by the value of merchandise which is at customers. Their weight in the total assets is relatively low, being specific to the entities which have the same object of activity.
According to stock rate *(R_{St})*, these have registered a drop from the total assets in 2013 as compared to 2014, due to the efficiency of production management, even if the price for raw materials has increased.
Commercial claims rate *(R_{CC})* owns a greater weight in the total assets than stock, and this fact has a negative effect on the entity, namely on its liquidity being influenced by the value of merchandise that the customers have. Cash availability rate *(R_{DB})* maintains a relatively low level, pointing out the entity's lowered liquidity.

- *Structural analysis of balance sheet liabilities*

Financial stability rate *(R_{SF})* emphasizes a drop of the entity's financial stability grade in the period of analysis, but is not of major proportion which would put the entity's stability over time under the question mark. The registered value highlights a good economic stability.
Global financial autonomy rate *(R_{afg})* registers a relative drop of the entity's financial autonomy level, its level pointing out the entity's satisfactory solvency.
Financial autonomy rate at term *(R_{aft})* highlights a drop in 2015 as compared to 2013, but during 2015 this comes back to a value closed to the one from 2013. The level of this rate, over 50%, indicates the entity's good financial position.
Financial security rate *(R_{sf})* registers a higher percentage than the minimal 100% provided value, reflecting the fact that the value of personal capital ensures the entity's financing.
Global debt rate level *(R_{ig})* registers a relatively growth during the three years period of analysing, which doesn't exceeds the maximum 66% provided level. Term debt rate *(R_{it})* determined according to personal capital, registers a growth during 2014 as compared to 2013 and during 2015 a relatively drop, its value being under the 100% allowed level, which points out the fact that the entity's financial security is not threatened.
In the analysed period one can observe an increase of financial liabilities rate *(R_{dt})* its level being a satisfactory one, maintaining in the 30% - 70% interval.
Financial profitability rate *(R_f)* highlights a constant increase on the three years period of analysis, their value is relatively low but higher than inflation rate in economy. (http://www.insse.ro/cms/ro/content/ipc-serii-de-date, accessed on the 17th of February 2017), thus we can sustain the fact that in the analysed period the personal capital was efficiently valued by the entity.

- *Financial equilibrium analysis*

Net situation registers a constant increase during the analysed period, pointing out the efficiency of the entity's economic management by maximising personal capitals thus leading to the financing of net assets.

Negative value of the financial working capital *(FRF)*, in the analysed period proves the fact that the net current assets' value is smaller than that of short term debts, and then the liquidity of net current assets is insufficient for covering the short term debts.

Working capital requirement *(NFR)* registers a negative value during the first year, but in the following two years it registers positive values, which indicates the fact that the entity has invested in increasing the manufacturing, thus also increasing the commercial assets.

Net treasury *(TN)* presents negative values during the analysed period, which notes that the entity has to call to credits for covering and supplement the financing. This situation does not have to be considered as being an insolvency state, because the entity started a process of acceleration concerning the stock rotation and a process of identifying the modalities of recovering the assets.

- *Financial risk analysis*

The positive and approximately constant value of leverage effect indicates the fact that the value of economic profitability (REC) is higher than the interest rate (http://www.bnr.ro/Raport-statistic-606.aspx, accessed on the 15th of February 2017), denoting the beneficial effect of debts on the entity.

The entity's debt degree increases in the analysed period, but the financial debts do not overcome personal capital, thus the entity remains secure concerning its financial solvency.

- *Liquidity and solvency analysis*

During 2013 – 2015, one may observe a lowered volatility of liquidity indicators \, respectively of current liquidity rate *(R_{LC})*, of partial liquidity rate *(R_{LP}) – acid test* and immediate liquidity rate *(R_{LI})*, and liquidity risk was maintained at an almost satisfactory level, also owed to the 29,30% percentage obtained during 2014 – 2015, of the stocks in the total of current assets, the rest being elements of immediate liquidity, owned mainly in assets and cash availability.

General solvency rate *(R_{SG})* registers a positive evolution, observing a percentage decreasing owed to debts increasing, but not as to affect the entity's solvency.

Through the rate of patrimonial solvency rate *(R_{SG})* it may be observed a diminishing of entity's used credits, having the purpose of financing the assets, thus in the same time reducing financial risk.

- *Altman Model*

After applying Altman model and determining the Z function, the fact that the entity is solvable resulted, thus ensuring the users' of financial – accounting information thrust in its viability.

Following the effected analyses the auditor has reached to the conclusion that the entity had to call to credits in order to supplement its financing. This situation must not be tabulated as being insolvability, because the entity accelerated stock speed rotation and identifying the modalities of recovering the assets. Bankruptcy risk analysis through Altman model proved that the entity is solvable.

Therefore the auditor, applying the professional reasoning, established that the analysed risk factors, financial position and liquidation present a general inherent risk.

6. Conclusions

In the actual context of market economy, the auditing of financial reports represent a necessary element in order to offer the users of financial – accounting information, an insurance of the fact that the information offered by these do not contain significant distortions due to fraud or errors and may be used in the process of taking decisions.

Risk evaluation represents a necessary step for identifying the elements which can significantly distort the information offered by financial reports, thus letting the auditor to supplement the quantity of necessary samples for efficiently documenting the opinion which is to be provided when ending the audit.

In order to determine the general inherent risk, the auditor analyses different risk factors, and calls to different methods of evaluating them, in the case of financial position of the entity's liquidation, the auditor uses indicators specific to economic-financial analysis. In the case of the present study the auditor established the fact that the analysed risk factors present a general inherent environment.

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HUMAN DEVELOPMENT AND PERCEIVED CORRUPTION AS KEY FACTORS OF LIFE INSURANCE

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Abstract: *A commonly recognized proxy, life insurance penetration was used as a dependent variable in our analysis for the 28 EU countries during the period 2004 – 2014. We apply a panel data analysis to assess the influence of human development, corruption level, inflation, population growth, and* employment rate to life insurance penetration. *Our contributions resides in a new effort to understand the life insurance penetration in terms of* behavioural finance. *Moreover, our results shows that Human Development generates increases of the life insurance market.*

Keywords: *behavioural finance; life insurance; human development; panel data.*

JEL Classification: *G22; C23; D73; O15.*

Introduction

Life insurance domain has an interesting development during the period 2004 – 2014. Financial instability can be caused by many variables, including the level of inflation, corruption, education and unemployment rate.

This paper started from the assumption that human development, in terms of health, education, poverty, inequality and other components should be the most important driver for the life insurance market. Our contributions resides in a new effort to understand the life insurance penetration in terms of behavioural finance.

The structure of the paper is as follows: *Section 2* presents some previous research on the issue, *Section 3* describes the methodology and provides descriptive statistics, *Section 4* offers information regarding our results, *and Section 5* presents the conclusions.

1. Literature review

Insurance demand is measured by insurance penetration or insurance density. We chose to use *penetration* such as Outreville, (1996); Omoke, (2012); Alhassan and Fiador (2014), Olayungbo and Akinlo, (2016), further we have included population growth rate. The insurance penetration is defined as the ratio of total life premiums to gross domestic product.

There are numerous studies on the insurance literature which have evidenced the direct impact of *education* on life insurance development such as Gandolfi and Miners (1996); Truett and Truett (1990); Elango and Jones (2011); Kjosevski (2012); Muresan and Armean (2016). Mantis and Farmer (1968, apud Zietz, 2003) show a positive relationship between *employment* and life insurance demand.

In a recent paper, Dragos and Dragos (2013), prove that a low level of *corruption* increases the life insurance density. *Inflation level* should have an indirect impact,

according to Browne and Kim (1993); Beck and Webb (2003) but Elango and Jones (2011) obtained a significant positive impact. In addition, Mare et al. (2016) find that inflation is not a significant variable in a convergence process.

2. Methodology

We use the following variables based on previous studies for achieving our declared aim and for the period 2004 – 2014:

Table 1: Description of the variables used in the panel analysis

Variable	Variable description	Codification	Expected Sign	Source
ENDOGENOUS VARIABLE				
Life insurance penetration	The ratio of life insurance premiums divided by GDP.			Insurance Europe & fred.stlouisfed.org
EXOGENOUS VARIABLES				
Corruption perceptions index	This index measures the perceived levels of public sector corruption.	**CPI**	**-**	Transparency International
Employment rate	Is the ratio of the country's working-age population divided by total population.	**EMP**	**+**	OECD
Human Development Index	Is a proxy of a decent, knowledgeable and healthy life.	**HDI**	**+**	United Nations Development Programme
Population growth rate	Derived from total population.	**ΔPOP**	**+**	Eurostat
Inflation	Measured by consumer price index (PPP).	**PPP**	**-**	World Bank

Source: own construction

As it can be seen in first table, we expect a positive correlation between human development, population growth, employment rate and life insurance demand, but inflation and corruption perception index should have a negative impact.

Our sample contains a total of twenty-eight countries, the entire output of European Union member states, while the temporal dimension covers eleven years, between 2004 – 2014. The analysis was conducted using the econometric modelling software Eviews 7.0, while the construction of the final quantile maps was possible by making use of GeoDa 1.8.14.

Given the panel structure implied, the three models estimated were the Pooled Ordinary Least Square (Pooled OLS), the Fixed Effects model and the Random Effects model. According to Green (2012), the panel analysis presents an advantage over the cross-section procedures due to the fact that it offers the researcher a higher versatility regarding the modelling of the interactions between individuals (Green, 2012, p. 385). The most minimalist approach regarding this type of analysis is represented by the first model displayed by the *Equation 1.*

$$y_{it} = x'_{it}\beta + z'\alpha_i + \varepsilon_{it}$$
$$y_{it} = x'_{it}\beta + c_i + \varepsilon_{it} \qquad \textit{(Equation 1)}$$

In the case of this model it can be stated that x_{it} represents the vector of exogenous variables (without the classical term of constant), while the z_i term is meant to

encompass the individual influences of each unit (with constant). Having this specification as a baseline, three models are to be taken into consideration. The first of the three, the Pooled OLS model ignores the panel structure and runs a classical least square regression. Due to the fact that the individual influences cannot be taken into consideration by the Pooled regression, a second configuration is proposed – the Fixed Effects model. This is due to the possible correlation between the components of the x_{it} vector, which can result in inconsistency problems for the β parameters (Green, 2012, p.386). The second model is presented by the *Equation 2*.

$$y_{it} = x'_{it}\beta + \alpha_i + \varepsilon_{it} \qquad \textit{(Equation 2)}$$

The second configuration proposes an additional regression, in the form ofα_i, which is comprised by $z'_i\alpha$ – a constant for each country in the sample – this being the essence of the Fixed Effects model (Green, 2012, p. 386). While the model pays little attention to the unobservable heterogeneity, while the third and final model – with Random Effects – focuses on the presumption of independence among the observable effects and unobservable (Alan and Hansen, 2009).

$$\begin{aligned} y_{it} &= x'_{it}\beta + E[z'\alpha_i] \\ &+ \{z'_i\alpha - E[z'_i\alpha]\} + \varepsilon_{it} \\ y_{it} &= x'_{it}\beta + \alpha + u_i + \varepsilon_{it} \end{aligned} \qquad \textit{(Equation 3)}$$

The model, displayed in the *Equation 3*, u_i represents a series of random elements specific to the group, similar to the ε_{it} element. Green (2012) notes that in certain cases the Random Effects model would be more appropriate due to the fact that it can become unstable if new observations – in our case, new countries – are to be included (Green, 2012, p.410).

3. Results

The analysis is opened by presenting several elements of descriptive statistics. *Table 2.* emphasizes the mean, standard deviation, median, skewness, kurtosis, minimum and maximum values, in addition to the range for the Euro Zone. As it can be observed, the highest mean value is attributed to Finland (7.40%), while the lowest is registered by Latvia (0.19%). Moreover, we can conclude that the Baltic States are at the bottom of the hierarchy for this particular indicator, as the neighbour of the latter, Estonia (0.52%), scores the second-lowest penetration rate. Sample means exceeding the 5% level are registered by France (6.44%), Belgium (5.63%), Ireland (5.54%) and Portugal (5.25%), with Italy (4.8%) and Malta (4.51%) also presenting particularly high rates. The lowest levels, in addition to the Baltic States, with percentages just above the unit are Greece (1.02%), Slovakia (1.58%) and Slovenia (1.62%).

From a skewness point of view, Austria displays the lowest value (-0.63). Other negatively skewed countries being Greece, Portugal, Slovakia, Slovenia and the Netherlands, all the rest displaying a positive value for the skewness coefficient. In the case of this six countries, their mean is also lower than their median, with the sole exception of Greece. Also, particularly leptokurtic distributions – i.e. more

peaked – are presented by Ireland (1.18), Italy (1.44) and Latvia (1.86), while Cyprus (-1.90), France (-1.46) and the Netherlands (-1.54) display the lowest values for the kurtosis coefficient, meaning that their distributions follow a more platikurtic path. The closest to a normal distribution is Germany that presents a kurtosis coefficient of 0.004, the lowest in the entire sample.

Table 2: Descriptive statistics for Euro Zone, 2004 – 2014

Country	Mean	StDev	Median	Skewness	Kurtosis	Min	Max	Range
Austria	2.44%	0.29%	2.60%	-0.631	-1.183	2.00%	2.80%	0.80%
Belgium	5.63%	1.19%	5.40%	0.632	0.578	4.00%	8.10%	4.10%
Cyprus	2.34%	0.71%	2.00%	0.570	-1.904	1.60%	3.30%	1.70%
Estonia	0.52%	0.15%	0.50%	0.640	-0.443	0.30%	0.80%	0.50%
Finland	7.40%	0.94%	7.10%	0.696	-0.860	6.40%	9.10%	2.70%
France	6.44%	0.71%	6.10%	0.079	-1.457	5.40%	7.50%	2.10%
Germany	3.25%	0.14%	3.20%	0.971	0.004	3.10%	3.50%	0.40%
Greece	1.02%	0.08%	1.00%	-0.329	-0.877	0.90%	1.10%	0.20%
Ireland	5.54%	0.85%	5.40%	1.301	1.177	4.70%	7.40%	2.70%
Italy	4.80%	0.96%	4.50%	0.740	1.436	3.30%	6.90%	3.60%
Latvia	0.19%	0.05%	0.20%	-0.154	1.861	0.10%	0.30%	0.20%
Lithuania	1.23%	0.32%	1.23%	-0.560	-0.843	0.67%	1.65%	0.98%
Luxembourg	2.43%	0.94%	2.40%	0.448	-0.703	1.30%	4.20%	2.90%
Malta	4.51%	2.35%	3.10%	1.005	-0.381	2.40%	9.20%	6.80%
Portugal	5.25%	0.88%	5.30%	-0.502	-0.964	3.90%	6.50%	2.60%
Slovakia	1.58%	0.10%	1.60%	-0.345	-0.587	1.40%	1.70%	0.30%
Slovenia	1.62%	0.12%	1.60%	-0.422	-0.293	1.40%	1.80%	0.40%
Spain	2.45%	0.20%	2.40%	0.467	-0.652	2.20%	2.80%	0.60%
The Netherlands	3.75%	0.74%	4.00%	-0.210	-1.536	2.70%	4.80%	2.10%

Source: own computations

On the other hand, in the cluster of states that are not in the Euro Zone despite being a European Union member, the United Kingdom presents the highest mean of the penetration rate (9.05%). Ranked second, Denmark also shows high levels of this indicator, its mean being scored at 5.97%, with a rather low range of 1.70%. Excluding the two states with an output option from adopting the Euro currency (Denmark and the United Kingdom have negotiated output options from the *Maastricht Treaty*, obtaining the right to reject the adoption of the Euro currency), the highest penetration rate is achieved by Sweden, at a 5.21% level.

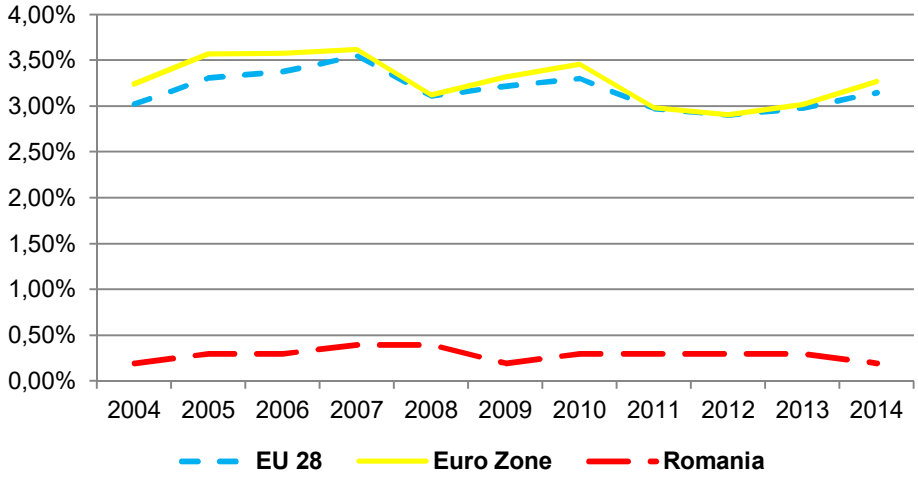
Table 3: Descriptive statistics for Non-Euro Zone, 2004 – 2014

Country	Mean	StDev	Median	Skewness	Kurtosis	Min	Max	Range
Bulgaria	0.32%	0.06%	0.30%	-0.027	0.412	0.2%	0.4%	0.2%
Croatia	0.73%	0.06%	0.70%	-0.291	-0.208	0.6%	0.8%	0.2%
Czech Republic	1.41%	0.20%	1.40%	0.133	-1.865	1.2%	1.7%	0.5%
Denmark	5.97%	0.61%	6.00%	-0.455	-1.139	5.0%	6.7%	1.7%
Hungary	1.54%	0.22%	1.60%	0.541	0.472	1.2%	2.0%	0.8%
Poland	2.01%	0.44%	2.00%	0.665	1.968	1.3%	3.0%	1.7%
Romania	0.29%	0.07%	0.30%	0.123	-0.452	0.2%	0.4%	0.2%
Sweden	5.21%	0.66%	5.00%	-0.197	-0.622	4.0%	6.1%	2.1%
United Kingdom	9.05%	1.67%	8.70%	1.647	3.279	7.3%	13.0%	5.9%

Source: own computations

Contrary to the results shown for the UK and the Scandinavian states, the lowest levels of the indicator are registered in the Balkan countries. With rates lower than the unit, Bulgaria, Croatia and Romania present means of 0.32%, 0.73% and 0.29%, respectively, the latter being also the lowest in the non-Euro Zone cluster. However,

both Scandinavian states present a negative coefficient of skewness, meaning that the existence of a few low levels implies a shift to the left of their respective means. From a kurtosis point of view, the highest values for this statistic are displayed by the United Kingdom and Poland, with 3.28 and 1.97, respectively. The Czech Republic presents the lowest kurtosis coefficient in the second group of countries, its value of -1.87 being a proof of a platikurtic-oriented distribution.



Graph 1: The mirroring evolution of penetration rate for the period 2014 – 2014 in the EU 28, Eurozone and Romania
Source: own computations

The *Graph 1* presents the mirroring evolution of the European Union as a whole and the Euro Zone in the respect of penetration rate of life Insurance between 2004 – 2014. A level slightly higher for the Euro Zone is observable between the two, while both series edge-out Romania. The latter oscillates just above the 0.00% low, hitting its maximum in 2007 and 2008 at a 0.4% level, while the means for the EU 28 and Euro Zone exceeded 3.00% most of the time.
In order to establish if the series are stationary or not, it is mandatory to check for the presence of a unit root in each of the six variables. The conclusion is drawn using the test of Levin, Lin and Cho (2002), that is presented in the *Table 4*. All the six series validated the stationarity assumption, as the null hypothesis was rejected in every case, meaning that for a 1% significance level the panels did not contain unit roots.

Table 4: Unit root tests for every variable

Variable	Test	P-Value	Result
Penetration	-2.78490	0.0027	Reject Null – No Unit root
CDI	-5.74859	0.0000	Reject Null – No Unit root
Employment	-6.36932	0.0000	Reject Null – No Unit root
HDI	-5.01868	0.0000	Reject Null – No Unit root
Inflation	-5.28734	0.0000	Reject Null – No Unit root
Population (GR)	-3.20468	0.0007	Reject Null – No Unit root

Source: own computations in Eviews 7.

The analysis debuts with a Pooled Ordinary Least Squares (Pooled OLS) regression. As we can see by observing the second column of *Table 5.*, four out of five regressors' coefficients (sans the inflation) are statistically significant at a level of 10%. However, further aspects regarding this particular configuration will not be discussed. While the Pooled OLS has shown favourable results, it possesses several issues. The most notable would be the fact that it ignores the panel structure of the data. However, studies have shown that it is useful in underlining a starting point in the succession of procedures (Grigoli, Herman and Schmidt-Hebbel, 2014).

Table 5: Results of the panel estimations

Variable	Pooled	Fixed Effects	Random Effects
CPI	0.008985*** (0.001033) [8.697538]	0.001275 (0.001172) [1.087639]	0.003169*** (0.001041) [3.043838]
EMP	-0.000972*** (0.000248) [-3.927510]	-0.000299 (0.000218) [-1.373222]	-0.000303 (0.000209) [-1.451838]
HDI	0.070869** (0.029586) [2.395397]	0.035358** (0.015989) [2.211491]	0.038692** (0.015871) [2.437964]
ΔPOP	0.320218** (0.140014) [2.287044]	0.239500** (0.120105) [1.994086]	0.266477** (0.115378) [2.309597]
PPP	-0.000455 (0.000506) [-0.899001]	-0.0000458 (0.000250) [-0.183515]	-0.0000728 (0.000248) [-0.292836]
Constant	-0.0020097 (0.027139) [-0.740502]	0.012687 (0.019288) [0.657756]	-0.001938 (0.018572) [-0.104354]
Goodness of fit			
R^2	0.490479	0.914460	0.080433
R^2 (adjusted)	0.482043	0.904506	0.065208
F-statistic	58.14277 (0.00000)	91.87107 (0.00000)	5.283081 (0.000114)
Akaike Information	-5.190517	-6.799680	N/A
Schwartz	-5.117852	-6.400026	N/A
Hannan-Quinn	-5.161462	-6.639880	N/A

Source: own computations in Eviews 7.0.

In the second case, the Fixed Effects configuration proposes a model where the Human Development Index (HDI) is statistically significant at a level of 5%, while the population growth rate is also statistically significant at the same level. In this case, it can be stated that an increase of one unit in the HDI will determinate a 3.53% increase of the penetration rate, all other aspects remaining equal. In addition, an augmentation of 1% of the population growth rate implies a growth of 0.24% of the penetration rate in the European Union, Ceteris Paribus. The F-test, that underlines the statistical significance of the model as a whole, shows that the Fixed Effects

model is more suitable than the one making use only of the intercept, its robustness being presented both by the value that exceeds 58 units and its associated probability that is smaller than 1%.
Regarding the model's goodness of fit statistics, its determination coefficient (R^2) can be noted for its high value (both the standard and adjusted form), explaining 91.45% and 90.45%, respectively, of the variance. Also, if we were to compare the two models by using the Information criterion, the Fixed Effects configuration would be more suitable, given the fact that it scores the minimum value between the two in every case (i.e. Akaike, Schwartz and Hannan-Quinn).
The final model estimated is the one using Random Effects. In this case, both the Human Development Index and population growth rate are statistically significant at a level of 5%, similarly to the previous case. However, an additional variable becomes statistically significant, at a level of 1%, the CPI. The result is in line with the elements underlined by the Pooled OLS model regarding this particular variable. The third and final configuration notes that an increase of one unit in the Corruption Index implies a raise of 0.317% of the penetration rate, Ceteris Paribus. The F-statistic of the Random Effects model underlines, for a 0.000114 probability, that the model is more suitable that the one including only the constant.

Table 6: The results of the Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	15.440268	5	0.0086

Source: own computations in Eviews 7.0.

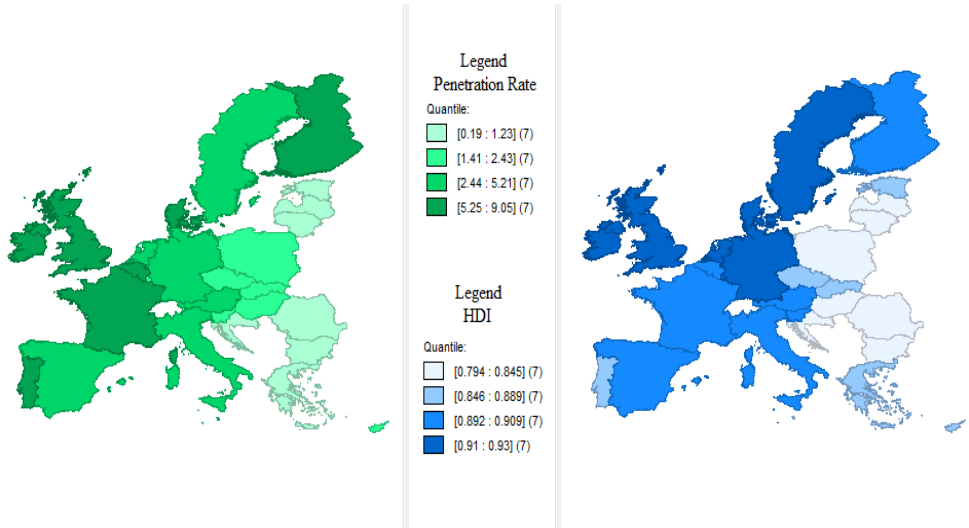


Figure 1: Quantile maps of the Life insurance penetration rate and HDI (mean for 2004 – 2014)
Source: own construction in GeoDa 1.8.14.

The most adequate model between the Fixed Effects model and the Random Effects model is to be determined by the result of a Hausman test. The Chi-Squared statistic that is used to build the test develops under the assumption (i.e. the null hypothesis) that the independent variables and the residuals of the model are not correlated. In

our case, the null hypothesis states that the Random Effects model is better for this configuration than the model with Fixed Effects. Following the results of the test, as shown in the *Table 5*, the probability of 0.012 (less than 1%) is implying that the Fixed Effects model is more suitable for our variables.
As we came to see, one variable in particular was recurrently statistically significant at a 5% level, the Human Development Index. Therefore, one of the main purposes of the study, to find a link between the two, was attained. In order to develop a better understanding of the relationship between the penetration rate and the HDI, we can study the quantile maps of the two, as displayed by the *Figure 1.*, computed by using the means of the data sample (2004 – 2014). It is observable that countries such as Denmark, Ireland, Sweden or the United Kingdom rank as having both the highest penetration rates in the European Union, while also placing very high on the Human Development Index hierarchy. On the other hand, it is shown that the Balkan region, and the countries in the Eastern Europe score particularly lower levels for both indicators, namely Bulgaria, Croatia, Latvia and Romania.

Conclusions

As we came to see by studying the descriptive statistics, the Scandinavian countries and generally the northern part of the European Union display high life insurance penetration rates, while the Central and Eastern Europe, particularly the Balkan region, present low rates for this indicator.
Also, our findings show that increases in the Human Development Index are bound to generate increases of the penetration rate.
In addition, the two models taken into account – the Fixed Effect and the Random Effects models – underlined the important role the population growth in augmenting the penetration rate. The results were in line with the initial assumption that the coefficient for this particular variable would be positive. Moreover, in the final configuration – the Random Effects model – increases in the Corruption Perception Index generate an increase of the life insurance penetration rate.
The findings of this paper are important for life insurance market and for governments, because human development refers to the people in term of skill, knowledge, poverty, health and security, which provide economic value.

Acknowledgements

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APPLYING BIG DATA ALGORITHMS FOR SALES DATA STORED IN SAP HANA

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Abstract: *An increasing number of small and medium enterprises operate and supervise their financial, logistics, production, human resource and other activities with ERP (Enterprise Resource Planning) IT systems, which are capable of managing these processes in a uniform framework. It is our research objective to explore analytical and prediction methods which can provide solutions to various financial and logistics problems that are faced by nowadays' enterprises. In order to achieve this objective, we analysed a real database of an enterprise using SAP. This database covers the period between January 2013 – October 2016 and contains 7 million sales records of 15,674 different products. These products also include currently inactive items, however, they can still be important from the aspect of data analysis in relation to the examined period. The data structure was created using the recently introduced SAP HANA (High Performance Analytic Appliance) database management system which revolutionised data storage with its in-memory and column-oriented features. This new technology makes it possible to execute various transactions more effectively and more quickly. Following the preparation of the schematics of data needed for processing and the calculation of calculation fields, we used the tools provided by SAP Predictive Analytics which was introduced to the market in 2015. After filtering sales data for 15 quarters, we used k-means clustering for each period. After preparing and examining the clusters, we made observations which make it easier to perform stock management, logistics and pricing activities in the future, thereby contributing to the long-term increase of enterprise profit. Clustering was also performed in R programming language, which enabled us to illustrate the clustering results, i.e., each sales record in 3D, colouring them based on their associated cluster label. After inspecting these graphic outputs, it was concluded that certain products should be withdrawn from the market, while others should be either developed or their stock level increased. We used regression analysis on the cluster centroids to predict the movement of each cluster mainly in terms of time. As a result, we provided an estimation as to the direction that the products belonging to the sales records in each cluster will fluctuate to in accordance with the coordinates of the cluster centroids, thereby making recommendations related to the management of each item and group of items. As a next step, we performed a global F test for regression analysis to examine the correctness of our model. As a conclusion, we reject the null hypothesis which stated that our model is basically invalid.*

Keywords: *SAP HANA; SAP Predictive Analytics; R programming language; k-means clustering; regression analysis.*

JEL classification: *F47; M15; M49.*

1. Introduction

The economic success of companies and enterprises is based on how efficiently and successfully they can make use of their available resources in order to produce their products or services (Fenyves – Dajnoki, 2015). Nowadays, an increasing number of small and medium enterprises operate and supervise their financial, logistics, production, human resources and other activities with Enterprise Resource Planning (ERP) IT systems which are able to manage these processes in a uniform framework. SAP Business One is one of the main ERPs of SAP AG (System, Applications & Products in Data Processing) and it is tailored to help small and medium enterprises manage their business processes in a more simple way (Niefert, 2009).

The memory-based and column-oriented HANA is a relational database management system developed and distributed by SAP and it was introduced to the market in 2010. In the case of SMEs, HANA runs on an independent B1A (Business One Analytics) server, on which the whole SAP Business One database is loaded into the memory where queries are performed subsequently (Walker, 2013).

By using the in-memory technology, data become accessible without any difficulties (e.g. lack of capacity) in just seconds; therefore, the hard and time-consuming tasks of pre-processing and grouping the data is not necessary. “Hot data”, i.e., data that is needed to be accessed frequently, is entered into the memory (Plattner, 2012).

The column-oriented construction better fits analyses in which algorithmic operations (organising, sum, filtering, mean) are often necessary to be performed on homogeneous data in columns. As a result, it is not necessary to load the whole table during analysis and indexes are not needed to be modified either when inserting a new row. By using this system, reports which used to take even more than ten minutes to perform can now be compiled in only seconds without overburdening the administration system (Idreos et al., 2012).

It is possible to connect to HANA even with mobile devices, enabling more effective work, eventually leading to a positive impact on competitiveness. Therefore, managers are able to make decisions based on the most up-to-date information any time of the day (Silvia et al., 2015).

On-line Analytical Processing makes it possible for database management systems to enable its users to query important data very quickly (Abdullah, 2009). OLAP is a database technology optimised for using queries and reports instead of executing transactions (Boutkhoum et al., 2015). OLAP technology is described by more complex queries, commands which include more complex calculations, as well as larger amounts of data. The system stores the results of various pre-calculations and partial operations in advance (Thomas et al, 2001).

Implementing ERPs potentially leads to increased sales efficiency and improved interactions in warranty services results in customer satisfaction through providing lower quotations and increased awareness. Enhanced production and lower cost of inventories also improve the performance of organisations (Máté-Kárpáti, 2015).

It is the fundamental operation of OLAP to create the data cube. Other typical OLAP operations include slicing, dicing, roll-up, drill down and pivoting (Ceci et al., 2013).

SAP Predictive Analytics involves several analytical functions. The 36 different algorithms involve clustering, involving the K means clustering used in this research. In addition, naive Bayes and kNN classification techniques are also focused on.

Furthermore, the system makes it possible to search for outliers, to examine the correlation between data and to analyse time series (SAP SE, 2014).

2. Sample and methods

The enterprise deals with food trade and its partners include various hypermarkets, food industry chains and restaurants. The 2015 central financial report of the enterprise could have been more favourable if the previous data are properly analysed and the sales of the substitute and supplementary product is better performed. *Table 1* contains the most important enterprise-related information from the aspect of analyses.

Table 1: Data of the examined enterprise

Characteristic	Value
Number of sales records	7 052 888
Beginning of the examined period	01/01/2013
End of the examined period	01/10/2016
Number of sold products	15 674
Number of currently active products	8 392

Source: Own research, 2017

The dataset containing sales also includes significant transaction-related attributes. In order to perform the proper analyses, reports and predictions, the examination should be narrowed down to the following attributes: card code, item code, date of sales (calculated field: summarised per month), price gap, purchase price, quantity and line total.

Our analytical methods included k means clustering and density-based spatial clustering of applications with noise (DBSCAN). These clustering methods helped us find the correlations between sales data and items and we used regression calculation to predict (depending on time or other variables) the coordinates of the centroids of clusters and homogeneous groups identified this way. Regression calculation serves the purpose of modelling a correlation between two or more random variables. As a next step, a global F test was performed to analyse the goodness of our model. The performed analyses enabled us to decide whether the lines and polynomials created during regression analysis properly fit to the cluster centroids and, consequently, whether the examined variables altogether describe the dependent variable sufficiently.

The SAP HANA technology was used for data preparation. Both in the case of the used clustering methods and during regression calculation, we used the operators of Predictive Analytics, as well as the statistical programming language "*R*".

3. Results

3.1. Results of clustering

The SAP Predictive Analytics makes it possible to perform filtering by column and row. This way, the dataset was divided to quarterly periods. The following attributes

were selected during the parametrisation of clustering: *quantity, net row total, purchase price and price gap*. As a next step, we ignored the missing values in the input data and set the maximum number of iterations to 100. In order to speed up the calculation process, we ran two types of analyses simultaneously, based on the available technology.

Clustering was tested with $k \in [1, 10]$ values and 5 clusters were created for each period, as the other parameters either resulted in excessively heterogeneous groups or the high number of clusters would have been difficult to interpret. The initial centroids of clusters is a difficult question, but observations show that the best result can be obtained if initial centroids are determined randomly. In addition, Predictive Analytics provides various options as to how the new coordinates of centroids can be calculated during the clustering process.

The results of the clustering process referring to the last quarter (01/07/2016 – 01/10/2016) show that the table was extended with two new columns: the number of cluster which represents which of the five clusters the given record belongs to and distance which shows the Euclidean distance between the given row and the centroid of its own cluster.

After finishing the algorithm, clusters can be classified into groups such as very good, less good, neither/nor, less bad, very bad. The first cluster contains the least number of items and the price gap coordinate of its centroid is the lowest (*Figure 1*). Therefore, it can be concluded that there were few sales in which purchase price was higher than selling price. For example, this phenomenon can be observed in the case of products with low shelf life, as it may occur that an enterprise does not pay proper attention to the appropriate management of products whose shelf life is shorter than a few months. There are relatively few products in the cluster with the highest price gap centroid coordinate (8978.69) (*Figure 1*), which relates to the fact that relatively few products were sold with high profit.

Algorithm Summary

```
Summary:

Overview
-----------------------------------------------------
Model Building Date    :  10 / 03 / 17   18:34 PM
Number of clusters      :5

The size of each cluster:
Cluster1                                  :21
Cluster2                                  :30
Cluster3                                  :49908
Cluster4                                  :1697
Cluster5                                  :130863

Sum of all clusters     :182519
Cluster Centers
                        Arres
1       :               -628.047619047618
2       :               8978.699538795805
3       :               265.71665871890696
4       :               1024.8347494683708
5       :               68.933937853437186
```

Figure 1: Clustering algorithm summary
Source: Own construction, 2017.

In addition to the operators of the SAP Predictive Analytics, clusterings were also performed in *R*, which separated the quarterly data relatively successfully by presenting them in a 3D cube (*Figure 3*). It is recommended to revise the items belonging to the records in the cluster on the left with very bad centroid coordinate and they should be withdrawn from the product range of the enterprise due to their high variability and low net row total. It is suggested for the enterprise to pay increased attention to the items belonging in the groups in the middle of the cube (less bad, neither/nor, less good), since these provide relatively stable trade and income performance, while they can easily represent the elements of the very good cluster in the future, as this group shows the most successful sales data of the enterprise.

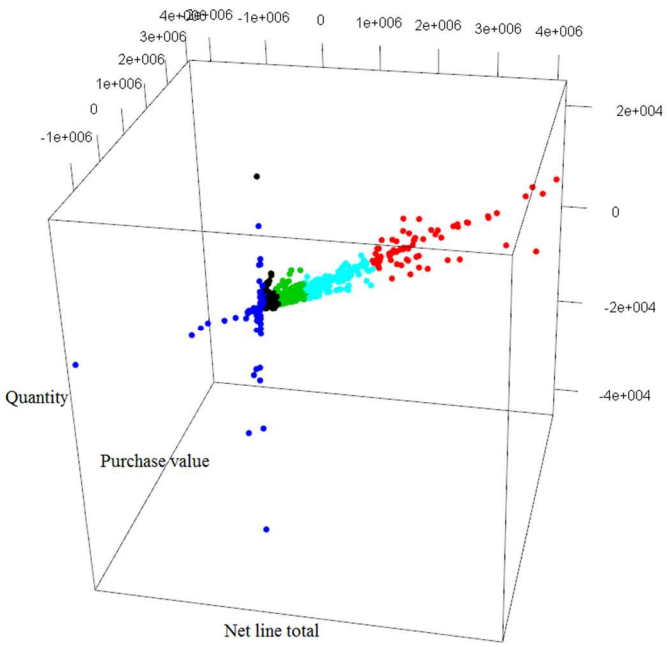

Figure 3: Clustering results in a 3D graph
Source: Own construction, 2017.

After the clustering process, we also performed the analyses of substitute products in the case of each item group, since one cannot necessarily recommend a product from a different item group instead of a given product. For example, it is not an option to recommend customers to buy products classified as dry bakery products instead of an item belonging to the group of chilled pork.
We analysed the item groups of clusters belonging to different categories based on two price gaps in the given period and concluded that the examined enterprise could recommend an item belonging to a cluster with a “very good” price gap centroid instead of products in the cluster with “less good” price gap centroid. Consequently, the enterprise may increase its profit based on items with higher price gap. For example, one may recommend customers to buy “chilled fresh chicken breast fillet” instead of “fresh chicken breast”. The former product has a higher price gap, while

the latter one has a lower price gap. The examined enterprise should withdraw its products with price gaps belonging to the "very bad" category, since their storage and removal may incur considerable costs.
In our research, we mostly used the k means algorithm, but we also tested other methods, the most important of which was DBSCAN. This clustering method is based on density, but the number of created clusters is not determined in advance; therefore, the variation of two parameters (epsilon (*eps*) and minimum points (*minPts*)) needed for the definition of density caused a problem related to the quantity of the resulting clusters. The number of resulting clusters was around 50-100. This method found a significant amount of sales records to be outliers. Finally, this procedure needed significantly more resources than the k means procedure, since it used around 9 GB memory in the case of *eps*=1000 and *minPts*=10.

3.2. Results of predictions

Clusters were compared to each other not only within a quarter, but also between different quarters in order to examine the change of clusters in a time series.
"Much" data is needed to draw statistically substantiated conclusions; therefore, we used the quarterly clustering results of nearly four years. Furthermore, it is very important to decide how to determine the associated cluster in each quarter. We strived to select a refined method; therefore, we decided to use the Magyar method. This approach called for nothing else than to calculate the distance of the cluster centroids of the two current quarters from each other, which means that the 5-5 clusters will result in a $D \in \mathbb{R}^{5\times5}$matrix. The Magyar method was used for the matrix obtained this way. The output of this method described how to pair the clusters of the previous and the subsequent quarter. Formally: Magyar method $(D) \rightarrow M$, where the pair of $M \in \mathbb{N}^{5\times2}$ and $\forall\{i,j\} \in M$ is the pairing of the elements of each cluster set (e.g. if *i=3 and j=4*, the 4th cluster of the subsequent quarterly analyses is associated as the 3rd cluster of the previous quarter). When used in each quarter, this procedure is an optimum solution of the problem, resulting in time series comprised of the people matching each other the most.
The examples below demonstrate the results which were obtained with regression analysis performed for the time series created using the above described method. Due to the strong fluctuation of cluster centroids, the linear regression could properly represent the correlation between time and the given coordinate only rarely; therefore, the given time series could be modelled more realistically using a third degree polynomial.
Figure 4 shows the results of the regression calculation.
The squared error of lines based on a few data points is relatively high, as it is very difficult to establish connection between two variables using such a simple model. *Figure 4a* shows the price gap coordinate of the 5th cluster against time, which, according to the model, shows a decreasing trend, while the net row total increases (*Figure 4b*), as it was expected. The enterprise should develop a better pricing strategy for the products belonging to the sales records of this cluster, as the profit realised on this product will be minimised in a few quarters. The reduction of the price gap can be explained by the more significant increase of purchase price and partially the fluctuation of products leaving a cluster and entering another. For this reason, the enterprise should withdraw all riskier products in this group and they should stabilise the less fluctuating ones.

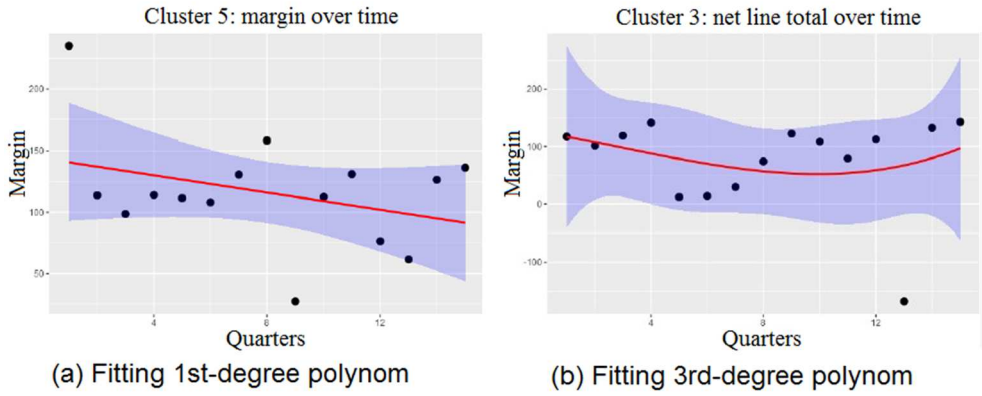

Figure 4: Results of the regression model
Source: Own research, 2017

It is important to make the results of predictions, i.e., the fitted polynomials fit the best possible way to the time series developed from the centroid coordinates of clusters. In order to test fitting, we also performed the well-known F test for each polynomial and observed whether the obtained parameters are good, i.e., whether the respective variables are good independent variables in the regression model. Based on the analysis of a third degree polynomial fitting (*Figure 4b*), it can be concluded that the polynomial fits the centroid coordinates of clusters better, due to the lower outliers. The results of the global F test performed for the model shown in *Figure 4b* are presented in *Figure 5*.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	6,778E+13	3	2,259E+13	2,992	,077
Residual	8,306E+13	11	7,551E+12		
Total	1,508E+14	14			

Figure 5: ANOVA results for the net value coordinate of the 3rd cluster against time
Source: Own research, 2017

Consequently, we reject the null hypothesis of the F test at a significance level of 10% that is the model is wrong as a whole. Therefore, we managed to find a regression polynomial which explains the net row total coordinate of the 3rd cluster at the proper level of significance, depending on time.
Furthermore, we examined the sales quantity of the items of two different subsequent periods and concluded that the sales transaction of each item increases. As a result, the examined enterprise is recommended to invest in a larger stock at a promotional price.

4. Conclusions and recommendations

We created a dataset based on a novel technology related to SAP HANA and analysed the sales records. After the clustering process, we identified substitute products within each item group of the enterprise. If the enterprise pays more attention to the correlation between products of this kind and they focus more intensively on products with higher price gap in their strategy, they can realise higher income in a short term. In addition to substitute products, there were also seasonal products in the clusters which were characterised by the various sales quantities of each period. The enterprise can prepare for such fluctuations by purchasing a large quantity of these items before the increasing period at a promotional price. Furthermore, by classifying each cluster in a separate category, there were also groups with "very bad" price gaps. The items in these clusters or products with low shelf life are the so-called "frozen" stocks. The enterprise should pay more attention to the coordination of these items, i.e., they are recommended to use "warning procedures" using the SAP Business One system.

The examined enterprise can develop a marketing strategy related to the top 10 customers which maintains and even improves their purchasing habits. A possible example of how this goal can be reached is to provide customers who purchased the most in the first two weeks of the month with a previously determined discount from the net total; therefore, customers purchase increasing amounts of products.

Clustering was also performed with the programming language "R"; therefore, the clustering results and each sales record, coloured on the basis of the cluster label, were depicted also in 3D form. As regards these graphic outputs, it was concluded that there are products which are recommended to be withdrawn from the market, while others should be developed or the minimum level of their stocks should be increased.

During regression analysis, the movement of each cluster was predicted mainly depending on time and both with using simple regression techniques and more complex models. It was concluded that the opportunities in the presented technologies and data mining algorithms have an infinite storehouse. Although both data storage technologies and the science of data mining underwent significant development during the past years, it is still not possible to use these methods at the desired safety and accuracy level among small and medium enterprises.

It was concluded that if these recommendations are accepted, the enterprise can proceed with its existing successful competition strategy in parallel with the constant development of technology, with special regard to its stockpiling, logistics and forwarding resources.

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DETERMINANTS OF FISCAL RULES IMPLEMENTATION – AN EU CASE STUDY

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Abstract: *This paper examines the implications of EU treaties, EU accession and other significant variables on the implementation of fiscal rules by EU states at a national level, sample period being years 1994-2015. The four targeted rules are the Budget Balance Rule, Public Debt Rule, Public Expenditure Rule and Public Revenue Rule for general or central governments. Two were our established key hypothesis: first, the fact that EU treaties enhance fiscal discipline at a national level, and second, the fact that the fiscal integration process determined in this particular case by EU accession and the two Maastricht treaty rules has a positive impact too. Both variables exert a positive influence on the implementation of fiscal rules at a national level by EU member states. While levels of public revenues as ratio-to-GDP exert a positive influence on the implementation of the related rules, it also has a negative impact on the implementation of the expenditure rule. Enhancing fiscal discipline through external factors is not necessarily the best method, as it may not correlate with internal structures and aggregates. Nevertheless, our results indicate that treaties and the integration process do bring with themselves fiscal rules that enhance fiscal discipline, fiscal framework, and conduct to more solid public finances.*

Keywords: *fiscal integration; fiscal discipline; fiscal rules; European Union.*

JEL classification: *E61; E62; H60.*

1. Introduction

Fiscal discipline represents one of the most important subjects of today's economics. How it can be achieved, what is influenced by, what are the limitations and what are the advantages are questions that need answers. Now, more than ever, the fiscal discipline needs to be enhanced, especially after the recent crisis proved that governments are not even near the required solidity of public finances in order to be able to face new shocks and crises.

At the EU level, in the past 2 decades, fiscal discipline and fiscal integration have gained a lot of attention due to signed treaties and the larger European integration process. Even so, it is important to determine what are the key factors that drive EU members in assessing and implementing fiscal rules at a national level for their general or central governments.

Our goal for this article is to reveal which are the factors that determine EU states in implementing fiscal rules, especially those related to debt, deficits, and expenditure and revenue levels. Our sample is composed of the 28 EU member states, sample period being years 1994-2015. Results indicate strong positive

connections between enhancing fiscal governance through treaties and through the fiscal integration process. These results also suggest that the path taken by the EU in the last two decades related to enhancing fiscal discipline has mainly been a positive one and should continue in the next years. Also, our final results reveal that the crisis had a negative impact, due to the fact that states suspended implemented rules or the ongoing process due to fast increasing levels of deficits and debt. Other variable that we introduced in the analysis are public debt, deficit, expenditure and revenue levels as percentage of the GDP, number of countries that have a public deficit under 3% of their GDP, number of countries that have a governmental consolidated debt under 60% of their GDP and accession to EU membership.

2. Literature Review

The rise of public debt-to-GDP ratios and deficit levels across many of the EU member states has triggered a wide discussion on the determinants of the sustainability of public finances. As most papers suggest, achieving sound public finances is a goal that has at its disposal a clear weapon: fiscal discipline through fiscal rules.

In response to the recent economic and financial crisis, many EU countries have strengthened their fiscal governance frameworks by introducing fiscal rules, which have the role to constrain fiscal policies through numerical limits on fiscal aggregates, such as deficit and debt levels and their evolution (Nerlich and Reuter, 2015). One of the government's arguments for adopting fiscal rules is that the burden of public spending should fall fairly across generations (Emmerson et al., 2006). No government has the right to leave behind high deficit and debt levels, even in the case of crises and shocks. Instead, it has the duty to limit the effects of such negative situations and to prevent the appearance of excessive burden for future governments and generations.

There are two broad schools of thought concerning fiscal rules. The 'public choice' view states that budgets are important constraints on political actors that end to alter budget outcomes (Eliason and Lutz, 2015). In contrast, as same authors' state, the 'institutional irrelevance view' states that political actors systematically evade the intent of rules while adhering to their letter. As so, the rules are seen as nothing more than a 'veil' that can easily be removed by politicians. In our point of view, this statement is not always valid. For example, if there exists proper and independent implementing, enforcing and monitoring institutions this situation is highly improbable to happen.

Achieving fiscal discipline, in any country, but more in a monetary union, without a central fiscal authority, while crucial for its stability, is a challenging task (Hitaj and Onder, 2013). For example, in the case of the EU, and especially the case of the European Monetary Union, countries have become more and more bounded on all fronts. If one country faces a shock, there is a high chance that the shock becomes contagious. As so, it is extremely important to maintain sound public finances through fiscal discipline. In such a context, fiscal discipline can be promoted easily through fiscal rules, defined by Sucharita and Sethi (2011) as permanent constraints on fiscal policies expressed in terms of a summary of fiscal performance, such as budget deficits, debt levels or other key variables such as public expenditure and revenues. Fiscal discipline on the other hand, ca be defined as the capacity of a government to maintain smooth financial operations and long-term fiscal health

(Hou, 2003). So, fiscal discipline is related to the concept of maintaining sound public finances. According to the same author, fiscal discipline targets three major processes: planning, budgeting and operating, and it implies estimations of expenditures and revenues, debt management, adopting counter-cyclical fiscal devices and maintaining structural balance.

The question of how much discipline is needed in a monetary union was proposed by know authors De Grauwe and Ji (2013). According to them, the nature of fiscal policies was changed dramatically by the creation of the Eurozone. Also, as same authors' state, and we agree with them, national governments of member countries of the union should be subjected to additional budgetary discipline and rules when compared with stand-alone countries. An important role in this regard can be attributed to the existence of a collective mechanism for mutual support and control, mechanism more probably to be found inside a political union. In the absence of such an organism, member states need to fill the necessary pieces of such a collective mechanism (De Grauwe, 2011).

The long run benefits of budget deficit and debt reduction have received extensive attention from economists and academia. As so, lower levels of public deficits and debt reduce real interest rates, increase investments, and thereby advantage productivity growth (Taylor, 1995). Given these facts, there seems to be no reason why states should not improve their fiscal discipline and set rules regarding debt and deficit levels. As Alesina and Perotti (1996) state, in theory, the benefits of numerical targets for insuring fiscal discipline are obvious. For example, a balanced-budget law, if enforced, eliminates persistent deficits induced by policy-makers and political distortions. Unfortunately, as same author states, there are two key problems that need to be solved. First, balanced budgets are not optimal, neither from the point of view of Keynesian stabilization policies and neither from optimal taxation theory. Second, numerical targets increase incentives for creative and non-transparent accounting (see von Hagen and Wolff, 2006). Also, tying government's hands may lead to an increase in the amplitude of business cycle (Fatás and Mihov, 2006).

Nevertheless, if the EU truly wants to become a fiscal union, even with problems as the one mentioned, it needs to enhance its public finances soundness. The logic behind this relies on the fact that in the absence of constraints, there is a bias towards excessive debt financing and more (Fuest and Peichl, 2012). No EU member for example will agree with the introduction of a fiscal equalisation mechanism without ensured sound public finances for all members. But, as Wyplosz (2012) stated, in order to achieve such a daring goal, rules need a specific function: to specify what is the acceptable behaviour. To be effective, rules must include sanctions that need to be applied in the event of non-compliance. These sanctions determine states look more in 'the neighbour garden' and see if it respects the rule (enhancing outside supervision).

Considering the papers and results presented so far, we establish for our article two main hypotheses:

H1: EU treaties such as the Maastricht Treaty, the SGP, SGP II and the Fiscal compact enhance fiscal discipline due to states introducing the rules in their own national legislation as constrains on policy-makers;

H2: the fiscal integration process had a positive impact, countries converging in introducing fiscal rules at a national level in order to maintain solid public finances and gain in fiscal discipline terms.

It is highly important to analyse the influence of such variables on the implementation of fiscal rules because the process becomes inefficient if for example, treaties are signed and not further implemented – thus the work done in bringing states together will have no results. It also allows us to see if the continuous fiscal integration that takes places in the EU has any impact on countries laws regarding fiscal policies.

3. Data

3.1. Sample composition

We used in our analysis data composed of 28 countries, meaning the member states of the European Union, the sample period being 1994-2015 (annual records). We used dummy variables such as member of the EU (1), non-member of the EU (0), member of EMU (1), non-member of EMU (0). We also quantified our key variables as dummy: implemented budget rule at a national level for the general or central government (1), non-implemented (0), implemented public debt rule at a national level for the general or central government (1), non-implemented (0), implemented public expenditure rule at a national level for the general or central government (1), non-implemented (0), implemented public revenues rule at a national level for the general or central government (1), non-implemented (0).

As dependent variables we used the specified rules: Budget Balance Rule (*BBR*), Public Debt rule (*PDR*), Public Expenditure Rule (*PER*) and Public Revenues Rule (*PRR*). Data was collected from the Fiscal Rules Database provided by the European Commission. Given the fact that the implementation of the specified fiscal rules depends also on the evolution of other macroeconomic variables, we introduced in our analysis variables such as Public Debt as % of the GDP (*PDGDP*), Public Deficits as % of the GDP (*DEFGDP*), Public Expenditure as % of the GDP (*PEGDP*), Public Revenues as % of the GDP (*PRGDP*), maintaining the public deficit under 3 % of the GDP (*PD3GDP*), maintaining the public debt under 60 % of the GDP (*PD60GDP*).

In order to capture the influence of the key treaties (*Treaties*) regarding fiscal policies, we gave each treaty a number from 1 to 4, in order to capture also the influence of the enforced discipline on states. As so, we gave value 1 for years 1994 to 1997 for the Maastricht Treaty, value 2 for years 1998-2004 for the Stability and Growth Pact, value 3 for the Stability and Growth Pact Reformed (years 2005-2012) and value 4 for the Fiscal Compact (years 2013-2015).

The variable Fiscal Integration Index (*FII*) was calculated by us by using a similar methodology as the one we used to quantify fiscal discipline (see Macsim and Oprea, 2016).

Table 1: Budget Balance Rule, Public Debt Rule, Public deficit as percentage of the GDP, Public Debt as percentage of the GDP and the Growth rate of the GDP

Country	Number of observations	BBR	PDR	DEFGDP	PDGDP	GDPGRR
Austria	22	0.772 *0.428*	0 *0*	-2.671 *1.491*	71.619 *8.059*	3.134 *1.854*
Belgium	22	0.090 *0.294*	0 *0*	-2.076 *1.816*	105.785 *11.666*	3.137 *1.912*

Country	Number of observations	BBR	PDR	DEFGDP	PDGDP	GDPGRR
Bulgaria	22	0.227 *0.428*	0.590 *0.503*	-1.252 *3.146*	37.778 *26.074*	7.858 *11.855*
Croatia	22	0 *0*	0.318 *0.476*	-4.486 *1.607*	55.085 *19.523*	4.905 *5.650*
Cyprus	22	0.136 *0.351*	0 *0*	-3.333 *2.690*	64.595 *19.014*	4.349 *4.736*
Czech Republic	22	0.045 *0.213*	0 *0*	-3.785 *2.579*	27.947 *11.150*	6.928 *6.931*
Denmark	22	1 *0*	0 *0*	0.171 *2.785*	42.162 *6.810*	3.238 *2.369*
Estonia	22	0.954 *0.213*	0.227 *0.428*	0.352 *1.670*	6.552 *1.993*	10.624 *9.021*
Finland	22	0.545 *0.509*	0.818 *0.394*	0.277 *3.787*	46.466 *8.217*	4.344 *4.442*
France	22	0.136 *0.351*	0 *0*	-3.718 *1.568*	70.852 *13.575*	2.975 *1.861*
Germany	22	1 *0*	0 *0*	-2.223 *2.400*	66.180 *8.201*	2.380 *2.310*
Greece	22	0.181 *0.394*	0 *0*	-7.928 *2.890*	122.866 *31.040*	2.812 *6.157*
Hungary	22	0.090 *0.294*	0.318 *0.476*	-5.247 *2.271*	67.828 *10.151*	6.015 *7.040*
Ireland	22	0.136 *0.351*	0.136 *0.351*	-3.342 *8.295*	61.014 *33.594*	8.569 *9.316*
Italy	22	0.090 *0.294*	0.090 *0.294*	-3.476 *1.478*	111.828 *10.624*	3.122 *3.710*
Latvia	22	0.136 *0.351*	0.136 *0.351*	-2.142 *2.560*	21.895 *13.916*	9.912 *11.676*
Lithuania	22	0.045 *0.213*	0.863 *0.351*	-3.314 *3.198*	24.633 *10.281*	10.933 *10.919*
Luxembourg	22	0.136 *0.351*	0.545 *0.509*	1.938 *2.054*	12.328 *6.445*	6.008 *4.162*
Malta	22	0.090 *0.294*	0.090 *0.294*	-4.538 *2.342*	61.709 *10.309*	5.890 *3.322*
Netherlands	22	0.090 *0.294*	0 *0*	-2.014 *2.418*	57.757 *9.252*	3.5098 *2.706*
Poland	22	0.136 *0.351*	0.863 *0.351*	-4.280 *1.438*	46.247 *5.810*	7.439 *8.701*
Portugal	22	0.636 *0.492*	0.136 *0.351*	-5.271 *2.155*	78.033 *29.318*	3.503 *3.386*
Romania	22	0.090 *0.294*	0.090 *0.294*	-3.347 *2.224*	22.761 *10.140*	9.528 *11.204*
Slovakia	22	0.090 *0.294*	0.181 *0.394*	-5.052 *2.816*	40.300 *9.646*	8.735 *7.264*
Slovenia	22	0.136 *0.351*	0.454 *0.509*	-3.838 *3.276*	35.566 *19.963*	4.477 *3.998*
Spain	22	0.636 *0.492*	0.181 *0.394*	-3.814 *4.166*	61.309 *19.100*	4.343 *4.104*
Sweden	22	0.727 *0.455*	0 *0*	-0.157 *2.314*	49.138 *11.517*	4.310 *6.378*

Country	Number of observations	BBR	PDR	DEFGDP	PDGDP	GDPGRR
United Kingdom	22	0.818 *0.394*	0.772 *0.428*	-4.068 *3.173*	55.647 *19.906*	5.126 *8.239*

First row is the *mean*. Second row is the *standard deviation* of the variable
Source: author calculations

Table No. 1 marks our part of descriptive statistics, the first row being the mean and the second row representing the standard deviation. A first look reveals us the fact that more developed countries register better values for the implementation of the budget balance rule. They also tend to register higher values regarding public debt (see for egg. Italy, Greece, Belgium). As assumed, lower developed countries register higher growth rates of their GDP, benefiting from foreign investments and EU funds for economic alignment.
What we find as being strange is the fact that some developed countries haven't implemented a public debt rule, although they don't register the best obtainable values for this specific macroeconomic variable.

3.2. Preliminary analysis

Table 2: The correlations between the Budget Balance Rule, Public Debt Rule, Public Deficit as percentage of the GDP, Public Debt as percentage of the GDP and the Growth Rate of the GDP

		BBR	PDR	DEFGDP	PDGDP	MEU
BBR	Pearson Correlation Sig. (2-tailed)	1				
PDR	Pearson Correlation Sig. (2-tailed)	0,135** 0,001	1			
DEFGDP	Pearson Correlation Sig. (2-tailed)	0,198** 0,000	0,093* 0,024	1		
PDGDP	Pearson Correlation Sig. (2-tailed)	0,070 0,095	-0,164** 0,000	-0,390** 0,000	1	
MEMUE	Pearson Correlation Sig. (2-tailed)	0,312** 0,000	0,089* 0,027	0,114** 0,006	0,327** 0,000	1

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Author calculations

Table No. 2 depicts our further investigation into the links between some of our most important variables. As the results indicate, there is a positive strong connection between the BBR, PDR, public deficits and ascension to EU member status. This indicates that the implementation of one rule leads to the implementation of the other. Our results also indicate that while the public debt rule leads to a reduction of the public debt, it has negative influences on public deficits. Finally, ascension to

EU member status while it leads to more and more countries implementing the two specific rules, it presents a strong positive connection with public debt and deficit levels.

4. Methodology

In order to establish the relationship between fiscal rules and the other chosen variables, we employ the next basic model (1):

$$Implemented\ rules\ indicators_{i,c,t} = \alpha_i + \beta_1 Respected\ rules + \beta_2 MEU_{c,t} + \beta_3 MEMU_{c,t} + \beta_4 POC_t + \beta_5 FII_{c,t} + \beta_6 Treaties_{c,t} + \beta_7 N_{c,t} + \varepsilon_{i,t} \quad (1)$$

Where: $Implemented\ rules\ indicators_{i,c,t}$ is one of the four indicators for implemented fiscal rules used in analysis: Implemented Budget Balance Rule (*BBR*), Implemented Public Debt Rule (*PDR*), Implemented Public Expenditure Rule (*PER*) and Implemented Public Revenues Rule (*PRR*);

$\beta_1 Respected\ rules$: One of the two indicators for the number of countries that respect the two key rules: maintaining the public deficit under 3% of the GDP and maintaining the debt level under 60% of the GDP;

$MEU_{c,t}$ - depicts the European Union accession dummy by year;

$MEMU_{c,t}$- is the European Monetary Union accession dummy by year;

POC_t - is a dummy variable, depicting the 2008-2011 global financial crisis;

$FII_{c,t}$ - depicts the evolution of the fiscal integration index calculated by us for the European Union;

$Treaties_{c,t}$ – depicts the 4 key treaties signed in the EU, the Maastricht Treaty, the SGP, SGP II and the Fiscal Compact;

$N_{c,t}$- represent country specific control variables: Public expenditures as % of the GDP (*PEGDP*), Public revenues as % of the GDP (*PRGDP*), Public deficits as % of the GDP (*DEFGDP*), Public consolidated debt as % of the GDP (*PDGDP*).

5. Empirical results

In order to capture de influence of our independent variables on fiscal rules indicators we used and Ordinary Least Squares panel distribution with fixed effects to allow for country specific characteristics as government spending and revenues to be accounted. While public expenditure, revenues, debt and deficit levels were provided by the European Commission, we quantified the years in which countries had implemented at a national level the budget balance, debt, public expenditure and revenue rules according to data also provided by the EC as in the Fiscal Rules database. As the two rules that suggest public deficits should register values under 3% of the GDP and the public debt should register values under 60% of the GDP, we attributed value 1 for the years that a country respected the rule and 0 otherwise. Also, our key variables that target implemented rules at a national level take the form of dummy variables, value 1 for years that countries had the rule implanted and 0 otherwise. In order to circumvent the risk of serial correlated errors, we have done our analysis with all the standard errors clustered at a country level.

Table 3: Implemented fiscal rules at a national level for the general or central government

Panel A: Dependent Variable BBR			Panel B: Dependent Variable PDR		Panel C: Dependent Variable PER		Panel D: Dependent Variable PRR	
Variable	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
PD3GDP	-0.023	-0.028	-0.015	-0.017	-0.049	-0.051	-0.009	-0.009
	(0.047)	(0.046)	(0.040)	(0.041)	(0.048)	(0.047)	(0.017)	.018
PD60GDP	0.120	0.105	0.075	0.069	0.100	0.094	0.038	.039
	(0.100)	(0.097)	(0.067)	(0.066)	(0.098)	(0.098)	(0.048)	.048
MEMUE	-0.093	-0.075	0.108	0.116*	0.222**	0.231**	0.038	.036
	(0.069)	(0.068)	(0.069)	(0.067)	(0.106)	(0.106)	(0.063)	0.063
MEEMU	0.092	0.064	-0.026	-0.038	0.098	0.086	-0.050	-0.046
	(0.081)	(0.081)	(0.079)	(0.081)	(0.103)	(0.100)	(0.041)	0.040
POC	-0.132***	-0.017	-0.094*	-0.047	-0.033	0.018	0.048*	0.033
	(0.045)	(0.038)	(0.054)	(0.051)	(0.059)	(0.051)	(0.028)	0.026
PEGDP	0.023	0.014	-0.026	-0.029	0.020	0.016	-0.087***	-0.086***
	(0.019)	(0.015)	(0.034)	(0.032)	(0.018)	(0.020)	(0.018)	(0.017)
PRGDP	-0.019	-0.008	0.022	0.027	-0.070***	-0.065**	0.080***	0.079***
	(0.021)	(0.019)	(0.039)	(0.037)	(0.024)	(0.025)	(0.022)	(0.021)
DEFGDP	0.030	0.016	-0.021	-0.027	0.024	0.018	-0.081***	-0.080***
	(0.022)	(0.019)	(0.033)	(0.031)	(0.020)	(0.022)	(0.018)	(0.018)
PDGDP	0.003**	0.003*	0.002	0.002	0.003	0.003	0.002	0.003
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.001)	(0.001)
TREATIES	0.185***	0.075**	0.127***	0.083**	0.089*	0.040	-0.002	0.011
	(0.031)	(0.036)	0.037	(0.037)	(0.044)	(0.045)	(0.029)	(0.026)
FII		0.401***		0.164**		0.181**		-0.051
		(0.077)		(0.073)		(0.084)		(0.033)
Number of observations	574	574	574	574	574	574	574	574
R squared	0.322	0.359	0.196	0.203	0.250	0.257	0.065	0.068
F-stat	18.64	20.01	4.98	5.53	5.59	6.04	135.18	196.26
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

First row is beta coefficient. Second row is the standard errors clustered at country level. *** denotes significant at 1%, ** at 5%,* at 10%.

Source: Author calculations

Our goal was to capture the influence of related variables to the degree by which countries implement at a national level fiscal rules as constraints for their general or central governments regarding public deficits, debt, expenditure and revenues. Regarding the first dependent variable, the BBR, our analysis indicate that it is positively influenced by debt levels and especially treaties, and negatively by the crisis. As the discipline evolved in the EU through new treaties that enhanced and enforced rules, more and more countries implemented at a national level, in their own legislation, a rule that prevents excessive deficits. As the crisis emerged, states were obligated to suspend the rule due to too fast rising deficits. Also, as model 2 indicates, the fiscal integration process had a positive impact. As the process evolved, more and more countries implemented rules in order to restrain the actions of policy-makers. The implementation of the debt rule at a national level was influenced positively by new treaties that were signed and by the evolution of the fiscal integration process, crisis having similar effects as for the BBR. A small positive influence can be attributed to the accession of a state to EU membership.

The public expenditure rule was also influenced by a positive manner by the accession of a state to EU membership, signed treaties and the evolution of the fiscal integration process quantified though our calculated fiscal integration index

(FII). While model 2 confirms the fact that higher public expenditures put stress on the implementation or suspension of the expenditure rules, we find strange the fact that in our first model the public revenue levels have a negative impact on the implementation at a national level of this specific rules.
Not last, the public revenue rule is clearly influenced by growing expenditure levels as percentage of the GDP negatively, same affect being significant to deficit levels. Only the evolution of revenue levels has a positive impact on the implementation of the rule, although it had a negative impact on the implementation of the expenditure rules. What we also find strange is the fact that neither public debt nor public deficits influence the implementation of most fiscal rules as constraints for the general or central governments.

6. Conclusions

Most countries of the world understand the importance of maintaining sound public finances as a mean to gain confidence from the general public, investors and media, but also as a mean to prevent future crisis to inflict damage on budgetary positions, debt and deficit levels. In this framework, the most important piece of the puzzle is being represented by fiscal discipline, enhanced through fiscal rules as constraints on governments.
But, fiscal rules don't appear sudden, from nowhere. They are the result of a process that targets limiting the power of policy-makers or a result of the fiscal integration process. Both cases seem to suit the case of the European Union.
Our goal was to analyse which are the causes that make countries implement such rules at a national level. Although at the EU level, such rules are stipulated in signed treaties, in order to enhance their effects and to become more and more effective these rules need to be found also in national legislations. We targeted in our analysis four important rules: the budget balance rules, the public debt rule, and the public expenditures and revenues rules.
The good news is that our two hypothesis are mainly confirmed. As new treaties emerged regarding enhancing fiscal discipline and convergence, the impact was a positive one, as countries implemented at a national level rules regarding balanced budgets, public debt, and public expenditure (see Panel A, B and C in section Empirical results). Unfortunately, as expected, treaties do not have an impact on the implementation of revenue rules, because treaties target mainly debt and deficit levels, and less revenue levels and their evolution. Second, the fiscal integration process has a positive influence on countries enhancing their discipline. As the process evolved, more EU member states implement specific rules targeting debt, deficit and expenditure levels.
What we find strange is the fact that while the level of public revenues as percentage of the GDP has a positive impact on the implementation at a national level of the related rule, it has a negative impact on the implementation of the expenditure rules. At the opposite table, public expenditure levels exert a negative influence on the implementation of the revenue rules. Nevertheless, what is important is the fact that treaties, used as a mean to enhance public finances solidity and the evolution of the fiscal integration process, are a good path to be undertaken. As the fiscal integration process has a positive impact, it is important to be continued in order to maintain discipline and constraints on policy-makers in making bad decisions.

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SOME COMMENTS ON REPRESENTATION OF COMERCIAL SOCIETY

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Abstract: *This article analyses the issue of the representation of the commercial company, especially in the case of genuine acts of disposal on the assets of the company, starting from different opinions expressed in the notarial and judicial practice of the form that the empowerment in the case of representation of a company should take. In the present form of Law no. 31/1990, the liability of the company was extended irrespective of the legal form for the legal acts concluded by its representatives.*

Keywords: *commercial company; empowerment; representation.*

JEL classification: *K2; M2.*

1. The name of a legal representative for administration

Linked to the concept of a legal persons in general and the company in particular, have been formulated in the literature with more opinions.

The way the institution of a legal person is seen in its essence makes the answer to the question of whether individuals through which manifests the legal person have the quality of a trustee, of a legal representative, previously put or of an person whose facts and juridical acts directly to the legal personi.

In an opinion, are regarded as "representatives" of the legal person all who represent opposite thirdii parties. We consider that this definition is too broad, whereas there may be persons representing the entity and yet not have the quality of its representative (for example, a simple representative or an attorney hired to represent a particular process).

In another opinion, through the representative of the legal person, it is meant any person to whom the law or the statutes recognizes faculty to represent the legal person or the manner for a particulariii operation. Although more complex, yet neither this definition does not entirely reflect reality. The notion should not be assimilated representative. Between the representative and the represented there is no identity of positions of the entity and the legal entity.

Mainly, members of the legal person did not represent, but otherwise the question arises when they are gathered in a general overview: their decisions are then the responsibility of the legal personiv.

It is generally attributed the status of "representative"v of the legal person to whom the statute has entrusted the management and control (the administrative board in the case of the autonomous administration, according to Law 15/1990 on the reorganization of the state economic units as autonomous regies and commercial companies; the general meeting of the shareholdersvi, the directorsvii is either acting individually or collectively in a board of directors of the commercial companies governed by Law No 31/1990, the board of directors made up of at least 3 members appointed by the founders at the time of foundation, According to Government Ordinance 26/2000, etc.).

The individuals that make up the body of a legal person are subjects of civil law and appear in double role, namely, as individuals in their own right and as the inner entities of the legal person. These people cannot be called directly responsible, but are called indirectly.
On one hand, the individual that meets the entity's functions are identified with the legal person and on the other hand the legal person stands by that person through injury that has been caused to him.
The legal entity has, in general, two types of principal representatives. On one hand, the general Assembly, where all members are summoned, which has the power to adopt resolutions and express the will of the legal person and, on the other hand, those who manage the legal person, who have the executive power, who run its willpower and bear different names depending on the legal entity (administrators, etc.).
The form of a legal person may consist either of a single person, in which case we are dealing with unipersonal entity, or with more individuals, this hypothesis is called collective and collegial body which represent the vast majority of them.
In conclusion, in our opinion, the body of the legal entity is the person or persons or the internal structure or memorandum of the Association, which will exercise the functions entrusted to them, becoming the will of the legal entity.
The civil code uses the concept of administration entity in art. 209 para.1 and 2 of the Civil Code which provides that legal person shall exercise the rights and fulfil the obligations through its management bodies, from the date of their establishment. Thus, the administration body shall appoint a natural or legal person who, by law, the Act of incorporation or statute, shall be designated to act in relation with third parties, on its own or collectively, in the name and on the account of the legal person.

2. The power to represent the commercial society

In accordance with article 218 of the Civil Code, the juridical acts done by the organs of the administration of the legal person, within the limits of the powers conferred on it, shall be considered to be acts of the legal person itself. In dealings with third parties, the legal person is engaged by the acts of its bodies, even if they exceed the power of representation afforded by The Memorandum of the Association or Status, unless it proves that the third party knew about it at the date of the Act was done.
Under art. 1919 civil code, the general rule is that the company is represented by administrators with the right of representation. Right of representation of a company cannot be awarded by means of a contract of employment, it is a special institution governed by corporate lawviii.
We must, however, make a distinction between the power to represent the company and the power of the company's managementix.
In the structure of any company we can distinguish a *deliberative body*- the general meeting of the shareholders who elect or appoint the *representative body* whose main task is to manage the entity with legal personality. Therefore, the governing body of the legal person is deliberative and the management body is the representative body.
Thus, the associates shall designate individuals who will administer and represent the society through the Memorandum of the Association of the company, therefore, the power of representation exists only if it has been granted to the administrator. The associates shall decide whether the mandate of administrators includes the

power of representation, hypothesis in which they can represent the company in dealings with third personsx or is limited to the internal management of the company. The Power of representation to the administrator must be expressed explicitly in all cases in order to ta With respect to the company, partnerships and Limited Liability Company, the right to represent the company belongs to each administrator, out of stipulation, contrary in the constitutive act, according to art. 75 and 197 paragraph 3 and law no. 31/1990 as amended and supplemented. In the case of these companies, if the articles of incorporation has not been conferred the power of representation of one of the administrators, the presumption that all administrators benefit from the power of representationxi is the one that operates. This presumption shall produce effect by third parties if the formalities are completed.
In the case of the company with limited shares, in accordance with article 143 of Law 31/1990 the right to represent the company in dealings with third parties and in legal proceedings lies with the Administrative Board. If there is no stipulation contrary to the Memorandum, the society is represented through its Chairman.
In conclusion, with the above things said, it results that the administrator enjoys the power of representation in compliance with the law as legal representative of the company, regardless of its form.
The members of the management bodies who legally represent the company benefit of a "general mandate" of representation and can conclude any kind of acts in the name and on behalf of the companyxii.
As the legal representative of the company, the administrator has the right to conclude acts of conservation, acts of administration and disposition under the management of the company. In order to achieve the object of the company's activities, the legislator has moved from corporate of the provisions of the legal acts concluded (conservation, management, provision) and the mode of training of legal acts (real solemn, consensus). We can see that the mandate of the general managers in corporate law encompasses a wider sphere than the mandate from common law, because it includes also documents available.
Thus, authentic instruments of provision in respect of the goods of a company may be made by the legal representatives of the company by virtue of the powers conferred on it by law, the memorandum or decisions of the Association, without the necessity of a special power of Attorney in authentic form for this purpose (70^1 of the law No. 31/1990).
From the analysis of this legal text, it appears that the legislator understood to extend corporate limits of social administrators and give a special character, in the sense that for documents available that have as their object the property of a company, regardless of its form, it is not necessary to have a special power of Attorney and, furthermore, does not require to take the form of an authentic and even in those situations where under the law, the acts of disposition necessarily end in authentic form (e.g. in the case of documents relating to the provision of property).
This opinion was enshrined and relatively recent in court practice, thus putting an end to the controversy of the doctrine, by Decision No. 731/05.03.2015 of the High Court of Cassation and Justice- Civil Section II. Thus, where the conclusion of a contract of mortgage the company was represented only by one of the Admins, this representation is in compliance with the provisions of law No. 31/1990 and the Memorandum Act, we cannot talk about the lack of consent to the conclusion of the Act, the fact that the other administrator hasn't agreed on the validity of the Act concluded between the company-which was legally represented- and a third person.

The extent of the powers of the person legally representing the company differ according to the type of management.
The Memorandum of the Association may contain two forms of Administration:
- **Simple**, that implies that provision (disposal or encumbering real warranty) are allowed to the administrator who manages assets whenever they are necessary for the proper management of the universality; in other cases it is required the prior authorization of members
- **Full** – that implies that the administrator can do any of the acts of disposal for valuable consideration or encumbering real rights, without any declaration of a general meeting of members. Cannot conclude, however, acts with a free title, such as donations of goods or bailment contracts only on the basis of the General Assembly of members' decision.

3. Transmission of the representative power

Under art. 71 para. 1 of the law of companies and the Civil Code art. 2023, the administrator is able to convey the power of representation to another person only if that possibility was expressly granted by the Memorandum or by the decision of the general meeting of shareholders. Otherwise it is required to represent the company in all documents that will be done. Assuming that he is granted the right of substitution, the administrator may exercise it by giving it to another person with a special mandate.
This legal text does not represent anything other than applying the General principles of mandate and justification is found in the right to represent the companyxiii.
Substitution with another person through a special mandate must be done carefully, however, for certain acts.
In general, the administrator may do any act in the interest of the administration of the company. In terms of provision of a certain gravity, law No. 31/1990 includes some specific provisions, which are different depending on the form of that company. Acts of acquisition by the company of certain goods from a founder or shareholder are subject to the conditions provided for in article 44 of the Act 1st index.
The legal documents for the acquisition of the company, concluded within a maximum period of 2 years from the date of establishment or of authorization from the start of activity of the company in return for a lump sum or other equivalent value representing at least one tenth of the issued share capital are also kept in mind. Such legal deeds must be subject to prior approval of the extraordinary General Assembly of shareholders, listed in the Trade Register and published in the Official Gazette and in a newspaper with wide spread. The goods are object of judicial acts and shall be subject to surveys.
The administrator will be able to dispose of their own behalf respectively acquire goods to or for the society, having a value of more than 10% of the value of the net assets of the company only after obtaining the approval of the extraordinary General Assembly.
Under art. 153[22] The Board of Directors, namely the Directorate will be able to conclude legal acts in the name and on behalf of the company, to acquire the property for it or dispose or rent, exchange or put as warranty, all that constitute goods contained in the heritage society, the value of which exceeds one half of the book value of the assets of the company at the date of conclusion of the legal act, only with the approval of the general meeting of shareholders given in article. 115.

The approval of the General Assembly is required for each legal act in part as to the mandate of the common law. This legal prohibition applies in the case of public limited companies.
Finally, in the case of companies, if the administration bodies only represent a legal entity, the conclusion is that a legal act for which the law requires authentic form ad validitatem (e.g. a contract of mortgage of the real estate), legal representatives do not need a special power of Attorney, given in authentic form, in order to create the documents in relation to the real estate.

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Notes

I. See I. Christian, *Theory of legal entity*, Editura Academy, Bucharest, 1964, p. 258.

II. See D., Mazeaud, *Responsabilité civile et précaution*, in Responsabilité Civile Et Assurances 6 bis, 2001, 611.

III. On this issue, see J.C. Groslière, Les responsabilités encourues par les organes des sociétés de commerce, Annales. Droit Toulouse, 1971, p. 1552. This author considers also representatives of legal persons and delegations; in this case, Dijon, 3 avr. 1981, Lettre de la Distribution, n. 9 of 1981 decided that the President-general manager of a limited-liability company is an entity while marketing director is the onre of the society.

IV. see J.C. Groslière, *op. cit.*, p. 152 et Com., 1 févr. 1994, JCP, 1995.II.22432, note D. Gibirila.

V. In Switzerland has been considered by courts in different situations, as organs: the individual wills appear directly through the corporate, though does not manifest itself towards third parties, gives guidance to persons with the right of signature; the individual named in the statute, not subordinated to the entity, which is the only legal entity through which can manifest apart;

an individual participating in the internal training of the will of the legal person and expressing this will direct his actions; the individual named in the statute and to which organ, as administrator of the legal person assigned the functions of an organ; natural person in the hand levers that put into motion the whole enterprise; the administrator, the responsible person participating in the formation of the will of the legal person and representing it by third persons, etc.; see r. Steinbrüchel, Hiljsperson und Organ (Organ and assistants), Zürich, 1947, p. 35-38, quoted after Christian I., *op. cit.*, p. 260.

VI. General meeting of the Associates was defined as a body in which associations, concerned shareholders, express their individual will as a collective will, other than the totality of the will of individuals who compose it, namely the will of society as a legal entity; see R. P. Lee, Right, Light companies, 2000, p. 113.

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VIII. In this sense it has been decided the judicial practice-to see High Court of Cassation and Justice-Decision No. 150/C/2015-A of 20.05.2015.

IX. I. Georgescu, *Romanian trade law*, vol. II, companies, Junimea Publishing House, Bucharest, 1946, p. 109, E. Munteanu, *The legal status of company managers*, All Beck Publishing House, 2000, p. 106.

X. The power of representation implies the right of representation of the company by the administrator to whom it was awarded.

XI. St. Cărpenaru, *Treatise on commercial law*, Universul Juridic, 2012, p. 217.

XII. S. Bodu*, Limitations and conflicts of interest in the appointment and mandate of administrator of a company,* published on www.juridice.ro.

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TAX EVASION. THEORETICAL AND PRACTICAL EFFECTS OF THE PROVISIONS OF ARTICLE 10 OF LAW 241/2005

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Abstract: *Law No. 255/2013 governs transient situations resulting from the entry into force of the new Criminal Code, and by art. 79 points 1 and 2 modified the name of chapter III, and the content of paragraph 1. 1 of art. 10 of law No. 241/2005 preventing and combating tax evasion. The disposal of the normative in force stipulates only a question of reduction of sentence, but considering the importance of the effects of reducing the penalty, and also the causes of unpunishment in the jurisprudence in relation to incidence of art. 5 pen. code through this work we plan to do a full analysis and of the provisions of article 10 paragraph 1, in the version in force before 1 February 2014. Following the legal approach taken, I've found that regulation causes reduction of sentences and " unpunishment " for an offence of tax evasion is not sufficiently clear and accessible to the recipients of the regulatory framework, being imperative needed the intervention of the legislator with the accuracy of the contents of the legal norm, with the consequence of applying them consistently. At the same time, we appreciate that it is necessary to regulate the alternative measures to ensure that those who have committed acts in the field of economic and financial crime should be encouraged to cover in full the damage caused to the consolidated budget of the State.*

Keywords: *tax evasion; sentence reduction causes; cause of atypical punishment; substitution of punishment; civil party claims coverage.*

JEL classification: *K0; K3; M0.*

1. Overview

Currently, the extensive process of judicial reform has brought changes of substance in relation to the field of criminal justice.

The new regulation aims to satisfy the criminal procedural requirements imposed by the predictability of criminal procedure, the requirement imposed by the European Convention for the protection of human rights and fundamental freedoms. In order to deal with transitional situations resulting from the entry into force of law No. 135/2010 regarding the criminal procedure codexiv was adopted the law No. 255/2013xv.

In the category of regulations that have been amended by law No. 255/2013 we will include its new name of chapter III and para. 1 of art. 10 of law No. 241/2005 preventing and combating tax evasion (art. 79 point 1 and 2).

Thus, chapter III of law No. 241/2005 originally called *"causes of unpunishment and cause of reduction of sentences "* was renamed *"causes of reduction of sentences, prohibitions and decay".*

Next, we propose to analyze aspects pertaining to the effects of the reduction of punishment, but also causes for unpunishment, taking into account their importance in the judicial practice in terms of incidence of art. 5 pen. Code.

2. Short references regarding the name of the chapter III of Law No. 241/2005

In the legal literature criticisms has been expressed with regard to the name chosen by the legislator for chapter III of Law No. 241/2005.

As regards the expression of the legislator in the name of marginal chapter III of the law we agree with the views outlined in the doctrine in the sense that it is improper (*M.A. Hotca ș.a*)xvi, we find ourselves in the presence of a legislative technique error (*B.Vîrjan)xvii.*

We consider the arguments we present mostly pertinent. Thus, the thesis according to which we subscribe also that the residential designation of chapter III is flawed in the old regulations, whereas the legal terms used are improper, inappropriate to the content of the legal norm. If the name of the cause of reducing the penalty is warranted for the first sentence of art. 10, whereas the limits of the punishment prescribed by law shall be reduced by half (both in the original version, and the provision in force), the second sentence referred to a case of replacing the prison sentence with the sanction of the criminal fine, and final thesis did not envision a cause of unpunishment, as inserted in the chapter title, but a question of special unpunishment provided in a special law, or in other words a question of impunity (*C.V.Neagoe*)xviii. In the case of the latter thesis, we go along with other authors (*B.Vîrjanxix, M.Șt.Minea, C.F.Costaș, D.M.Ionescuxx*) that we are in the presence of a cause of criminal liability (*M.A. Hotca ș.a*)xxi, whereas in the case of the offence of tax evasion we cannot talk about the impact of a case which removes criminal responsibility, as it was referred to in art. 90 of the penal code of 1969. Also, we cannot accept the argument that we're not in the presence of a cause for unpunishment, because such a question of defending the penalty committing the offence, or in paragraph 2 of art. 10 there is a reference that can revert the benefit granted if the perpetrator commits a new criminal offence of tax evasion over a period of five years. (*C.I.Gliga)xxii.*

We've highlighted these issues not just to show the uninspired choice of the legislator, but mostly because we want to develop the implications in the judicial practice, the lack of rigor of the regulatory provision.

3. Effects

For the purpose of recovering the full damage caused by the commission of an offence of tax evasion before entry into force of the new Criminal Code, the legislature has regulated in art. 10 three special theses, the only condition being that they are implementing that which refers to the amount of damage and repaired by the defendant, until the first judicial term.

For practical reasons, considering the numerous cases pending before the courts in court referral was made for acts committed prior to changes made by Law No. 255/2013 in the following we will examine not only the effects of reduction of the sentence Law no.241 / 2005, after changes, but also the causes of punishment and other causes of reduction of penalties under the law to prevent and combat tax evasion in the previous version.

Since the three categories of cases of punishment or reduction of sentence under article. 10 (previous version) are differentiated on the basis of the damage caused by the defendant, it should be noted that the three levels of damage are: 1). Damage caused and recovered up to 50,000 euros, when it becomes as incident because of the punishment provided for in Article 10 .1 sentence IIIrd thesis; 2). Damage caused and recovered for more than 50,000 euros, but up to 100.000 euros when the incident is due to the replacement of the fine provided for in Article 10 paragraph 1, sentence IInd thesis; 3). Damage caused and recovered for more than 100,000 euros, when it comes to reduction of sentence, as provided by article 10 paragraph 1 first thesis.

The three special thesis produce different effects, as follows: Ist thesis provides a case of halving the limits of imprisonment; thesis II provides optional replacement of imprisonment with a penalty fine; thesis III regulates a case for punishment, the effect of which is to remove the penalty of imprisonment, replacing it with an administrative sanction, such as extra investigation.

As from February 1, 2014, art. 10 para 1 provides only a case of halving the penalty limits provided by law, regardless of the amount of the civil party claims.

a) In **para 1 of art.10** of the law, in the previous form, but also in its current form the legislature has regulated a question of reduction of sentences, by ***compulsory*** reducing by half the minimum and maximum limits, when the damage was repaired in full by the culprit until the first term. We are so in the presence of a legislative text, which obliges the Court to halve the special limits of punishment provided for by law, in the case of detention, the provisions of article 10 paragraph 1.

If the conduct referred to in paragraph 1, in the version preceding the entry into force of law No. 255/2013 occurred damages of more than 100,000 euro, become incidental the provisions of article 9 paragraphs 1 and 2 of law No. 241/2005. Thus, the legal text provides that if the conduct referred to in paragraph 1 of article 9 have been caused by a damage of more than 100,000 euro, the equivalent of the national currency, the minimum punishment provided by law and the maximum limit is to increase by two years (according to the current regulations -5 years).

If the same acts occurred a damage of more than 500,000 euros in the equivalent in national currency shall be applicable the provisions of art. 9 para. 3, so that the minimum punishment provided by law and its maximum shall be 3 years (i.e. 7 years, according to the current regulations). Therefore, if the case of full cover of damage of more than 100,000 euros, according to the abovementioned legal texts first limits of punishment will be increased by 2 years (5 years), after which this limit will be reduced to one half (art. 9 para. 2). The situation is similar to the case of and art. 9 para. 3 of the Law.

Considering that we are not in the assumptions of a contest between mitigation and causes of aggravation, but some special cases of reduction of punishment, provisions of article 79 para. 3 of the new criminal code not incidental.

The cause of the reduction of the penalty provided for in art. 10 paragraph 1 can be applied to mitigating circumstances and the Court, under article. 75 pen. code, in which case we are talking about a cascade reduction of the punishment. Some examples in this regard: *the defendant A, in the period from March 2015 to November 2015 has not revealed the commercial operations in the accounting documents, causing a prejudice to the State budget of 150,000 euro, but until the first term has covered the integral civil party claims (special mitigation question of liability), had an honest conduct, has made efforts to eradicate the consequences of*

the offence, is a young man, at first contact with the criminal law (mitigating circumstances provided for in article 76 para 2 pen code.) which is why he will benefit special causes ***successively*** *reducing the penalty and mitigating the effects of the circumstances provided for in article 76 Pen. Code. Specifically, if the amount of the damage is over 100,000 euro, the limits of punishment provided for the offence of tax evasion under article 9 lit. (b) and para. 2 (2-8 years) shall be increased by 5 years (7-13 years), after which it will be reduced by half (3 years and 6 months to 6 years and 6 months), then these limits will be reduced by 1/3 (2 years and 4 months to 4 years and 4 months), the final punishment to be established between these limits.*

According to judicial practice, the same circumstance cannot be accepted (full coverage of damage) as a ground for reduction of sentence and also as a mitigating legal, provided by art. 75 paragraph 1 letter d. Pen. Code, because it would give the same circumstances a double efficiency, which is unacceptable.

b) In **the 2nd thesis of art.10** (previous version**)** established as a cause of optional replacement of imprisonment with fine penalty if damage is caused and recovered up to 100,000 euros in the equivalent currency. We are in the presence of an absolute reduction of sentence that may be imposed only for offenses committed before 1st of February 2014. From the expression of the legislature, by using the term, it is possible, results a light sanction - a fine - this is optional. The judge can decide on whether the application is justified or not in these causes, namely the penalty fine.

Inn doctrine it is considered that, as long as in the case of the other two special sentences under article. 10 paragraph 1 theses I and III in the previous form is provided imperatively the need to implement legal provisions that mitigate the sanction, there is no justification regarding this issue replacement to establish another penalty enforcement regime.xxiii

In the same direction, with extra arguments, has been argued that it is not fair to assume that the single effect of the application of this cause of mitigation would alternate the character of the punishment, in the sense that the Court would be able to choose between jail and fine punishment, while in case of incidences of art. 10 thesis I (previous version), which governs the facts with higher social hazard, necessarily applies to the cause of reducing the penalty. Furthermore, it was argued that if the extensive process of individualization of the sentence the Court would interpret strictly the thesis I article 10 and would consider that the implementation of the prison sentence is necessary, then it would be required to make application of the thesis I article 10, relating to the reduction half prison sentence, because otherwise, the defendant would not be eligible for any of the causes to mitigate the punishment provided by law. Another argument which was brought was that the first sentence of art. 10 (both versions of the regulations) does not refer to limit the damage, but can be inferred from the interpretation of the other two sentences (referred to in the original version). At the same time, if thesis I would be accepted and in case of damage under 100,000 euro, we would end up in a position to apply simultaneously to two causes of attenuation, which is inadmissible.xxiv

Even if the provision of Article 10 thesis II is objectionable, in relation to the wording, it empowers the Court to consider that possibility for the legislated judge to apply the penalty of fine, taking into account the general criteria of individualization of punishment provided by Article 72 of the Penal Code . 1969 (Article 74 of the Penal Code.).

After changes by Law No. 255/2013 of the above are not current, but practical relevance for acts until 1st of February 2014 as a result of the incidence of article 5 of the Penal Code on the application of penal law more favourable to the final judgment of the case.
The text art. 10 thesis II (predecessor) created and creates difficulties in judicial practice due to failure of the legislature to determine limitations replacing imprisonment penalty of fine.
If we do an analysis of the provisions of article 8 and 9 of the Law in the previous version, through the limits of punishment, we find that for these crimes is provided only custodial sentence, without mentioning the text content limits replacing imprisonment penalty of fine. Obviously because of this omission by the legislature are incidents, provisions of Article 63 paragraph. 3 Penal Code. 1969.
To improve the operability of the legal text of the Law, recriminations of tax evasion must be corroborated, which is the only sanctioning regime of imprisonment with art. 10 thesis II, which stipulates the possibility of applying the criminal fine. Thus, if the incidence art. 10 thesis II the court must determine a punishment by a fine between 500 lei and 30,000 lei, in the case of article 63, paragraph 3 of the Penal Code. 1969 (you should be able to choose between imprisonment or the fine).
In a reviewxxv it has been argued that article 63 Penal Code of 1969 the provisions of art. 10 thesis II were inoperative in application.
We appreciate that the legislator had to intervene for the purposes of inserting the content of fine penalty rule limits replacing imprisonment with penalty fine, but without changing the text, there is no other legal text that can be applied only Article 63 of the Penal Code 1969.
An issue of the enforcement of judgments that ordered the condemnation of the defendant to the penalty fine is one in which the convict in bad faith fails from the execution of the fine. In such a situation we may wonder if the provisions of article 63/1 Pen. Code can be applied previously, when the fine was ordered on the basis of art. 10 thesis II (previous version)?
Professor Matei Basarab showed that the replacement of the fine with imprisonment when the convict is absconding in bad faith is only possible if the penalty of a fine imposed by the text of criminality alternative imprisonment, cannot be applied if the penalty fine is due to retention of mitigating circumstances, because if we would apply Article 63/1 it would mean that the court returns the mitigating circumstances, removing its effectxxvi.
Other authorsxxvii consider that where the condemned evades in bad faith from the execution of the fine, the Court will be able to replace, in accordance with article 63, penalty fines with the prison limits laid down for the committed offence, taking into account the part of the fine that has been paid. In the event that the Court applies the penalty fine pursuant to article 10 IInd thesis, the limits of penalty will remain as set out in art. 63 para. 3 Pen. Code, not incidental for the provisions of thesis I, because it gets to the harnessing twice the provisions relating to mitigation of the penalty, which runs counter to the wishes of the legislature.
c) **In art. 10 para.1 thesis III** , in the version in force prior to February 1st 2014 provides that "*if the damage caused and recovered under the same conditions is up to the equivalent of 50,000 euro in national currency, it is applied an administrative sanction, which is recorded in the criminal record".*
*T*he legal text has governed a cause of unpunishment in favour of the accused which aims to cover in full, during prosecution or judgment, until the first term of the Court,

a damage of up to 50,000 euros. This provision has been replaced the regular punishment of prison with an administrative penalty.
The words "*administrative penalty*" have been interpreted as referring to the administrative penalties laid down by article 91 of the Pen.Code of 1969 - rebuke, rebuke with a warning, fines from 10 to 1000 lei lei. The correspondence in the new Criminal Code of this institution lies in the article. 80 (giving up to the punishment's application) and the penalty shall be governed by the provisions of article 81 (warning).
However, this legal provision can be applied only to offences committed before the date of entry into force of law No. 255/2013, whereas this regulatory action or decision repealed and Thesis II & III of article 10.
As regards the mechanism for the application of administrative penalty inserted into the content of art. 10 paragraph 1 of the Law, prior to the 1st of February 2014, specialized legal literature formulated more opinions.
Thus, some authorsxxviii have argued that article 10 para. 1 sentence III is inapplicable, since it contains provisions which cannot be transposed into practice for the following reasons:
→ Art.91 Pen. Code of 1969 provides administrative sanctions, no administrative penalty;
→the cases of unpunishment provided by this legal text differs from other general causes or special unpunishment, because it requires the application of administrative penalties which shall be entered in the criminal record, its application being compulsory, not optional;
→ the case of unpunishment cannot be applied during investigationxxix
Other authorsxxx have argued that the hypothesis provided by art. 10 thesis III is outside the scope of regulated unpunishment in the national law, it's being simply a choice not inspired by the legislature, which has not pursued this rule to defend the one committing a particular offence, but only to replace a criminal liability.
We agree with the view expressed in the doctrinexxxi in the sense that regulated hypothesis is an atypical case of unpunishment, which established another form of legal liability, which triggers the application of administrative sanctions under Article 10 paragraph 1 thesis III and not the provisions of Article 90 of the Penal Code of 1969.
After the entry into force of the law to prevent and combat tax evasion (July 27, 2005), the punishment cases could not be applied during the prosecution, whereas Article 11, paragraph 1, letter c of Pen. Procedure Code of 1969 was not expressly provided the possibility that the prosecutor would terminate the criminal proceedings under article 10 let. i / 1, only the courts could find within this legal text. Subsequently, art. I point 2, 3 of the **Law no.356 / 2006** amended the provisions of Article 11 point 1 letter c and Article 13, paragraph 3 c Pen. Procedure Code of 1969, meaning that the prosecutor may order the cessation of prosecution under article 10 paragraph 1, letter i/ 1 Pen. Procedure Code of 1968.
In judicial practice and currently there is controversy regarding the solution to be delivered and the legal basis that is required to be deducted in respect of the provisions of art. 10 of Law no.241 / 2005. Thus, on this point of law, solutions have been different, justified, in our opinion, wrongly:
a) The legal provision invoked as the basis of **payment** as that covered in **paragraph c of Article 16**, as it relates to the lack of evidence that the person has committed the offense. The solution was argumented on the provisions of article 19 of Law no.

255/2013, according to which when, during the trial, it appears that on an act committed before the entry into force of the new Penal Code, the provisions of Article 18/1 of the Penal Code 1969 as more favourable criminal law, the prosecutor may order dismissal, the judge order the payment, under the Code of Criminal Procedure. According to Art. 18/1 Pen. Code of 1969 the prosecutor is obliged to take account the **Decision no.265 / 2014 of the Constitutional Court**, that show that provisions of Article 5 of the Penal Code are constitutional insofar as the provisions of the law do not allow combining successive establishing and applying more favourable criminal law. Paragraph 3 of **Article 18 / 1 Pen. Code of 1969** expressly provides that if the facts do not show the seriousness of a crime the prosecutor or the court may impose one of the penalties of an administrative nature under article 91 of the Penal Code of 1969.

b) Other courts have ruled payment solutions under the provisions of **article 16 lit. Pen. procedure code read in conjunction with article 91 Pen. Code of 1969.** It was argued that one of the conditions provided by law to renounce to penalty or conditional sentence, is that the act is an offense (art.396 paragraph 2 C. pr. Code.) , or in the two cases in question this condition is not met and therefore the uniform application of more favourable criminal law under the law;

c). another solution was an application of art. 90 Pen. Code of 1969, which refers to the replacement of criminal liability with a penalty of an administrative nature, which requires **termination of criminal proceedings** based on Art. 11 para 2 letter b combined with article 10 paragraph 1, letter i Pen.procedure code of 1968.

We consider that the courts that have given the above described solutions started from a wrong premise-that the texts in question relates to the impact of the provisions of article 91 Pen.code of 1969. In reality, art. 10 of law No. 241/2005 does not make references to the lack of concrete social danger of the deed, with the consequence of the application of administrative penalty, but directly of the application of the penalty. However, under the rules and regulations prior to February 1st 2014 the application of administrative penalties in the criminal trial was in three separate cases: payment, pursuant to article 10, letter b/1 Pen. procedure code of 1968, in which case the deed, as a result of the lack of concrete social danger was not considered a criminal offence, although it met the constitutive elements of a criminal offence; termination of criminal proceedings, pursuant to article 10 letter I Pen. Procedure code of 1968, when the deed was a criminal offence, but the criminal liability was replaced by the administrativexxxii aspects; the cessation of the criminal process, pursuant to art. 10 letter i/1 Pen. Procedure code of 1968, in the case of an incidence of unpunishment provided by art. 10 paragraph 1 thesis III of law No. 241/2005 (previous version of the entry into force of law No. 255/2013). Therefore, we think that when applicable the provisions of law No. 241/2005 or of the penal code of 1969, in relation to the provisions of article 5 pen. Code, ***the solution in the case of the incidence of unpunishment at the present time cannot be other than cessation of the criminal process, and the basis is provided by article 16 para.1 letter h Pen. Procedure code combined to art. 10 paragraph 1 thesis 3 of law No. 241/2005 (previous version), considering that the provisions of the criminal procedure law are of immediate applicability.***

A particularly important issue, with practical implications, is on the provisions of **Article 18 Pen. Procedure code (Article 13 Pen. Procedure code of 1968).**

Article 18 provides that, *if amnesty, prescription, withdrawal of a complaint of existence of a case of punishment or not imputed or if a case of Cancellation of criminal investigation, the defendant may request further trial.*
This text shows the provisions of dispositions art.13 Pen. Procedure code of 1968.
In relation to these provisions the following question arises: the defendant who was in court benefits of unpunishment as seen in art. 10 para 1 thesis III (predecessor of Law no.241 / 2005) may request further trial?
The answer can only be affirmative, since even if the text of art. 10 on the punishment due to atypical necessarily require administrative sanction and entered in the criminal record, preceded implicit recognition of the deed and payment of damages, the defendant may request the continuation of criminal proceedings, under Article 18 Pen. Procedure code, to prove his innocence. If the defendant proves that he did not committed the offense of tax evasion and does not owe any money to the Ministry of Finance represented by ANAF as civil party in question, may request the reimbursement of up to 50,000 euros. The contrary solution would violate the fairness of the trial provided by art. 8 Pen. Procedure code and the right to defend inserted in the content of art.10 of Pen. Procedure code.

4. Conclusions

The legal issues raised by the provisions of Law no.241 / 2005 on preventing and combating tax evasion, outlined in this study, the current legal and economic conditions which highlight the need to prevent tax evasion, require the intervention of the legislature, on one side, and on another side to determine accurately the content of the legal norm, the consequence of applying them consistently and uniquely, to fully meet the requirements imposed by European regulations.xxxiii
Tax evasion is one which lies both at national and at international level, being one of the most common offences in the economic-legal field.
The fight against tax evasion doesn't have severe penalties (ineffective, given the large number of cases with this object, on the role of the courts), but also alternative measures or more lenient criminal penalties (fines), through which those who committed such acts should be encouraged to cover in full the damage caused to the consolidated budget of the State. Regulation causes reduction of sentences for offences of tax evasion must be clear, accessible to the recipients of the regulatory framework, in order to avoid problems of interpretation of the law. At the same time, it would require that the content of law no 241/2005 should be regulated penalties contravention with respect to acts of tax evasion as a lower social hazard (see model of some countries such as Luxembourg, Switzerland, Austria).

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9. Ș. Siclodi,(1970) *Despre cauzele care înlătură răspunde la penală,* [About cases that remove the criminal deed] in Revista Dreptul nr.2/1970.

Notes:

I. Law No. 135/2010, Publ. în M. Of. No. 486/15.07.2010.
II. Law No. 255/2013 for the implementation of law No. 135/2010 code of criminal procedure and for modifying and completing some legislative acts containing provisions of the criminal procedure law. publ. în M. Of. No. 515/14.08.2013.
III. See *M. A Hotca coord.,M. Gorunescu, N. Neagu, M. Dobrinoiu, R. F Geamănu*, *Offences provided for special laws, commentaries and explanations*, Edition 3, Ed. C.H. Beck press, Bucharest, 2013, p. 225.
IV. See B. Vîrjan, Offence of tax evasion, Edition 2, Ed. C.H. Beck Press, Bucharest, 2016, p. 298-299.
V. See C. V. Neagoe, *Cases of unpunishment, Tax evasion,* Penal Right Magazine no.2/2006, p 82.
VI. See B. Vîrjan,*op. cit*,p 300.
VII. See M. Șt. Minea, *C .F .Costaș, D .M. Ionescu, Law of Tax evasion for commentaries and explanations* Ed. C. H. Beck, București,2006, p150.
VIII. See M. A. Hotca, *op. cit*, p226.
IX. See C. I. Gliga,, *Tax evasion. Regulators. Doctrine. Case-law*,Ed. C. H. Beck, București, 2007, p117.
X. See M. Șt. Minea ș. a, *op. cit,* p 162.
XI. See B. Vîrjan, *op. cit,* p 337.
XII. See Gh. Neacșu, *Some issues raised by the application of art. 10 para 1 of the Law on prevention and combating tax evasion no.241 / 2005,* Revista Dreptul nr.3/2006, p169.
XIII. See M. Basarab, *Penal right,Overview vol. I,* Ed. Lumina Lex, București,1997, p 239.
XIV. See R.D.G. Bârdan, *The legal individualisation of imprisonment under article 10 of the Law on tax evasion,* publ. în Revista Pro Excelsior nr.1/2011, p12.
XV. See I. Gliga, *op. cit,* p116.
XVI. C. V. Neagoe, *op. cit,* p 82.

XVII. See Ș. Siclodi, *About causes that removes criminal response,* Revista Dreptul nr.2/1970, p 32.

XVIII. See B. Vîrjan, *op. cit,* p 345.

XIX. See in this matter Î.C.C.J, penal section, decission nr.163/17.01.2014,http://www.scj/1093/Detalii jurisprudență.

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RESEARCH-DEVELOPMENT ACTIVITIES FINANCING OUT OF PRIVATE SOURCES

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Abstract: *Research-development activity financing was always a hot subject because, most of the times, it is expected that the said financing be done from budget sources but, lately, economic entities which have such research-development activity have looked up to provide this funding also from private sources. Presently, there are several ways of financing such activity on the funding market, the entities having the possibility to choose the one which fits best their organization also (bank credits, bond loans, leasing etc.). Even if sometimes these financing sources are expensive for the moment, in the long run they may be beneficial for the entities as the procurement of new products allows them either to enter new markets or corner a more significant part of the market on which they are.*

Keywords: *research-development; financing; bank credit; leasing; factoring; risk capital.*

JEL classification: *G32; G39; O32; O39.*

1. Introduction

For the accomplishment of the strategic fundamental objective of an economic entity, that of maximizing its market value, the said entity has to develop a profit making activity and make sure such activity provides both a short and a long term yield. This presumes the achievement of a profit sufficient enough for the distribution of dividends and, simultaneously, for the reinvestment of part of it in research-development activities.

From the ground up of its activity, a company needs an initial capital which is set up either directly, as financial contribution, or indirectly, by the contribution of assets in kind. The share capital set up upon the company registration will be used for the running of the current activity and/or investments. At the same time, the share capital represents the company warranty in its relations with the creditors to whom the company will turn to in order to complete the financing resources it needs for its activity.

Concomitantly with the activity development and, mainly, for its extension, it appears the necessity of the capital accretion, both through endogenous financing sources as well as through exogenous sources. The main endogenous sources are self-financing, assets transfer and disinvestment. By their nature, such financing sources are long term ones as they highlight the capitalization of a part of the net profit as well as of the depreciation by which the physical and moral wear and tear of the company assets are compensated.

The company capital may, in fact, increase with the aid of the exogenous sources which may be long term ones, such as, share issue, contributions in kind, reserves incorporation, dividends payment in shares, bank credits, long term bond loans,

leasing, factoring, and, the short term ones may, most of the times, take the shape of short terms bank credits.

2. Financing from internal (endogenous) sources

For all the companies, internal or self-financing represents the oldest financing way which provides for the renewal of the productive potential, both with a view to the conservation of the patrimony and its increase by economic growth.

The importance of this way of financing raises when a company does not have access or limited access to the capital of the monetary or capital markets.

Certain companies, mostly small and medium sized or start-ups depend exclusively on internal financing because the cost of the borrowed capital is high and they avoid running into debt. But, for companies having a good financial standing, which make important cash flows (profit), internal financing is a basic alternative of the financing. (Pirtea, M. et al., 2010)

From the structural point of view, internal financing is based on depreciation and undistributed benefits. Depreciation is used as financing source in the case of the remaking of the capital invested for the preservation of the patrimony level. In turn, for the increase of the capital invested with a view to the growth of the patrimony, most of the times, companies resort to undistributed benefits as a source of internal financing.

The capital which is frozen in tangible and intangible assets loses from its value due to their use but such loss is recovered by its inclusion in the operating costs making the accrued depreciation which stays at the disposal of the company. Physical depreciation is determined by the use of the assets and the moral one is determined by technical progress.

By depreciation one estimates the value of the depreciation of the capital which is frozen in tangible and intangible assets but what needs to be taken into account is that, due to technical progress and inflation, the accrued depreciation may have a value below the monetary resources which are necessary for the assets renewal, both tangible and intangible.

The balance of the foreign operations of the companies is given by the balance of the monetary elements of the profit and loss account. It makes the monetary surplus resulted from the use of the production factors in exploitation and investment activities. The undistributed benefits are represented, on one side, by the balance of the non-monetary elements. Such elements are found in several balance sheet items: legal reserves, reserves provisioned by the company deed of establishment, other reserves as well as the result carried forward, the last up to the distribution moment.

The profit of the exercise represented by the total amount of the same sign inflow variable constitutes the base of the internal financing, taking into consideration, on one hand, that there are no lags between income and expenditure (accounting approach) and, on the other hand, there are no lags between inflows and payments (financial approach) (Pirtea, M. *et al*, 2010).

3. Financing from external (endogenous) sources

3.1. Financing by bank credits

In the course of its activity, a company needs financing. If it cannot provide it from internal sources then the company resorts to external sources. A way of providing the financing needs is bank credits.

In such a context, for companies, irrespective of their organization form, commercial banks have a role of active partners which may grasp, when there is the case, the companies financing necessity, thus preventing the occurrence of phenomena which would generate risks for the companies' activity. But, in order to be able to intervene and grant credits to companies, the said entities must operate a profitable activity, they must have an adaptability to the market conditions and, when need arises, they must be able to restructure their activity at any moment.

Taking these company features into consideration, it is considered that banks have a unique or special role as compared to other entities of the financial sector and, the importance of the said role is given by the banks main functions:

- An allocation as efficient as possible of the monetary availabilities by granting credits to the real economy;
- A monetary transfer between companies due to an adequate monetary policy of the central bank;
- Providing deposit operations for companies and entities as a proof of trust in the banking system stability and liquidity etc.

Banks have a special statute in the relations they intermediate between the participants in economic transactions, a statute conferred by the actual functions they have. Thus, the size of the crediting resources and the risk assumed by the banks, as well as the nature of the credit transactions made banks become the most informed segment of the economic environment, owner of a huge potential in the transfer of information to the clients in order to minimize the costs of the business and to render efficient the ratio between the saved funds and those invested in the economy.

3.2. Bond loan – alternative of exogenous financing

The bond loan represents a solution to procure financial resources, both medium and long term, in a high volume, necessary for economic development and/or the quittance of payment obligations assumed by the issuers. At the same time, this financing source is a credit contract between a mass of creditors and one sole debtor (the bonds issuer).

Big companies in terms of turnover and personnel and with a certain impact on the market resort, in certain positions, to bonds issue as an alternative to bank credit. In such a case, the warranty of such a loan is done by the issuer's reliability status as well as with the future income which will be obtained subsequent to the investments achieved on the basis of the procured funds.

As buyers of the bonds, i.e. creditors, appear the investors that may significantly influence the market evolution. Those investors may be both natural and legal persons. The reasons which determine such persons to acquire the position of investors in those placements are the level of the afferent interest and the possibility of transacting them on the secondary market, at the stock exchange, transactions

by which they capitalize the favourable price balance between the moment of the purchase and that of the bonds sale.
In countries with market economy, Romania included, along the companies comes the state or its various entities which run into short term debts, by treasury bills and medium and long terms debts for which it goes on the financial market. Being an important bond issuer, the state, by this bond issue, aims to secure the necessary resources to fund public objectives, to cover the budgetary deficit, etc., through the collection of the liquidities existing on the market.
In the case of functional market economies, the development of the bond loans is the consequence of multiple causes, such as: issue terms which are attractive to investors, owed to the severe competition between the bond issuers; the existence on the financial market of negotiable instruments big collective placement entities which represent and operate for several subscribers/issuers, including the case of smaller companies; the advantage of the interest rate decreasing, during certain periods, for short term placements, a thing which determines the subscribers to look for medium or long terms placements.

3.3. Factoring – financing modern alternative

Due to the fact that the world economy tends more and more towards globalization and the capital markets develop increasingly we are in the situation in which various more special financing forms are sought for and factoring comes amongst such forms, with a view to the provision of liquidities necessary for the companies and the appeal to such alternative sources follows and ascending trend.
By the advantages it offers, factoring became an important financing source as it is efficient and, as such, it is preferred by more and more companies. There is no unanimously accepted definition in the specialized literature due to its functions and to the variants in which it may be used. Still, a definition which comes closer to its role is that which says that factoring is a contract between a party called adherent, goods supplier or services provider and a banking company or a specialized financial entity, called factor, contract by which the latter provides financing, debts follow-up and preservation against credit risks and the adherent transfers as a sale, the debts generated by the sale of goods or services rendering to third parties" (Law no. 469/2002 July 9)
From the definition it results that factoring is both a business and a financing source which consists of the acquisition of debts resulted from goods delivery and services provision to a factoring company.
Due to a more and more aggressive competition on the market that the companies have to cope with, the said companies have an ever increasing acute need of their own financial capital and, in order to cover this financing need they resort to new financing instruments. Combining both the financial and economic interests of an economic circuit, factoring answers those requirements and the achievement of those interests shows the efficiency itself of the use of this exogenous financing instrument of the companies.
Thus, in an entrepreneurial economic approach, the financing by factoring represents the exogenous financing of the company, from the fiscal point of view it represents an income and not a loan or a debt, it represents a way of achieving the financial funds necessary to continue the activity and, from the point of view of the financial capital it is the company's own financial capital and not a borrowed one and, from the point of view of the financing duration it is a short term financing

3.4. Leasing – efficient financing way

The leasing activity has its origin, as well as other activities and instruments of the market economy like marketing, factoring and franchising, in the United States of America. The starting point of this financing way was represented by the decision to extend the tenancy and rental operations of consumption and real estate goods to the area of industrial investment goods.

In time, the goods selling system was also extended over their processing possibilities by the tenancy agreement for a determined period. Goods producers, especially those who produced items for investments realized that it was more advantageous for them to use the leasing than to resort to the rental or tenancy of the goods they produced as a means of financing. By the leasing instalments, the good was paid and the afferent interest was at a level which satisfied both parties of the leasing agreement.

Besides the three parties in the composition of a leasing transaction, there is a fourth one which usually intervenes and that is the insurance company which signs with the good owner an insurance agreement of the said good, issues an insurance policy and pays, should there be the case, the value of the said good (Molico, T. & Wunder, E., 2003)

In practice, in leasing agreements the most frequently met goods are industrial equipment, machinery and installations, means of transport, computer technique and office supplies, medical equipment, air conditioning equipment, industrial and commercial buildings as well as administration ones. It results that goods of any branch of activity can make the object of a leasing agreement. What must not be omitted is the fact that, sometimes, the leasing object is given by complex equipment and machinery, of great value, items that the lease may not be interested to purchase because it needs them just to obtain a certain product.

According to the financial nature of a leasing agreement we see two forms of it: financial and operational leasing.

3.5. Risk Capital – exogenous source of financing

The risk capital represents an investment in companies which are not listed at the stock exchange done by companies with risk capital which, acting like a manager, administer their own (internal), individual or institutional money. The risk capital includes financing for the beginning phases (initial and start up) and for the extension of a business. The risk capital is a professional capital jointly invested with the entrepreneur to finance a business in its first three stages of its evolution.

The risk capital is necessary and attractive mostly for new companies which have a brief history of operations and which are too small to be listed on the stock exchange markets or they may not fall within the criteria which are necessary to gain access to a bank credit or for bonds issuance. That is why, for the risk they assume subsequent to investments in such companies, the risk capital investors claim the possession of an important part, sometimes the majority of the capital and, at the same time, the control on the decisions of the company.

As a rule, risk capital investors purchase at least 40% of the company capital and appoint some members in the Board of Administration. At the same time, those investors receive preferential shares which provide a privileged position in relation to the other shareholders in the case of the company liquidation or sale. (Onofrei, M. & Anton, S.G., 2010)

The risk capital, as company alternative source of financing, has a special importance for those economies in which prevail small and medium sized companies, like those in Europe, where such companies represent over 90% and employ about two thirds of the employees of the private sector. The improvement of those companies' access terms to sources of financing would represent an important factor for the businesses extension, jobs creation and, implicitly, economic growth.

4. Discussions

After all, we need to expressly mention that the field of research-development and innovation may not benefit of foreign credits or EU funds under the shape of national subsidies, just as it happens, for instance, in agriculture. In that sense, an exception is represented by the structural funds of that domain. Access to funds coming from the EU is done only on a competition basis within the funding programs of the community area. Due to that fact, in order to increase the volume, quality and competitiveness of the Romanian research-development and innovation activities, consistent with the evolution and exigencies of the European level, it is imperiously necessary their stimulation within the framework of economic entities. The cooperation between companies, universities and research-development and innovation entities is necessary, especially for the fast research results implementation in economy.

Amongst the first ten companies of the world which invest huge amounts in the research-development activity we find companies which understood what progress and staying on a very competitive market means: Toyota, the Japanese automotive producer, Nokia, the cell phones producer, Johnson & Johnson, the cleaning products producer, Ford General Motors, the automotive producer, Roche, the Swiss pharmaceutical products producer, but also the German automotive producers Volkswagen and Daimler.

All those companies included in this top invested in research and development amounts in the vicinity of the value of 5 billion Euros. Five of the world's main ten investors in research-development come from the United States. Out of the first 50 companies of the world, 18 are from the European Union, 20 from the United States and 9 from Japan (www.ec.europa.eu/scoreboard/research).

Thus, at the European level, the great producers of the building materials industry allocated significant budgets for the research-development activity (the Lafarge Group allocates almost 1% of the amount of the income) (Rus M.I., 2012: 237) but they continued to allocate important budgets both during the economic crisis started in 2008 and after the said crisis as they realized that the new products achieved from research-development activities may bring them benefits as well as a better place on the respective market. (Rus M. I *et al*., 2014: 652)

Internationally, the majority of the developed countries admitted that, though the world's crisis appeared, they still considered scientific research and technological development as important activities associating them to the "economics based on knowledge". This does not mean anything else but the fact that research-development activities may be considered both a drive of economic boost which may be of help to escape from the crisis and a strategic necessity which may result in a sustainable development in a period not far away.

In exchange, about the Romanian industry one cannot say anything else but the fact that for the last 20 years it was systematically rifled and destroyed, especially through privatization and the small innovative companies which should have replaced them are, usually, subscribers to the funds coming from the state budget and they do not manage

to produce something or provide competitive services. This is why, with some exceptions, on the "domestic market" the offer of the economic entities of the research-development sector is very poor due to the lack of capital and the "foreign market" is very difficult to approach both due to the lack of funds and to the infrastructure which does not match the level of potential partners in a research project.

5. Conclusions

The dimensions, financing and legal form of the scientific companies are, to a great extent, governed by the expenses generated by communication and this communication implies, both, the models advertising, that of the verifications results, of the colleagues review and publication, these facts being their main reason of existence. Also, a long time, the communication manner of the research-development activity results were shaped under different forms: meetings (conferences), their proceedings, letters, publications in magazines, bulletins, books, formal observations reports, scientific anagrams, secret deposits of documents, patents, e-mail messages, each of them corresponding to a specific literary genre. All these communication ways show us that there is a communication and records infrastructure composed of commercial publishing houses, libraries, organizations that maintain electronic archives and databases, physical and electronic mail services, patent offices etc.

Unfortunately, to economic analysis are accessible just defining facets of the research system. For example, it is easy to notice that the funds granted to the research system have three specific destinations: the salaries of the system employees, communication expenses (including trips and documentation) investment expenses and consumables. Salaries are spent on consumer's goods and services. Communication expenses are, in fact, acquisitions of the publishing, tourism and communication economic entities.

The immediate impact of investments in research on industrial development is indirect, especially through the acquisition of specific devices, installations, services and consumables.

The funds with that destination granted to research institutes reach the producers or sellers of such devices, installations, software and consumables of a new type. If this market of the research laboratories would not exist, the majority of the new products would not take the leap from being a prototype to being a product on a general market. The healthy objective for an industry which generates new products is to satisfy a demand, a new industry presumes a demand of new products and a capacity of the clients to assess them, and, such demand is, normally, created by the system of the research-development activity.

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INVESTOR PSYCHOLOGY AND DECISION MAKING; BASED ON OVERCONFIDENCE AND SELF ATTRIBUTION BIAS: *EVIDENCE FROM ISLAMABAD STOCK EXCHANGE (ISE)*

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Abstract: *The literature in behavioural finance and behavioural economics deviates from the conventional economic model in incorporating behavioural evidence on non-standard preferences and values, such as loss aversion, self-deception or attribution, or overconfidence. In the present world, investment decision is most important phenomena. Investment is current sacrifice for future benefits. Investor's decision making is affected by the behavioural biases the most important of which is overconfidence (overconfidence related to accuracy of personal information).The other related bias is self-attribution, which causes an upward rise in investor's overconfidence about the precision of information and foresight. This study examines the impact of behavioural biases such as overconfidence and self-attribution in decision making that result from the cognitive errors of information processing. This main purpose of this paper is to give empirical evidence on the implication of overconfidence and self-attribution bias on investor behavior and decision making. The result suggests that investors in Islamabad Stock Exchange are overconfident and this overconfidence in the private information and its accuracy and this have an impact on the stock investment decision. Whereas, the self-attribution bias is not showing a significant relationship towards decision making process.*

Keywords: *Overconfidence; Self-Attribution; Investment Decision; Private Information.*

JEL Classification: *G02; G11.*

1. Introduction

The standard notion of finance argues full rationality on the part of investors. This standard perspective had proven very successful in providing models with important useful implications for capital market design, security design, and corporate capital structure. The main pillars of standard finance are based on evidences provided by theories such as arbitrage theory (Stephen 1976), theory of investment and dividend (Modigliani & Miller 1958; Miller & Modigliani 1961), portfolio theory (Markowitz 1952), capital assets pricing (Sharpe 1964) etc. Whereas behavior finance involves human behavior and psychology in finance.

The concept of *behaviourism* in psychology was introduced by Watson (1914). Later on, this concept was advanced by Skinner (1953). The concept of behavior in finance also has its traces in *the wealth of nation* (Smith 1753).The modern behavioural

finance is the outcome of work of most importantly Ulrich, Kehnemann and Tversky (Schmidt & Zank 2005; Tversky & Kahneman 1975). Although the foundation of behavior finance is laid on the ashes of standard finance but it seems to have provided a replacement to standard finance. In standard finance, people are assumed to be rational whereas people in behavioural finance are assumed to be normal; led away by behaviors, preferences, frames, overconfidence, cognitive errors, dissonance and feelings of regret. These concepts revolutionized the world of financial markets, securities and their types, financial regulations, analysts and consultancies-by considering investor as normal human being.

A number of studies and surveys have given the implications of psychology on financial and other economic decisions. Investors must be capable of making a good decision, a right decision at a right time. This decision making process involve making decision choices on the basis of accessible information (Gilboa 1997). Investors consider themselves a rational decision maker, processing all information. The researches show that they are all subject to bounded rationality. Bounded rationality (Simon 1991) means the decision makers is unable to process all perfect information to make optimal decision choice (Simon 1959; Simon et al. 2009). Since human beings have limited cognitive capacity to process the information, so the try to approach a good decision through heuristics (Tversky & Kahneman 1973). Hirshleifer (2001) argued that most psychological biases are basically an outgrowth of heuristic simplification, self-deception, or emotion-based judgments. The focus of our study is self-deception that reasonably explains overconfidence and self-attribution Bias. Overconfidence (Busenitz & Barney 1997) is a behavioural inclination to overvalue the aptitude, knowledge and precision of judgment whereas underlying process biased self-attribution (Zuckerman 1979) is a behavioural inclination to ascribe success to own abilities and failures to other things such as bad luck, affecting an appropriate decision.

How security market would react if the investors are biased by self-deception? Empirical evidences up to decade of 90s presented the results in an amalgamate pattern. Some studies favoured that investors would underreact while others favoured they would overreact. The theoretical evidence to investors' overconfidence and biased attribution of success was provided by (Daniel et al. 1998). This theory argues that overconfident investors react excessively to private information signals and underreact to public information signals. They also argued that investors, who are biased by self-attribution, become more overconfident when they earn money owing to the successful realization of their predictions and judgments.

This main purpose of this paper is to give empirical evidence on the implication of overconfidence and self-attribution bias on investor behavior and decision making. This paper provides empirical evidence to the theory based on investor overconfidence and on changes in confidence resulting from biased self-attribution of investment outcomes (Daniel et al. 2002). The main focus is to analyze if the investors in Pakistan are biased by overconfidence and self-attribution and the resulting over and under reaction to an information or are being skewed towards private information in the process of decision making.

This research has many implications for the literature and future researchers also. As this will adds to the body of literature the prevalence of overconfidence and attribution bias in investors in developing country setting and evaluate the implication of hypothesis of (Daniel et al. 1998) in Pakistani scenario.

The main objectives of our study are:

- To investigate the relationship between overconfidence bias and investor making decisions
- To investigate the relationship between self-attribution bias and investor decision making

This study examines the impact of behavioural biases such as overconfidence and self- attribution in decision making that result from the cognitive errors of information processing. This study has relative importance because investor community in Pakistan is not much equipped with knowledge and exposure. So their decision is much biased by overconfidence and self-attribution. Most importantly, the idea of this study is much more in accordance to previous literature, but our main focus is to apply those ideas in developing country setting for contextual contribution. This study has incorporated the most recent data for analysis and result generation. So we aim to find the extent to which our investors, biased by overconfidence and self-attribution value private information at the expense of public information.

2. A Brief Review of Literature

The literature in behavioural finance and behavioural economics deviates from the conventional economic model in incorporating behavioural evidence on non-standard preferences and values, such as loss aversion, self-deception or attribution, or overconfidence. Empirical research shows that people unable to update their beliefs accurately and encompass their own preferences and beliefs that deviate from rational investors' beliefs in many dimensions (Kahneman & Tversky 1972; Tversky & Kahneman 1975). Moreover human being has restricted cognitive capacity, that's the reason; they are unable to process information up to its highest competence in the process of problem solving (Simon 1959).

Since human information processing capacity is finite, so they choose imperfect decision making procedures, or heuristics, to arrive at reasonably good decisions cheaply (Kahneman & Tversky 1973; Simon 1955). The cheap decision processes can be called heuristic simplification. However, the systematic decision error can be the result of certain other reasons. Hirshleifer (2001) is of view that most common behavioural biases can be considered a response to heuristic simplification, self-deception, or emotion-based judgments. Heuristic simplification helps us to clarify many different psychological biases, such as availability effects : heavy focus on information that stands out or is often mentioned, at the expense of information that blends in with the background (Tversky & Kahneman 1973), framing effects : where the explanation of a situation affects judgments and preferences (Kahneman & Tversky 1981), money illusion (wherein nominal prices affect perceptions and beliefs), and mental accounting (Thaler 1985).

Self-deception helps explain *overconfidence*: a propensity to overrate one's ability, skills or judgment precision and biased *self-attribution* (a natural propensity to ascribe successes to one's own ability, skills and judgments and failure to bad luck or other factors) and confirmatory bias: a behavioural propensity to infer circumstances as consistent with one's pre-existing beliefs (Jonas et al. 2001).

There are other dimensions of overconfidence bias that is evidenced in literature. An extensive empirical research evidenced the propensity of individuals to believe them as 'above average' on positive characteristics (Abbes 2013; Kruger & Dunning 1999).The 'better than average' thinking also affects the ascribing of outcome. As

individuals expect their behavior to lead them to success, they ascribe the outcomes to their actions when they succeed and to bad luck when they fail (Feather & Simon 1971; Lin et al. 2014). This attribution of outcomes further reinforces overconfidence (Malmendier & Tate 2005).

Recent empirical studies find that agents' overconfidence (i.e., attaching too high precisions to their private signals) could lead them to sub-optimal decisions. Barber and Odean (2000) document that individual investor's trade excessively despite earning negative returns. Choi and Lou (2010) showed that the average mutual fund manager tends to boost his confidence to a larger extent after receiving confirming public signals than to decrease it after disconfirming public signals. They were also in a view that this bias is stronger among inexperienced managers and is largely absent among experienced ones. The bias also leads to poor future performance, which is driven by managers' sub-optimal portfolio choices.

Kyle and Chuang and Lee (2006) characterize the overconfidence hypothesis by considering three testable implications: First, overconfident investors overreact to private information and underreact to public information. Second, market gains increase investors' overconfidence, and consequently they trade more aggressively in subsequent periods. Third, excessive trading of overconfident investors in securities markets contributes to the observed excessive volatility. Daniel et al. (1998) argued that if investors are overconfident; they overweight their own private information while ignoring publicly available information. As a result, investors overreact to private information and underreact to public information, and this asymmetric response of overconfident investors induces short-horizon momentum and long-horizon reversal in stock returns.

Based on above literature, our expected hypotheses are

H1: There is a significant impact of self-attribution bias on investor decision making

H2: There is a significant impact of overconfidence bias on investor decision making

The self-attribution bias states that people tend to attribute successes to their own skills and foresight but failures to bad luck (or other external factors).When investors receive any confirming signal from public, they tend to overestimate their ability to gather and process information, and revise the perceived precisions of their private signals upward too much, upon observing confirming public signals. In contrast, they revise their perceived precisions downward too little with disconfirming public signals (Choi & Lou 2010). The self-attribution bias is measured in term of self enhancement (Paulhus & Williams 2002; Pfeffer et al. 1998; Krueger 1998) and self-protection (Pyszczynski & Greenberg 1987; Hoffmann & Post 2014). In self enhancement, people show an irrational degree ascribing success to own. Whereas in self-protection people show an irrational degree of disclaimer to the failures (deny the responsibility of failures).

Overconfidence bias can be defined in three ways; first it can be measured through the overestimation of one's actual ability, over performance, level of control and chance of success (Malmendier & Tate 2005). The trait of overconfidence is to focus on one's own ability. Second measure of overconfidence occurs when people think themselves to be better than others, such as when a majority of people rate themselves above than the average (Kruger & Dunning 1999). For simplicity we will call this trait as over placement (Larrick et al. 2007). The third way overconfidence has been measured is irrational degree of certainty regarding the accuracy of one's beliefs, ignoring the other factors associated with the decisions that he is taking or what we will call over precision (Barber & Odean 2001).

3. Methodology

In this study, survey method was used to collect primary data from the investors of Islamabad Stock Exchange (ISE). There are two main reasons using questionnaires or primary data. Overconfidence and self-attribution are a behavioural aspect of human beings so it is more realistic to measure it through survey rather than using proxy based on secondary data. Another reason for use of primary data is stock market of Pakistan is not that much developed. It is very difficult to find account level information of investors. Measurement tool used is five point Likert scale (ranging from strongly disagree to strongly agree) that was adopted and adapted according to our study. A total of 150 questionnaires were distributed out of them, 100 were considered valid for evaluation of results. Hence the response rate is 66% which is considered quite satisfactory. Overconfidence includes 15 items; self-attribution bias is checked through 8 items whereas the investor's decision making is analyzed through 9 items.

4. Data Analysis and Results

The collected data was analyzed using frequency percentage, descriptive statistic, and correlation and regression analysis. The reliability coefficient of data is acceptable for all variables. The Cronbach alpha is the most widely used index for determining internal consistency. Here the reliability coefficient is acceptable and lies above *0.60* (Roberts 1980).

Most of the respondent's i.e. 86 % are male and rest of 14 % are female, lies in different ages groups, only 5 % are greater than 51 years age (>51) while 11 % respondents are belong to 41-50 years age group on the other hand majority of respondents (43 %) are the part of 31-40 years age group and rest of 41 % are less than 30 (>30).

Table 1. Descriptive Statistic

	Minimum	Maximum	Mean	Std. Deviation
Age	1	4	1.8	0.82878
SA	2.25	4.5	3.43	0.47571
OC	2.67	4.87	4.06	0.42012
IDM	2.56	4.89	3.63	0.58477

Correlation analysis is used to measure strength of the association (linear relationship) between two variables. The result of correlation analysis shows that a significant positive correlation is observed among self-attribution bias and overconfidence bias *(0.542).*

In order to estimate the relationship we used following equation,

$$IDM = \beta_0 + \beta_1 SA + \beta_2 OC + \varepsilon_0 \quad (1)$$

Where *IDM* denotes investors' decision making, *SA* denotes self-attribution bias, *OC* denotes overconfidence bias.
Regression analysis was carried out in order to check the linear relationship among investor's overconfidence and self-attribution with decision making behavior. Although the coefficient for self-attribution is positive but we reject our first hypothesis as the value is insignificant. This insignificant value suggest that the investor in ISE are least biased by self-attribution while making investment decision. In the case of Pakistan, one of the two facets of self-attribution bias seems to be true i.e., self-protecting bias since the ascribing of failures or unfavourable outcomes to others such as bad luck or people is very common for investors biased by self-attribution (Pyszczynski & Greenberg 1987). Whereas the coefficient for overconfidence bias carries a positive sign is highly significant. The model suggests that overconfidence do have an impact on the stock investment decisions for the studied sample, based on this overconfidence in the private information and its accuracy. The literature provides a link between these two biases as investor having self-attribution bias would become more overconfident when any of his judgment or perception becomes successful (Daniel et al. 1998).

Table 2. Regression Analysis

	β	Std. Error	t	Sig.
(Constant)	1.074	0.489	2.195	0.031
SA	0.108	0.13	0.829	0.409
OC	0.594	0.148	4.029	0.00
R Sq.	Adj. R Sq.	Std. Error of the Est.	F	Sig.
0.231	0.215	0.51815	14.547	.000

5. Conclusion

This study examines the impact of behavioural biases such as overconfidence and self-attribution in decision making that result from the cognitive errors of information processing. The result suggest that that the investor in ISE are least biased by self-attribution while making investment decision. In the case of Pakistan, one of the two facets of self-attribution bias seems to be true i.e., self-protecting bias (ascribing failures or unfavourable outcomes to others such as bad luck or people).The model suggests that overconfidence do have an impact on the stock investment decision, based on this overconfidence in the private information and its accuracy. Investors having overconfidence and self-attribution bias value the information more that is possessed by them and react to it. Whereas they don't value public information owing to the higher degree of overconfidence. The area of behavior and cognitions is least explored in Pakistan. So there is a good opportunity for future research and exploration of behavior on investor decision making.

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ANAYLSYING THE FINANCIAL SITUATION OF FOOD TRADE ENTERPRISES OF THE NORTHERN GREAT PLAIN BY MEANS OF LOGIT MODEL

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Abstract: *Over recent decades, the bankruptcy prediction has become such an area which intensively concerns the economic operators. There is a need for measurement forecasting tools so that we can assess the financial situation of the enterprises and the potential crisis can be recognized at an early stage. Such tools are the bankruptcy models by means of which the bankruptcy situation can be predicted years earlier and the operational problems of the companies can be revealed. The escalation of crises can be prevented if these are recognized in an early, emerging phase. Such a tool used in the area of bankruptcy prediction is the logit model which predicts the bankruptcy situation of companies by means of logistic regression analysis. The explanatory variables of logit model are financial indicators since the financial rates themselves can indicate the problems existing in the operation of companies. In the Northern Great Plain region, there are more than nine hundred enterprises whose main activity is Retail sale in non-specialised stores with food. These are small and medium-sized enterprises which operate as limited partnership and Limited Liability Company; the rate of public limited companies is low amongst them. It is peculiar to SMEs that 90% of them are replaced five years after beginning their operations. We can state that these enterprises continuously cease and are established and therein lies the core strength of the sector as well. When the multinational large companies are forced to reduce personnel, SMEs engage the labour force released. The reason of cessation may be that these enterprises do not use controlling tools, including bankruptcy prediction models. By means of these tools, the arising problems can be identified and managed. In the course of the research, 86 of such enterprises have been selected which deal with retail sale in non-specialised stores with food in the Northern Great Plain region. We have tested the logit bankruptcy model on the compiled sample and we have examined the efficiency and punctuality of the model. Among the enterprises, with regard to their forms, 36 limited partnerships, 44 limited liability companies and 6 public limited companies have been included in the sample. The registered offices of enterprises are located in the Northern Great Plain region as well as these ones were established before 1 January 2009 and had 4 financial years for which there were accounts between 2009 and 2012. The screening and choosing of enterprises meeting the abovementioned criteria have been carried out by means of the OPTEN Company Database and we have managed to obtain the annual reports from the website 'Electronic Reporting Portal' (www.e-beszamolo.im.gov.hu). The following two main tools have been used in the course of the testing: R-Statistics statistic programme and Microsoft Excel spreadsheet programme.*

Keywords: *bankruptcy prediction; logit-model; Northern Great Plain region; financial indicators; R-Statistics; logistic regression analysis.*

JEL classification: *C87; C81; G330.*

1. Introduction, raising the topic

The enterprise crisis is an unplanned and unintended process of limited duration as well as its impressionability has ambivalent outcome. In these circumstances, the survival of the enterprise is substantially and permanently at risk or its further operation becomes impossible (Katits, 2002). In economic environments with developed financial markets, the decrease of prices makes the financial crisis unequivocal which is an indicator of the process. As the fusions and acquisitions get condensed, the financial instability and the market prices increase. This event is the main cause of the provisional bankruptcy of market participants (Hashi, 1997). This can also explain the fact why SMEs are replaced in the first five years of the establishment.

There is a need for measuring and monitoring tools so that condition of the enterprise and the potential crisis situation can be assessed. Identification of the crisis and its different stages can be traced by means of the so-called indicators (Kalmár et al, 2015; Nagy-Darabos, 2017.). Through the quantitative aspects of the company's economic situation, the indicators are outlined in the evolution of further (static and dynamic) investigations of all information (Katits, 2002, Musinszki, 2016).

According to Altman and Hotchkiss (2005), prior the bankruptcy proceedings, the company can be characterized by five preceding phases or states in the bankruptcy process: economic bankruptcy, business bankruptcy, technical insolvency, financial insolvency, bankruptcy. With the help of the logit analysis, the problem can be recognized at each stage in case of the aforementioned enterprises.

2. Material

Those enterprises carrying out food trade activities have been included in the investigation database which marked the activity 'Retail sale in non-specialised stores with food' as main activity and whose registered offices are located in the Northern Great Plain region as well as the enterprises had been established before 1 January 2009 and they had 4 financial years for which there were accounts between 2009 and 2012. The screening and choosing of enterprises meeting the aforementioned criteria have been carried out by means of the OPTEN Company Database and we have managed to obtain the annual reports from the website 'Electronic Reporting Portal' (www.e-beszamolo.im.gov.hu).

In the course of establishing the database, the aim was to involve such companies whose Operating Profit or Loss results had been negative at least in the last 3 years during the period examined. Thus, the final database consists of 67 operating enterprises and 19 enterprises having negative Operating Profit or Loss at least over 3 years. In case of 2 of 19 enterprises, the result of the business activity was negative only in the last three years of the investigation and it was negative in all four years of the investigation in case of 17 enterprises. The rate of enterprises with negative performance is 22.09% in the sample and the rate of surviving enterprises is 77.91%. With regard to their forms, 36 limited partnerships, 44 limited liability companies and

6 public limited companies have been included in the sample. The companies are micro, small and medium-sized enterprises.

3. Method

The two main tools which have been used during the analysis are R Statistics statistic programme version R-3.2.4 and Microsoft Excel spreadsheet programme. The combined use of these tools has been allowed by RExcel software which can be applied as an extension of Microsoft Excel. This has enabled us to use the modules of R Statistics via the spreadsheet program after giving the appropriate commands.

The first treatises used the scorecard analysis as a method of the bankruptcy prediction. Individual rates were used for comparing the bankrupt enterprises with the successful ones. These methods played an important role in establishing the subsequent bankruptcy models and provided a basis for developing the multivariate bankruptcy models (Bellovary et al., 2007).

We have applied the logistic regression as a method not primarily for reason of the regression. The main reason was that the method is well suitable for classifying the financial indicators as explanatory variables to categories by classes and for estimating the probability of the classification. For the proper separation of the companies being in the sample, the procedure assigns Z-value expressed by probability to the weighted independent variables. The formula of the logistic regression is:

$$Pr(solvent) = e^{z}/(1+e^{z})$$

$$Pr(solvent) = e^{\beta_0+\Sigma(\beta j\ Xj)}/(1+ e^{\beta_0+\Sigma(\beta j\ Xj)})$$

where

β_j – regression parameters,
X_j – number of independent variables (financial indicators)
j = 1, …, *m*, where *m* is the number of financial indicators.

The number between 0 and 1 obtained as the result of the procedure can be regarded as a probability value (Virág-Kristóf, 2005). Basis of the model is the 'odds' which means the relative ratio of the probabilities for getting into the two groups defined before. In case of bankruptcy models, this practically covers the quotient of the chances for the survival and the occurrence of bankruptcy. Expressed in formula:

$$oddsx = P_{survivor|X} / P_{bankruptcy|X}$$

where

x is the vector of independent variables (x_1, x_2 … x_p) applying to the particular observation.

In turn, interpreted for bankruptcy models, this is a vector of the indicators of the companies examined (Imre, 2008). And, in present investigation, this can be used for the question whether the permanently loss-making enterprises can be separated from the ones having positive results i.e. whether the model can be used for segregating the problematic enterprises.

The key issue of constructing the logistic regression model is to decrease the number of available variables to an appropriate extent. The logistic regression analysis, contrary to the discriminant analysis, does not require a normal distribution of the variables and the equal variance-covariance matrices in the two classes. However, the multicollinearity existing in the course of the combination of more variables and the persistence of non-significant variables may cause problems. Furthermore, it is important to filter out the extremely high values before starting the modelling (Virág et al., 2013).

4. Results

For testing the enterprises, we have chosen 19 characteristics which, in our opinion, can be important for assessing the activities of enterprises carrying out commercial activities. These financial indicators have become explanatory variables of the model.

4.1. Analysing the data of the year of 2009

After the run of the step-by-step regression, seven indicators have remained of the 19 indicators in the logit model in the year of 2009. Indicators are the following: Liquidity ratio, Cash level liquidity, Total indebtedness indicator, Debt/Equity Ratio, ROS before taxes, Net ROS, Earnings after taxes/Equity.

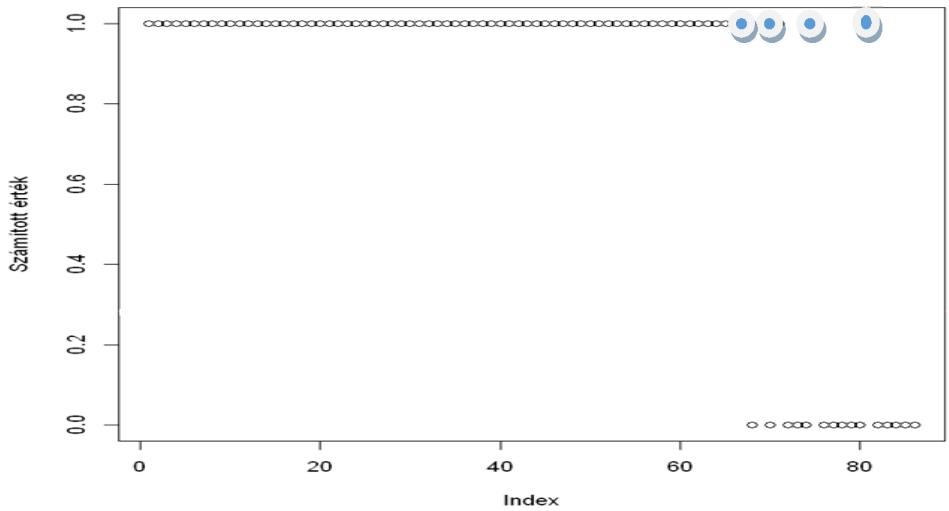

Figure 1: Distribution of the calculated Z values of the logit-model in 2009
Source: Own editing

I have disaggregated the enterprises into groups by means of the odds ratio ODDS which was determined based on the sample. Since 86 enterprises can be found in the sample, the category of enterprises having negative Operating Profit or Loss (0) thereof contained 19 enterprises and the category of positive Operating Profit or Loss (1) contained 67 enterprises. The companies having negative Operating Profit or Loss represented 22.09% in the sample while the enterprises with positive performance represented 77.91%. I have calculated the “cut off” parameter as a

quotient of the two ratios; its value is 0.2836. Those enterprises have been included in the category of negative performance where the Z value of regression is lower than 0.2836; the enterprises with regression above the value have been included in the category of positive performance.
We can infer accuracy of the model from distribution of the calculated regression values which is illustrated by Figure 1. Indices are indicating individual companies on the horizontal axis and the calculated regression values are on the vertical axis. The logit-method has appropriately separated the companies in 2009, with the exception of 4 enterprises. In Figure 1, we can see two groups according the logit model where the companies with positive performance are taking values around 1 while the values of companies producing negative Operating Profit or Loss are moving around 2.22*10-16. In Figure 1, we can also see four incorrectly categorized companies which are under the 69th, 71st, 75th and 81st; the companies' value calculated by the model is 1. In the application of logit-method, a separation of the companies can be observed already in the year of 2009.
Accuracy of the model concerning the category of positive performance is 100% since it has ranged 67 of the 67 companies with positive performance among Category "1". Taking into consideration the companies with negative performance, accuracy of the model is 78.94% because it has ranged only 15 of the 19 companies with negative performance among Category "0". Considering both categories, total accuracy of the model is 95.34% and added value of the model is 45.34%.

4.2. Analysing the data of the year of 2010

After the run of the step-by-step regression, ten indicators have remained of the 19 indicators in the logit model in the year of 2010. Indicators are the following: Fixed assets/Current assets, Liquidity ratio, Total indebtedness indicator, Debt/Equity Ratio, Operating ROS, ROS before taxes, Earnings after taxes/Total assets, Operating Profit or Loss/Total assets, Rotational speed of total assets, Earnings after taxes/Equity.
We have disaggregated the enterprises into groups by means of the ODDS ratio as well. As in 2009, the "cut off" parameter concerning the sample is 0.2836. Those enterprises have been included in the category of negative performance where the Z value of regression is lower than 0.2836; the enterprises with regression above the value have been included in the category of positive performance.
Accuracy of the model can be inferred from distribution of the calculated regression values as well; it is illustrated by Figure 2. Indices are indicating individual companies on the horizontal axis and the calculated regression values are on the vertical axis. In Figure 2, we can see two groups according the logit model where the companies with positive performance are taking value 1 in each case while the values of companies producing negative Operating Profit or Loss are moving between 2.22*10-16 and 2.11*10-10. In Figure 2, a linear straight line can be perfectly laid on the regression values of both groups and, in the application of logit-method, a flawless separation of the companies can be observed already in the year of 2010.
Thanks to the perfect grouping, the original group rates have remained as 22.09 of negative performance and 77.91% of survival rate. Accuracy of the model concerning the category of positive performance is 100% since it has ranged 67 of the 67 companies with positive performance among Category "1". Taking into consideration the companies with negative performance, accuracy of the model is

also 100% because it has ranged 17 of the 19 companies with negative performance among Category “0”. Considering both categories, total accuracy of the model is 100% and added value of the model is 50%. Compared to the previous year, the logit model of 2010 has performed in the grouping of companies with positive Operating Profit or Loss just as the model of 2009 but it has grouped the companies with negative performance 21.05% better.

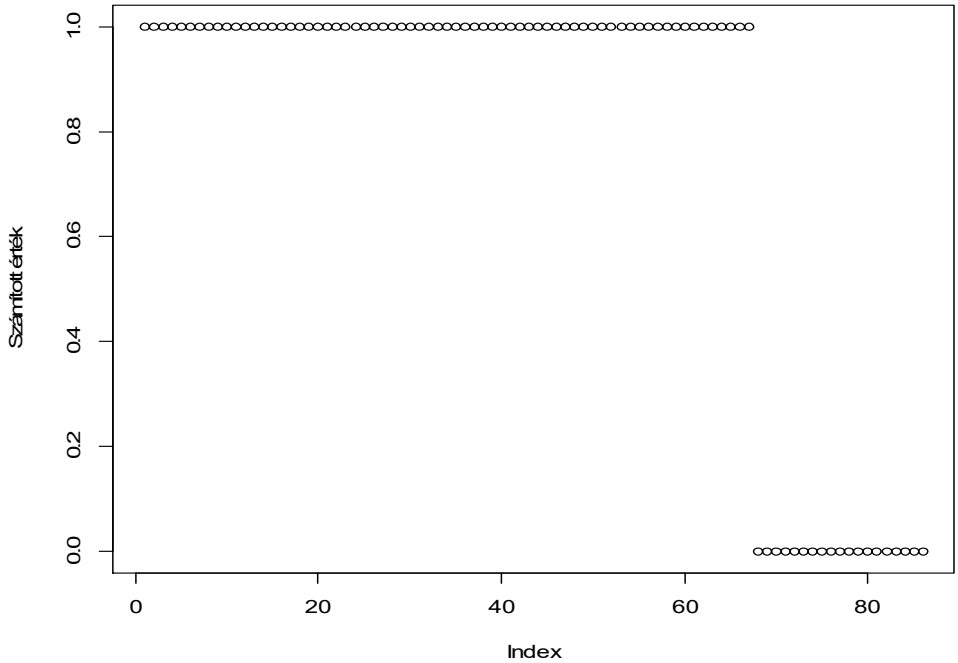

Figure 2: Distribution of the calculated Z values of the logit-model in 2010
Source: Own editing

4.3. Analysing the data of the year of 2011

After the run of the step-by-step regression, nine indicators have remained of the 19 indicators in the logit model in the year of 2011: Current liabilities/Total resources, Current assets/Total assets, Fixed assets/Current assets, Liquidity ratio, Total indebtedness indicator, Operating ROS, ROS before taxes, Net ROS, Earnings after taxes/Total assets.

Value of the “cut off” parameter is 0.2836 according to the described above.

Figure 3 is totally the same as the figure of the year of 2010. In Figure 3, we can see two groups according the logit model where the companies with positive performance are taking values around 1 in each case while the values of companies producing negative Operating Profit or Loss are moving between 2.00*10-16 and 1.79*10-9. As in case of the logit-model of 2010, a linear straight line can be perfectly laid on the regression values of both groups in case of the model of 2011 as well (Figure 3). In the application of logit-method, a flawless separation of the companies and a minimal standard deviation between group values can be also observed in the year of 2011.

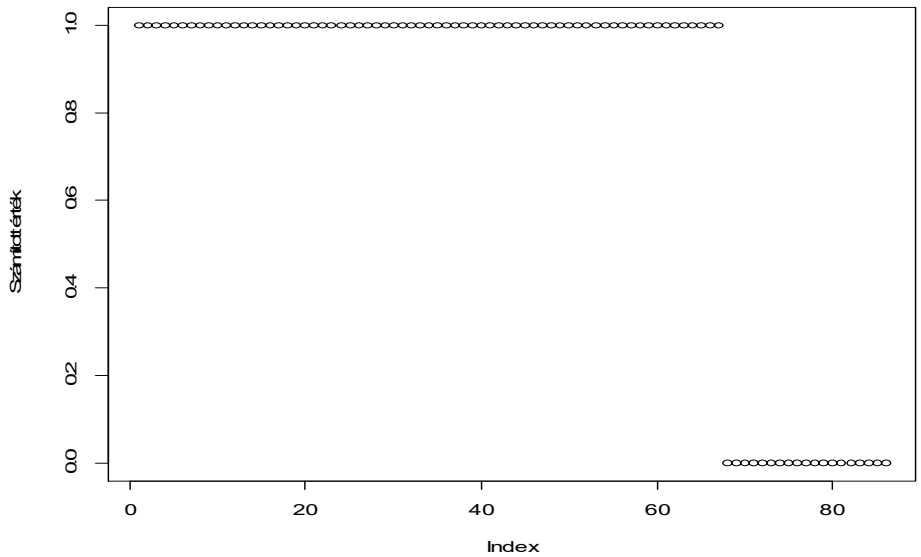

Figure 3: Distribution of the calculated Z values of the logit-model in 2011
Source: Own editing

Accuracy of the model concerning the category of positive performance is 100% since it has ranged 67 of the 67 companies with positive performance among Category "1". In case of the companies with negative performance, accuracy of the model is also 100% because it has ranged 19 of the 19 companies with negative performance among Category "0". Total accuracy of the model is 100% and added value of the model is 50%. Compared to the previous year, the logit model of 2010 has performed in the grouping of companies with positive Operating Profit or Loss just as the model of 2009 but it has grouped the companies with negative performance 21.05% better. The classification accuracies of the logit-models of 2010 and 2011 are identical and their statistical properties are almost identical. The model of 2010 has used the 10th indicator and the model of 2011 has used the 9th indicator which are partly identical.

4.4. Analysing the data of the year of 2012

After the run of the step-by-step regression, nine indicators have remained of the 19 indicators in the logit model in the year of 2012: Current liabilities/Liabilities, Current assets/Total assets, Fixed assets/Current assets, Total indebtedness indicator, Debt/Equity ratio, Operating ROS, Earnings after taxes/Total assets, Rotational speed of total assets, Earnings after taxes/Equity. In case of disaggregating the enterprises into groups, value of the ODDS ratio is 0.2836.

Regression values of the group with negative Operating Profit or Loss are very close to zero and regression values with positive performance are taking value 1 in case of each company i.e. there is not repeatedly separation among the data in individual groups.

In Figure 4, we can see two groups according the logit-model where the survival companies are taking values 1 while the values of companies producing negative

Operating Profit or Loss are moving between 2.00*10-16 and 2.67*10-09. The two groups are clearly separating.
Accuracy of the model concerning the category of positive performance is 100% because it has ranged 67 of the 67 companies with positive performance among Category “1”. Taking into consideration the companies with negative performance, accuracy of the model is also 100% because it has ranged 19 of the 19 companies with negative performance among Category “0”. Total accuracy of the model is 100% and added value of the model is 50%.

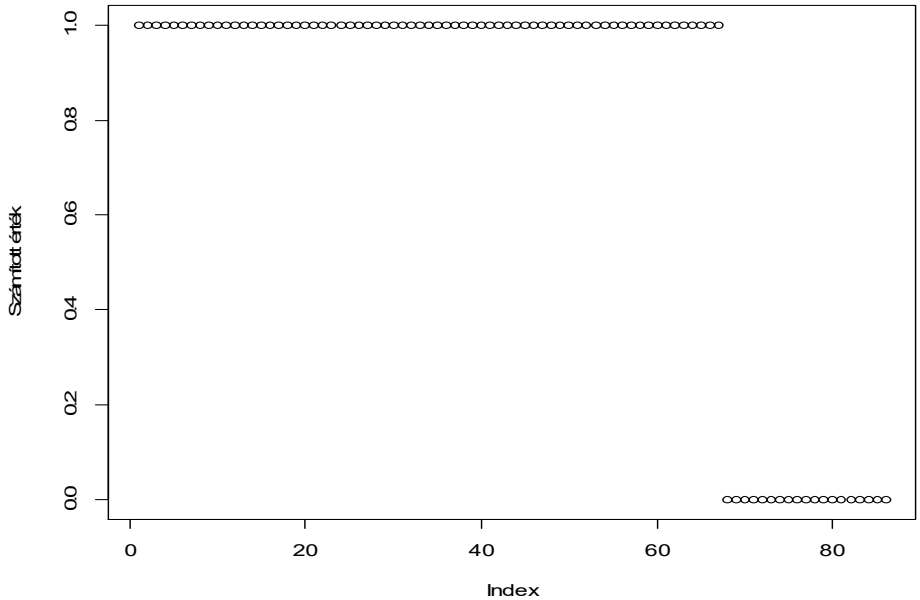

Figure 4: Distribution of the calculated Z values of the logit-model in 2012
Source: Own editing

In the years of 2010, 2011 and 2012, the classification accuracies of the logit-models are identical as a whole and by category as well. In the listed 3 years, the model has used different indicator combinations but, regardless of this, it has provided 100-percent performance. The classification accuracy of the logit-model is 95.34% since it has ranged 4 companies among incorrect categories.

5. Conclusions, proposals

The repository of opportunities provided by the developed computing devices and application is almost inexhaustible. R Statistic programme, with its more than 8 000 modules, serves every field of science and is available for free. Use of the model and retrieval of the data are the most useful and the fastest by means of Microsoft Excel. Outputs of individual modules can be immediately utilized as inputs of the next module.

In the last three years of the analysis, the logit-model has flawlessly categorized, the groups have totally separated from each other and the standard deviation within the two groups was 0. The model of 2009 has provided the weakest result, with 95.34%. The logit-method was suitable to determine which indicators could explain the bankruptcy situation in different years. Table 1 contains those indicators which have been included in the models in at least three years. During further investigations, by means of the above-mentioned indicators, it is worth creating a new logit-model and testing that on larger samples.

Table 1: Explanatory variables of the logit-models in the years of 2009-2012

5.	Fixed assets/Currents assets
6.	Liquidity ratio
10.	Total indebtedness indicator
11.	Debt/Equity ratio
12.	Operating ROS
13.	ROS before taxes
15.	Earnings after taxes/Total assets
18.	Earnings after taxes /Equity

Source: Own editing

We think that the majority of SMEs do not use bankruptcy models at present. The small and medium-sized enterprises are the engine of the economy therefore it is needed to create such a bankruptcy model which is developed for the sector and specified sectorally. It would be required to manage the bankruptcy models as well as other financial analysing and controlling tools with high priority in the strategy of small and medium-sized enterprises.
We have appointed an aim for our work i.e. to examine whether the companies with negative or positive performance can be separated. Based on the examination of enterprises involved in the investigation, it can be unequivocally stated that this kind of separation can be realized with a relatively high accuracy.

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PERSPECTIVES AND CHALLENGES OF ROMANIA'S INTERNATIONAL TRADE RELATIONSHIPS

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Abstract: *The current financial crisis has highlighted the need to support a process of economic development based on the stimulation of increasing the national economic productivity and exports. In this analysis we present the evolution of international trade and its characteristics in the past decades based on data released by Eurostat, World Bank and UNCTAD. Romania's international trade was influenced by the collapse of socialist regime, the transition to a market economy, the accession to the European Union and the latest international financial and economic crisis. Based on the data for the period 1990-2015, we conclude that besides continuing the positive evolution of increasing the volume of exports, Romania's major challenges consist in changing the structure of its traded products, favoring the exports of highly manufactured goods instead of raw materials and importing more raw materials and capital goods instead of consumer goods.*

Keywords: *international trade; foreign exchange; exports; imports.*

JEL classification: *F10; F13; F19.*

1. Introduction

The well-known theories Export-Led-Growth (Adelman, 1984; Furuoka, 2007) and Import-Led-Growth (Barro, 1996; Lawrence and Weinstein, 2001) are pointing out the importance of international trade on the development of any country. However these theories also bring into attention that such development is depending strongly not only on the increase of the volume of the traded products and services but also on the structure of the exports and imports of such items, which determines the need for deeper analyses on this issue. On the other hand, the volumes of exports and imports are under the influence of several determinants, out of which financial and economic crisis have significant negative impacts on them.

The severe contraction of world trade volume during the recent global crisis had major negative impacts on the global economy, affecting countries' development process and demanding changes of their trade strategies. The current crisis has long lasting effects and the current recovery remains really fragile, with persisting high levels of unemployment in many countries and rise of the national debt, affecting both production and international trade structures.

International trade dynamics of the states in the Central and Eastern European Union recorded a decrease during the crisis. In Romania's case, the overall volumes of imports and exports have been affected by the slowdown in developed countries and the reduced global trade, due to lower global demand.

2. The international trade coordinates in Romania after 1990

After 1990, in Romania, the balance of payments has deteriorated rapidly due to depletion of foreign exchange reserves and rising imports. Thus, in *1998* the trade balance deficit was at 2.6 billion U.S. dollars due to increasing imports and decreasing exports.

The trade deficit in *1999* worth 1.092 billion U.S. dollars and was at a lower level by 58.4% over the previous year.

The year *2000* was characterized by an increase in domestic consumption provided by external resources. The import growth rate was higher than that of exports and the deficit of goods and services balance increased to 1.938 billion U.S. dollars, with 15.5% more than the previous year.

In *2001,* Romanian exports recorded a decline from the previous year due to less favorable conditions in foreign markets and due to a slight appreciation trend of the national currency.

The exports have grown as a share of GDP from 23.8% in 1999 to 31% in *2003.* The demand of imports was formed by: intermediary goods, capital goods, consumer goods and raw materials.

In *2004,* the trade deficit reached 5.323 billion euros due to increased imports.

The real appreciation of the domestic currency in the period *2001-2005* and keeping inflation under control had no significant effect on the development of exports. In 2005, the current account deficit increased compared to the value recorded in the previous year, reaching 6.891 billion euros.

In *2007,* the trade deficit growth *was due to internal structural changes of the economy and the catching-up process.* The accession to the European Union has led to more pronounced increase in imports of goods and services and the deficit increased to 17.345 billion euros, up with 47.6% from 2006.

In *2008*, the exports of goods amounted to 33.628 billion euros, up with 13.8 percent over the previous year due to higher external prices and volume, also due to the change of exports structure in favor of the capital goods and the depreciation in real terms of the domestic currency against the euro.

In 2009, the global economic activity began to contract due to the adjustment of firms' balance sheets and population income, the effect of wealth and declining confidence. Emerging economies, including Romania, have been affected by the economic slowdown in developed countries and by the reduced world trade due to lower global demand. However, Romania has registered a trade deficit of 7.165 billion euros, down with 61.2% from the previous year. The manufacturing industry provided 92.3% of Romania's exports. Intra-community exports were 74.3% of total, up by 3.8% compared to 2008.

The difficulties registered in the Romanian economy caused an oscillating evolution of international trade. In 2010, the current account deficit of balance of payments was 4.969 billion euros, the lowest level in the last 7 years as a share of GDP (4.1%). Trade deficit improved the current account balance, registering a reduction with 14% compared to 2009.

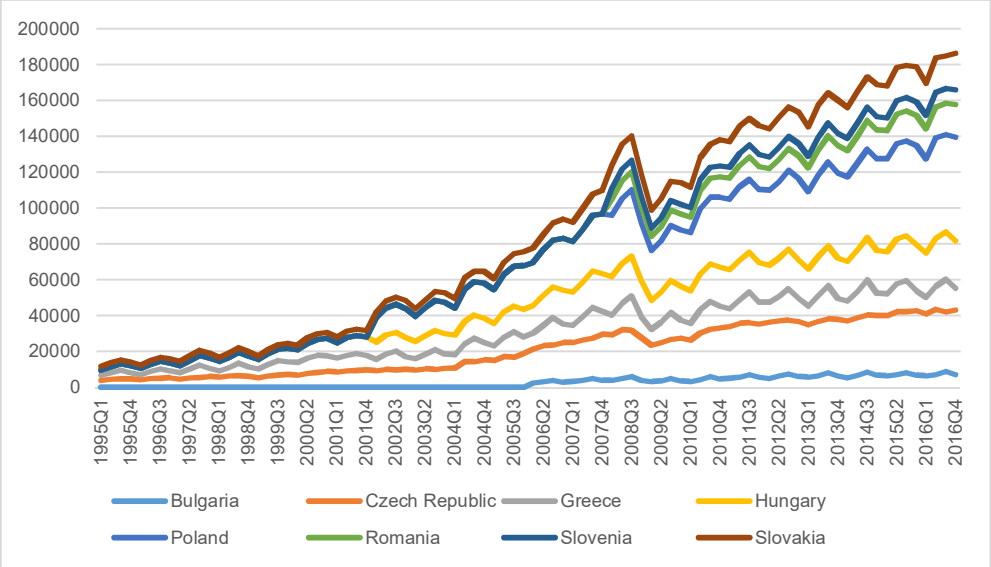
Analyzing the trade deficit of Romania as percentage of GDP, we can notice that it had improved in the first decade after 1990, decreasing gradually from 9.45% in 1990 to 5% in 1995 and having a slight increase to 5.28% in 2000. After that, the years marked by the spectacular increase of consumption, on background of the rapid process of bank lending to the population have brought beside an advance of the economic growth of the country a much important increase of the imports leading

to the maximum increase of the trade balance as percentage of GDP of 14.3% which was registered in 2007.
The financial and economic crisis that hit almost entire world, including Romania, changed essentially Romania's international trade evolution, leading to a decreasing trend of the trade deficit as percentage of GDP which dropped rapidly to 6.41% in 2009 and followed then a rapid decreasing slope up to 0.53% in 2015, which shows a very important improvement of the international trade of Romania.

3. An analysis of the trade of goods and services in Central and Eastern Europe

Among the countries of Central and Eastern Europe members of EU, the largest volume of exports of goods and services was recorded in Slovakia followed by Poland (actually the only European country that has registered economic growth during the recession), Romania and Slovenia, which have registered a similar evolution. At the same time, as shown in Chart 1, the exports of Hungary, Greece and Czech Republic had also a tendency to increase but much slower than the previous countries. On the other hand, Bulgaria had the lowest exports of goods and services, with a very small but almost insignificant increase starting from 2006.

Chart no.1. Exports of goods and services from Central and Eastern European countries, members of European Union, during the period: first quarter 1995 - fourth quarter of 2016 - millions of euros (millions of ECU till 1999) -

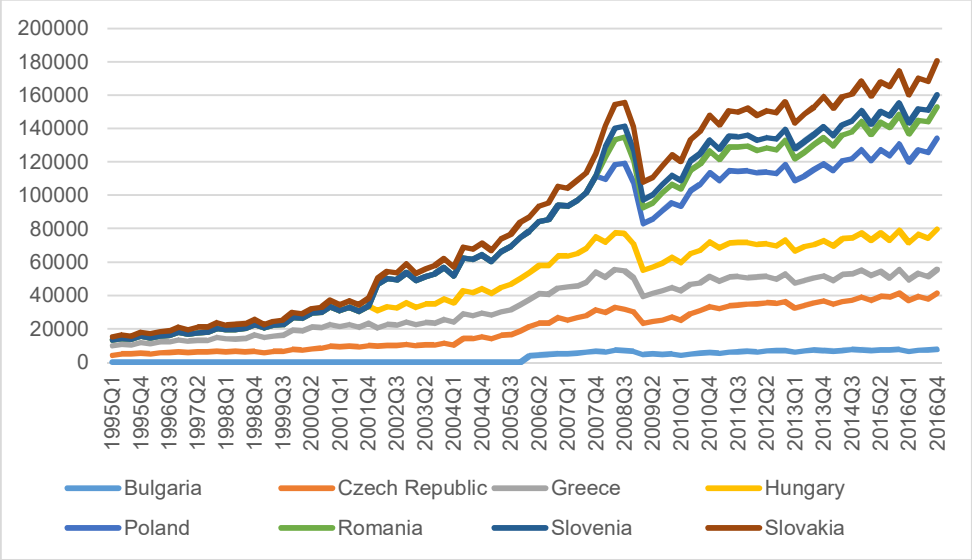


Source: EUROSTAT

The evolutions of the exports of goods and services, recorded by all the 8 countries, are marked by the occurrence of the financial and economic crisis, the chart revealing important dropdowns in exports in the period 2008-2009, explainable especially by the worsening of the financial situation of the partners in foreign countries.

On the other hand, a general image of the evolution of the imports of the same 8 countries can be pictured by Chart 2:

Chart no. 2. Imports of goods and services from Central and Eastern European countries, members of European Union, during the period: first quarter 1992 - first quarter 2011 - millions of euros (millions of ECU till 1999) –



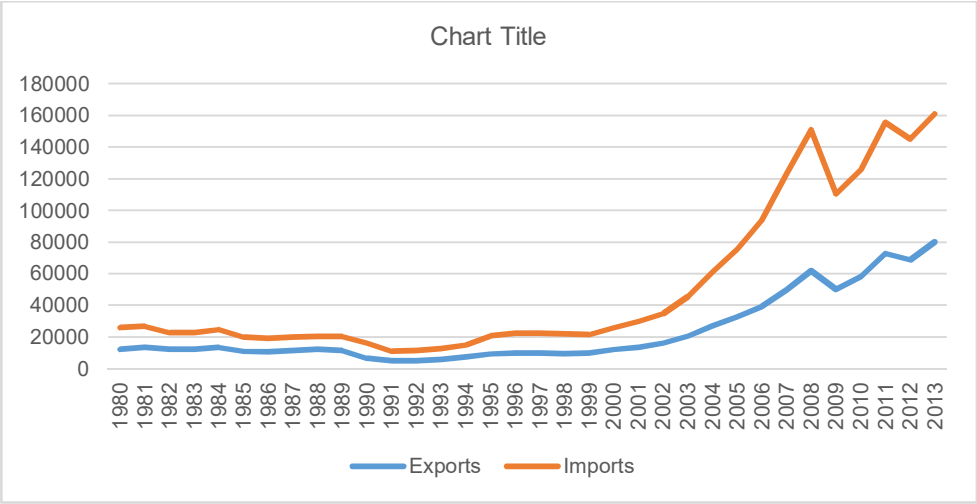
Source: EUROSTAT

Chart 2 shows a quite similar trends of the imports of goods and services in all 8 countries, almost all of them, except Greece, registering however higher volumes of imports than their exports. Moreover, Romania and Poland appear to have an almost identical evolution of imports between 1995 and 2015.
The highest imports have been made by the same group of countries, consisting in Slovakia, Poland, Romania and Slovenia, while Hungary, Greece and Czech Republic registered significantly lower volumes of imports. Bulgaria, on the other hand, had very low volumes of imports during the entire period 1995-2015.
The impact of the financial and economic crisis on the volume of imports of the considered countries appears also obvious, while the years 2008-2009 are marked by important dropdowns in the Chart, for all the countries.

4. Romania's international trade in the communism and market economy period

In Romania's case the international trade was marked not only by the international economic and financial turmoil but also by the change of the regime, while the transition from the communist economy to the market economy has brought changes both in the structure of the traded products and services and in the one of the international partners. Under these circumstances, it becomes of high interest the analysis of the evolution of Romania's imports and exports after the 1980, reflected by Chart 3.

Chart no.3. The evolution of imports and exports of Romania during 1980-2013 - *Million U.S. dollars (USD)* -



Source: UNCTAD - http://unctadstat.unctad.org/wds/ReportFolders/

In 1989 under the communism influence there was a concentration of the international trade of Romania to the countries in the region.
There is observed a reorientation of Romanian exports to the European countries, after 1991, the share of export volume to the countries increasing from 65.6% (1995) to 78.7% (2009). The share of volume of exports to developing countries fell from 26.9% (1995) to 13.7% (2009). The situation is explained by the accession of Romania, Poland, Hungary and Bulgaria to the European Union and by the fact that the share of USSR and CIS has decreased significantly from 1990 until today.
The mentioned trends regarding the geographical orientation of Romania's international trade flows are explained by the orientation of the authorities political, economic and trade actions to Western Europe. At the moment we can speak about a "dependence" of Romania on the Community Market by the fact that two thirds of all Romanian foreign trade is developed with partners/companies from this market. The idea derives also from the evidence of the main Romania's trading partners.
The main trading partners of Romania are the European Union countries, which have a share of over 70% of foreign trade. Italy, Germany and France are the main countries involved in the international trade of Romania. In the case of imports the situation is relatively similar. Russia stands as a trading partner, on the primary energy resources.
The structure of Romanian exports by countries and regions in the period 1990 - 2015 was as follows:

Table no. 1. The Structure of Romanian exports of goods by countries and regions during 1990 – 2015 - %-

Region	Country	1990	1995	2000	2005	2010	2015
World	Total	100	100	100	100	100	100
	Total	42.8	69.39	84.9	85.64	88.74	85.27
	Germany	11	18.13	15.69	14.03	18.07	19.75

Region	Country	1990	1995	2000	2005	2010	2015
Europe & Central Asia	Italy	8.83	15.76	22.48	19.41	13.84	12.43
	France	3.42	5.77	6.97	7.44	8.33	6.81
	Hungary	2.62	2.2	3.43	4.14	4.78	5.38
	United Kingdom	2.16	2.98	5.27	5.45	3.62	4.36
	Turkey	2.73	4.39	6.05	7.92	6.86	3.95
	Russian Federation	24.23	2	0.86	0.83	2.22	1.82
	Austria	1.21	1.96	2.42	3.11	2.31	2.51
	Bulgaria	1.7		2.79	2.65	3.58	3.34
	Poland	1.35		0.98	1.46	2.63	2.68
	Netherlan ds	2.66	3.02	3.17	2.69	2.76	2.53
	Greece	1.45	2.59	3.13	2.13	1.51	1.32
	Spain	0.71	1.28	1.1	2.42	3.03	2.89
Middle East & North Africa	Total	8.06	11.54	6.15	5.3	4.67	7.01
East Asia & Pacific	Total	5.71	6.91	1.85	1.81	2.37	3.11
	China	2.59	2.27	0.82	0.75	0.83	0.96
South Asia	Total	1.19	1.9	0.55	1.26	0.66	0.48
Sub-Saharan Africa	Total	0.87	2.2	1.07	0.75	1.03	0.72
North America	Total	6.28	2.93	4	4.41	1.74	2.06
	United States	5.81	2.54	3.66	4.06	1.49	1.92
Latin America & Caribbean	Total	1.86	2.22	0.82	0.56	0.68	1.07

Source: World Integrated Trade Solution (WITS), http://wits.worldbank.org/

After 2000 more than 85% of the exports of Romania were made in the Europe and Central Asia region, most of them in Germany (19.75% of total exports in 2015), Italy (12.43% in 2015) France (6.81% in 2015) and United Kingdom (4.36% in 2015). We notice also an increasing trend of the share of exports to the formerly communist countries such as Hungary (from 2.62% in 1990 to 5.76% in 2015), Poland (from 1.35% in 1990 to 2.68% in 2015) and Bulgaria (from 1.7% in 1990 to 3.34% in 2015). On the other hand the exports dropped down rapidly in Russian Federation from 24.23% in 1990 to only 1.82% in 2015).

It can also be noticed the slight decrease of the exports in the Middle East & North Africa region, from 8.06% in 1990 and 11.54% in 1995 to 7.01% in 2015, but this region remains the second of importance for the Romanian exports.

On the other had there can be observed important dropdowns of exports in North America, from 6.28% in 1990 to only 2.06% in 2015, especially due to the decrease of exports in the United States (from 5.81% in 1990 to 1.92% in 2015), but also in the East Asia, from 5.71% in 1990 to only 3.11% in 2015, while the major decrease was registered with China, from 2.59% in 1990 to only 0.96% in 2015. Moreover, especially after Romania became member of the European Union, the share of its exports towards South Asia region and towards Latin America and Caribbean region decreased also from 1.19% in 1990 to 0.48% in 2015 and from 1.86% in 1990 to 1.07%, respectively.

Romanian imports, on the other hand, have also changed since 1990 in terms of shares and partners, either by countries or by regions, as it can be seen in the following table:

Table no. 2. The structure of Romanian imports of goods by countries and regions in the period 1990-2015 -% -

Region	Country	1990	1995	2000	2005	2010	2015
World	Total	100	100	100	100	100	100
Europe & Central Asia	Total	32.84	74.95	82.81	83.96	87.15	89.26
	Germany	11.45	17.18	14.73	13.97	16.71	19.82
	Italy	1.19	13.27	18.8	15.48	11.57	10.89
	Russian Federation	23.41	11.96	8.58	8.25	4.36	3.16
	France	1.88	5.18	6.12	6.75	5.93	5.59
	Hungary	2.4	3.06	3.93	3.31	8.68	7.95
	Netherlands	1.45	2.63	2.18	1.77	3.52	4.01
	Poland	4.27	0.55	1.48	2.9	3.74	4.84
	Austria	1.65	3	2.54	3.71	4.09	3.85
	Bulgaria	2.28	0.75	0.67	0.97	3.06	2.95
	United Kingdom	1.74	2.92	4.1	2.87	2.29	2.48
	Spain	0.21	0.86	1	2.23	2.1	2.56
	Turkey	0.84	2.44	2.08	4.86	3.68	3.63
Middle East & North Africa	Total	24.07	8.13	1.18	1.19	0.92	0.92
East Asia & Pacific	Total	5.22	6.32	6.05	8.16	7.68	6.61
	Korea, Rep.	0.15	3.11	1.62	1.36	0.87	0.77
	China	2.55	0.87	1.33	4.04	5.45	4.59
	Japan	0.85	0.74	1.3	1.44	0.47	0.47
North America	Total	4.73	4.38	3.42	3.23	1.43	1.18
	United States	4.59	3.96	3.01	2.75	1.21	1.08
Latin America & Caribbean	Total	2.07	2.14	2.25	1.84	0.98	0.86

Source: World Integrated Trade Solution (WITS), http://wits.worldbank.org/

As Table 2 shows, the structure of the Romanian imports in 2015 is very different from the one registered in 1990. The most significant imports of goods were made in 2015 from the Europe and Central Asia region, while over 80% were from the countries in the European Union. The most important partners regarding the imports at the end of 2015 were Germany, Italy, France, Netherlands and Austria, but also the former communist countries Hungary, Poland and Bulgaria.

We notice important increases of the share of imports from Germany (from 11.45% in 1990 to 19.82% in 2015), Italy (from 1.19% in 1990 to 10.89% in 2015), France (from 1.88% in 1990 to 5.59% in 2015), Netherlands (from 1.45% in 1990 to 4.01% in 2015) and Hungary (from 2.4% in 1990 to 7.95% in 2015). In contrast, imports from Russian Federation have decreased from 23.41% in 1990 and 11.96% in 1995 to only 3.16% in 2015).

Imports increased also in relation with the East Asia and Pacific region, from 5.22% in 1990 to 6.61% in 2015, while the imports from China increased from 2.55% in 1990 to 4.59% in 2015 and the imports from Korea increased also from 0.15% in 1990 to 0.77% in 2015).

On the other hand, the imports from Middle East and North Africa region had the most spectacular decreasing evolution, from 24.07% in 1990 to only 0.92% in 2015.

Important decreases of imports were also recorded with Latin America and Caribbean region (from 2.07% in 1990 to 0.86% in 2015), but also with North America region (from 4.73% in 1990 to 1.18% in 2015), the latter especially due to the reduction of imports from United States, from 4.59% in 1990 to only 1.08% in 2015).

5. An analysis of Romanian Foreign trade by main commodity groups

Romanian foreign trade of goods evolution after 1990 is marked by several changes in the structure of the traded products, both in terms of exports and of imports.
Regarding the exports of goods the main groups of products exported by Romania in 2015 by their share in total exports were machineries and electronics, means of transportation, mineral products, metal products, raw materials, textiles and clothing products, plastic or rubber products, and vegetables. At the same time the category of consumer goods had in 2015 the major share in total exports, followed by capital goods, intermediate goods and raw materials, but this structure has suffered some changes since 1990, as it can be seen in Table 3.

Table no. 3. The structure of Romanian exports by groups of products in the period 1990-2015 *-% -*

Product categories	1990	1995	2000	2005	2010	2015
Animal	0.39	2.15	1.22	0.87	1.12	1.36
Capital goods	25.98	11.95	16.11	17.68	30.12	31.79
Chemicals	5.15	9.13	4.99	4.48	4.39	3.51
Consumer goods	42.04	43.68	47.95	51.08	39.5	39.5
Food Products	0.32	0.91	0.69	0.62	2.33	3.26
Footwear	2.21	5.41	7.61	5.8	3.06	2.36
Fuels	17.8	7.94	7.17	10.68	5.3	4.46
Hides and Skins	0.62	0.66	0.95	0.91	0.62	0.65
Intermediate goods	29.22	38.93	28.68	25.88	18.79	16.65
Machineries and Electronics	16.19	8.29	13.99	17.67	26.88	27.24
Metals	16.23	18.16	15.99	14.88	11.78	8.36
Minerals	1.5	1.3	0.76	0.39	0.21	0.19
Miscellaneous	9.33	8.33	6.18	6.16	6.74	9.23
Plastic or Rubber	1.82	2.55	2.21	3.88	4.98	5.53
Raw materials	1.03	4.89	6.19	4.09	8.44	7.81
Stone and Glass	1.39	1.92	1.56	0.94	0.57	0.54
Textiles and Clothing	9.81	19.84	24.17	18.98	8.19	6.98
Transportation	13.16	5.41	4.91	7.9	15.3	16.55
Vegetable	0.49	3.67	1.36	1.51	4.76	5.89
Wood	3.58	4.33	6.22	4.35	3.76	3.89

Source: World Integrated Trade Solution (WITS), http://wits.worldbank.org/

The share of consumer goods in total exports has raised progressively till 2005, from 42.04% in 1990 to 51.08% in 2005, but it decreased after down to 39.5% in 2010 and 2015, on the background of the increasing volume of exports and of the increasing share of the capital goods and raw materials in total exports. Moreover, the share of intermediate goods exports in total exports has declined from 29.22% in 1990 till 16.65% in 2015, while the share of the exports of raw materials in total exports had an increasing trend from 1.03% in 1990 to 7.81% in 2015. On the other

hand, it appears that the share of exports of capital goods increased from 25.98% in 1990 to 31.79% in 2015. However, putting together these figures, we may say that even the volume of the exports has raised significantly in the period 1990 – 2015, the structure of Romania's exports of goods had a negative evolution, because there is a tendency of increasing the share of the exports of raw materials, instead of increasing the share of manufactured goods. Therefore, a specific challenge for Romania becomes finding the proper means for changing the structure of the exported products by putting accent on the exports of highly manufactured products instead of promoting the exports of raw materials.
Regarding the structure of imports of goods of Romania, its evolution shows quite worrying signals, while the share of imports of raw materials has dropped down significantly and the share of consumer goods has increased very rapidly as shown in the following table:

Table no. 4. Structure of Romanian imports by groups of products in the period 1990-2015 *-% -*

Product categories	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**
Capital goods	21.45	23.19	27.27	26.73	30.38	31.55
Consumer goods	13.96	27.97	24.7	29.96	29.55	29.61
Intermediate goods	21.18	27.6	33.19	27.66	25.59	24.71
Raw materials	42.34	19.22	13.13	14.26	10.76	9.38

Source: UNCTAD - http://unctadstat.unctad.org/wds/ReportFolders/

Imports of raw materials has decreased as share from 42.34% in 1990 to only 9.38% in 2015, while the consumer goods have increased as share from 13.96% in 1990 to 29.61% in 2015, which show that the Romanian economy has increased significantly the appetite for consumption of manufactured goods instead of orienting itself towards the manufacturing goods by using imported raw materials. At the same time the imports of intermediate goods increased slightly to 24.71% in 2015 compared to 21.18% in 1990, while the import of capital goods has increased from 21.45% in 1990 to 31.55% in 2015. However, the positive evolution in the share of the capital goods was not able to compensate the negative effects induced by the evolution of the other import components and puts Romania into a bad position that needs to be changed, as one of the major challenges for Romania in the next years.
Analyzing deeply the structure of the exports and imports of Romania, there may be taken into consideration some specific indicators regarding the international trade such as the number of the traded products, the concentration index and the diversity index.
An overview of the specific indicators regarding the international trade can be synthetized by the figures in the following table:

Table no. 5. The concentration and diversity index of exports and imports of Romania in 2009

Exports								
2000			**2010**			**2015**		
Number of products exported	*Diversity index*	*Concentration Index*	*Number of products exported*	*Diversity index*	*Concentration index*	*Number of products exported*	*Diversity index*	*Concentration Index*
223 **(260)xxxiv**	0.549 **(0.160)**	0.130 **(0.068)**	242 **(260)**	0.423 **(0.210)**	0,094 **(0,065)**	244 **(259)**	0.424 **(0,198)**	0.103 **(0,065)**

Imports								
2000			**2010**			**2015**		
Number of products imported	*Diversity index*	*Concentration Index*	*Number of products imported*	*Diversity index*	*Concentration index*	*Number of products imported*	*Diversity index*	*Concentration Index*
242 **(260)xxxv**	0.348 **(0.087)**	0.070 **(0.069)**	248 **(260)**	0.263 **(0.123)**	0,066 **(0,069)**	248 **(259)**	0.266 **(0,119)**	0.059 **(0,059)**

Source: UNCTAD - http://unctadstat.unctad.org/wds/ReportFolders/

The diversity index indicates whether the structure of imports or exports of a country differs from the structure of the products involved in global trade. It can take values between 0 and 1, and if it gets close to the maximum limit it can be said that there is a big difference compared to the global average. The index is calculated as a measure of absolute deviation for the percentage of a state in relation to the global structure.

In the case of Romania, there can be observed an increase in the number of products exported by Romania, based on the increase and diversification of products exported towards the import situation where the growth is weak. Compared with 2000, in 2010 and 2015 it is registered a decrease of the diversity index in the context of a smaller deviations from the global average. It can be said that the structure of exported products differ by about 43% compared to the global average. In the case of imports the difference is smaller, being around 26%.

The concentration index (of the market) for a state shows how exports and imports are concentrated on certain products. In Romania, the concentration indices have low values, the structure of the products involved in international trade is one less focused on specific productsxxxvi.

6. Conclusions

Foreign trade remains indispensable for economic growth and therefore export and import strategies become more important for every country interested on its growth, which may be enhanced by combining such strategies with deliberate policies for building competitive and diversified productive capabilities. Moreover, while the impact of some severe phenomena such as financial and economic crisis can be significantly negative, there is a need to adapt international trade strategies for building resilience to such phenomena and limit their effects.

In the case of Romania there were recorded significant increasing trends of the exports and imports in terms of volumes after 1990, but also significant changes in the structure of trading partners and of the traded products. Thus, as result of becoming member of European Union and of the process of integration in this structure Romania's share of exports and imports with EU has increased very much while the trade with some other countries, such as United States, or regions, such as Middle East and Africa, had a decreasing trend.

On the other hand, our analysis has shown a worrying situation regarding the changes in the structure of the exported and imported goods. During the period 1990 – 2015, the share of imports of consumer goods in total imports has raised from 13.96% to 29.61%, while the share of imports of raw materials decreased from 42.34% to 9.38%. At the same time, the share of exports of consumer goods in total exports after an increase from 42.04% in 1990 to 51.08% in 2005 has decreased in 2015 to 39.5% and the share of exports of intermediate goods has declined from

29.22% in 1990 to 16.65% in 2015, while the share of exports of raw materials increased in the same period from 1.03% to 7.81%.
While for enhancing the economic growth for a country it is reasonably to encourage the exports of highly manufactured goods instead of raw materials and the imports of raw materials instead of consumer goods, the results from our analysis make us to point out that the major challenges for Romania in the next years are to take actions to reverse the exiting trend of changes in the structure of both imported and exported products.

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Notes:

[1]According to UNCTAD, Romania is part of the developed countries of Europe: in brackets it is shown the value of the indices in this region.
[2]According to UNCTAD,Romania is part of the developed countries of Europe: in brackets it is shown the value of the indices in this region.
[3]In order to calculate the two indicators there are considered only those products whose volume is worth more than 100.000 USD or which represent more than 0.3% of total trade.

ASSETS LIABILITIES MODELS - A LITERATURE REVIEW

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Abstract: *The main objective of this paper is to offer a review of assets-liabilities management models. The use of assets and liabilities management models has been rapidly developing since financial institutions require specific tools in order to minimize their risk exposure while maintaining a high level of profitability. Asset and liabilities management models were applied initially for companies and financial institutions but there are also models which can be applies within central banks or even at countries. Asset-liability management models are classified according to the period and variables specification in: single period static models, multi-period static models, single period stochastic models, multi-period stochastic models. Static models are deterministic models in which the variables are well defined and the links between the variables do not change during time. Dynamic models capture much better the financial market volatility, the correlations between assets classes and/or liabilities classes can change, also the variables used in these models can be described as probability functions with different values. The limits of static models are due to their inability to capture the dynamics of financial markets, the changes in the correlations between the various types of assets, also the treatment of the financial system is done in a purely deterministic system. The main disadvantage of dynamic models is their increasing complexity. There is a trade-off between model complexity and ease of use in the case of assets-liabilities models.*

Keywords: *bank assets-liabilities; literature review; financial crises; balance sheet.*

JEL classification: *C31; G21; G01.*

1. Introduction

Assets-liabilities management models (ALM) are used both within companies and financial institutions, lately assets-liabilities models where developed for countries (Animante, 2013), while (Alhumaidah, 2015) propose two ALM models for the central bank of Saudi Arabia. In the case of financial institutions the main objective of assets-liabilities management is the management of interest rate and liquidity risk (Novickytė & Petraitytė, 2014). ALM is a strategic planning tool that unifies various banking activities under a single department (ALCO) in order to identify and minimize the risks that may arise as a result of the activity or external shocks; the utility of ALM models for banks derive from the identification of potential problems and risk that effect the balance sheet and income (Novickytė & Petraitytė, 2014, p. 1084).
The type of models used in ALM can be classified according to the incorporation of random variables into stochastic or deterministic models (Zopounidis, Doumpos, &

Pardalos, 2010, p. 284), while another clasifficationcan be made according to the analyzed time period and the influence of the random variables in which case we have four categories (Stavros A Zenios & Ziemba, 2007):

- Single period static models;
- Multi-period static models;
- Single period stochastic models;
- Multi-period stochastic models.

By static models we understand the deterministic models in which the variables are well defined and the links between the variables do not change during the analyzed period. Dynamic models, on the other hand, capture the aspect of financial market variability, for e.g. changes in the correlations between assets / liabilities, and variables are described as probability functions and may have distinct values depending on market developments.

2. Literature review

2.1. Single period static models

Single period deterministic models are structured so that the portfolio's evolution is predictable for the investor, these models are focused (Romanyuk, 2010, p. 11) mainly on the use of duration and convexity risk measures. The duration ($D = -\frac{\partial P}{P \partial r}$) of a portfolio measures the time period in which the initial investment is being recovered, and at the same time the sensitivity of the portfolio P to changes in the interest rates r. While the convexity of a portfolio captures the changes in duration as a result of changes in interest rate.

The main methods based on the use of duration and sensitivity are (Romanyuk, 2010, p. 12):

- immunization strategy proposed by (Redington, 1952), the main advantage of this method is given by its simplicity, the main disadvantage of the immunization strategy is due to the fact that analyzing a single period does not capture the volatility existing in the financial markets;
- dedication method assumes that asset-generated cash flows are fully matched with liabilities cash-flows.
- GAP analysis, which involves the classification of resources and placements by maturity, aiming at correlating the maturity between assets/ liabilities.

Immunization (Redington, 1952) involves matching assets and liabilities depending on different maturities of interest rates, (De La Grandville, 2006) shows that the impact of portfolio duration and immunization differs from investor to investor according to the time horizon for which the investment is made.

Ventura and Pereira (Ventura Bravo & Pereira da Silva, 2006) uses an immunization technique augmented with a stochastic-process and found that immunization minimizes the interest rate risk, but the cost associated with this strategy are high due to the transaction cost.

Dedication as an ALM method involves the correlation of cash flows between assets and liabilities, while GAP analysis addresses the differences between maturities of assets and liabilities. The GAP analysis is applied to Indian banks by (Dash & Pathak, 2011) which notes that the level of liquidity and profitability is influenced by

the shareholder structure, with state-owned banks being more conservative in liquidity risk management, while private owned banks are more profitable.
While single period static models provide protection of the portfolio against minor fluctuations of financial markets (Rosen & Zenios, 2008, p. 21) the limits of portfolios building through these methods are:

- not using probabilities in specifying models, variables are considered static with predefined behavior ,
- single period static methods do not take into account the possibility of surpluses or deficits that can lead to the rebalancing of the portfolios.

In order to increase the efficiency of single period models a range of techniques have been proposed in order to overcome the limitations of the short time horizon analyzed and the deterministic aspect, (S A Zenios, 1995) discusses the positive impact of the immunization strategies of the balance sheet observing that the limitations of these methods became apparent with the increase of interest rate volatility. The author proposes the use of Monte Carlo simulations to augment the methods of immunization and portfolio dedication. (Monfort, 2009) proposes a model which uses risk measures, for e.g. by using Value of Risk in assets and liabilities management.
The limits of these static models are due to their inability to capture the dynamics of financial markets, the changes in the correlations between the various types of assets, also the treatment of the financial system is done in a purely deterministic system. The use of these short-term static methods should be complementary to the use of dynamic models.

2.2. Multi-period static models

Multi-period static models offer the possibility of making changes to the structure of assets and liabilities without, these changing can be of the structure/correlation of different types of assets/liabilities(Rosen & Zenios, 2008). Multi-period static models uses the same tools as annual static models (immunization, GAP analysis, dedication), plus the possibility to make changes in the structure of assets and liabilities at the end of each period, and they can incorporate changes in the variables used (Stavros A Zenios & Ziemba, 2007).
Since the 1960s linear programming models have been used for asset allocation decisions (Cohen & Hammer, 1967), the objectives of the functions being used were: maximizing the long-term value of the company, NPV of net income and the NPV of the liquidation value of the financial institution.
In the multi-period static models the most common algorithm is based on the linear programming, the canonical form of the linear programming model (Zopounidis et al., 2010) is:

$$\max \text{ z} = \sum r_i X_i - \sum c_j Y_j \tag{1}$$

where:
r_i – represent the income from the asset X_i,
c_i – represents the cost of liability Y_i ,
and z (profit) is the maximized function expressed as the difference between income and expense, the objective function being maximized taking into account some restrictions.
Due to the fact that linear programming cannot incorporate more than one objective, if the financial institutions have, besides the main objective for e.g. maximization of

revenues, other secondary objectives such as (Zopounidis et al., 2010, p. 285): risk minimization, market share, deposit rates, the level of loans granted, exposure to a particular sector, then the multi-objective programming can be used.
The linear multi-objective model developed by (Zopounidis et al., 2010, p. 296) for financial institutions seeks to minimize deviations from the main objectives provided that the imposed restrictions are respected:

$$\min \mathrm{z} = f(d_i^+ + d_i^-) \tag{2}$$

So that

$$\sum_{j=1}^{n} c_{mj} x_j \leq \Theta_m, \forall m = 1, \cdots, M(\text{constraint}) \tag{3}$$

$$\sum_{j=1}^{n} a_{ij} x_j = b_i + d_i^+ - d_i^-, \forall i = 1, \cdots, I(\text{objective}) \tag{4}$$

$$x_j, d_i^+, d_i^- \geq 0 \tag{5}$$

In this case the objective function (Zopounidis et al., 2010, p. 297) is:

$$\left\{ \begin{array}{l} \{P_1 \left[\sum_{m=1}^{M} W_{1m}(d_m^+, d_m^-)\right], \quad P_2 \left[\sum_{i=1}^{I} W_{2i}(d_i^+, d_i^-)\right] \quad \ldots \\ \quad P_\varphi \left[\sum_{i=1}^{I} W_{\varphi i}(d_i^+, d_i^-)\right] \end{array} \right\} \tag{6}$$

Where P_φ are the priority levels with $P_1 > P_2 > \cdots > P_\varphi$, and $W_{\varphi i}$ is a weighted linear function of the constraints' deviation and theirr priority level.
(Kosmidou & Zopounidis, 2004) propose a model with a main objective and various secondary objectives like: liquidity, profitability and risk level. Due to the fact that the various objectives can yield contradictory results, the authors suggest the use of a single main objective, and for the other objectives they should be classified according to their importance.
(Tektas, Nur Ozkan-Gunay, & Gunay, 2005) applies the linear multi-objective model to two banks in Turkey, the objectives being maximizing: liquidity, revenue, capital adequacy or market share; while the constraints of the equation's system are legal and regulatory framework.

2.3. Single period stochastic models

The starting point of the single period dynamic models is Markowitz's seminal work (Markowitz, 1952) "Portfolio Selection". In this paper he proposed how to determine efficient portfolios so that for a given profitability to offer lower risk or at a predetermined risk level how to provide the highest return.
(Markowitz, 1952) uses a vector that includes the portfolio of assets $w = [w_1, w_2, \ldots, w_N]'$, $\mu = [\mu_1, \mu_2, \ldots, \mu_N]'$ represent the expected return on asset returns, $\mu_p = w'\mu$ the expected return on portfolio profitability, $\Sigma : N \times N$ the covariance matrix of returns and $\sigma_p^2 = w'\Sigma w$ portfolio variance. In this case the return of portfolio is maximized μ_p given a σ_p^2 some level of risk.
Within the mean-variance model we can combine the profitability and the variance in order to obtain a single objective function:

$$\max \mathrm{f(w)} = c\mu_p - \frac{\sigma_p^2}{2} \tag{7}$$

Based on the mean-variance analysis for asset portfolios (Sharpe & Tint, 1990) extend the analysis of liabilities using the criterion of the correlation between assets

and liabilities and (S A Zenios, 1995) extends the mean-variance analysis from portfolios that follow normal distribution to portofolios governed by asymmetric/non-normal distribution laws.

Stochastic ALM models take into account the notion of risk, the risk in this case influencing investors' decision at the beginning and at the end of the period for most of the annual stochastic models. The most used (Romanyuk, 2010, p. 12) measures of risk are:

- absolute deviation, $|w - E(w)|$, where w represents the value of the investment and E(*w*) the expected value of the investment;
- semi-variance, $(min\,[(w - E(w)), 0])^2$, which takes into account the lower than average returns, is a measure of asymmetric risk;
- downside formula, $(min\,[(w - w^*), 0])^2$, in this case the threshold w^* is the minimum return of the investor;
- CVaR, $CVaR_\alpha = \frac{1}{1-\alpha}\int_0^{1-\alpha} VaR_\gamma(X)d_\gamma$, which measures average losses that are greater than or equal to VaR.

2.4. Multi period stochastic models

The most widespread models of assets-liabilities management are the multi-period stochastic models, which model the dynamic evolution of resources and liabilities over time, following different distribution functions. (Rosen & Zenios, 2008) argue that these models best capture the need to re-evaluate the position of the portfolio and make new decisions on the most appropriate allocation due to changes in the initial conditions.

Within the multi-period stochastic models we find the following types of methods used (Romanyuk, 2010, p. 13):

- decision rules, this method involves portfolios allocation strategies for each period, between the periods there is no change in the portfolio; these types of strategies imply that at the end of the period the portfolio manager will make the necessary adjustments, this strategy is optimal for long-term investors and when there are a reduced number of decision variables.
- Scenario analysis/simulation, including Basel III, focuses on the analysis of scenarios in stress tests. The practical difficulty of this method is given by the large number of possible scenarios and by the probabilities associated with each scenario;
- Stochastic optimal control involves the use of Markov processes in defining state variables and the transition from one state to the next. It is similar to scenario analysis, but because it uses numerous variables the complexity of modeling increases exponentially which raises serious problems in solving them.
- Stochastic programming, in this case the states are described as discrete; it's one of the most popular technique used in ALM modeling due to the fact that can encompass many decision variables that capture various goals and constraints, can also incorporate scenarios with low probabilities that can have a strong impact and the investment decisions may be reversible and the analysis extends over long periods of time.

Sometimes in practice a combination of these methods are used, (Boender, 1997) employ a scenario analysis and after the identification of the best strategy an

optimization method is used; (Consigli & Dempster, 1998) propose the use of the CALM asset-liabilities management model, which is an a multi-period dynamic model using stochastic programming

(Chiu & Li, 2006) uses a stochastic optimal control to achieve the assets-liabilities management over long periods of time, the authors note that in markets without transaction costs the optimal behavior is to rebalance the portfolio as often as necessary, also the discrepancy between the variance in assets and liabilities has a big influence on portfolios managers behavior.

The Russell-Yasuda Kasai model (Carino et al., 1994) is a model specifically developed for the Japanese market involving the use of multi-period stochastic programming, the objective of the model is to increase the portfolio's profitability without affecting the long-term development of the portfolio; the Russel-Yasuda Kasai model includes multiple objectives of the financial institution and takes into account the restrictions imposed by regulators. The results of this model were extraordinary, in the first two years of the Russel-Yasuda Kasai implementation the profitability was 4.2% higher than in the previous period.

The Russel-Yasuda Kasai model uses the scenario tree method, which assumes that decisions are taken at each stage and each moment of each scenario is associated with a probability. The Russell-Yasuda Kasai model (Carino et al., 1994, p. 48) □ maximizes the expected portfolio value at the end of the T planning period, taking into account the penalties accumulated as a result of non-compliance, Russell-Yasuda Kasai model is defined as:

$$\max \mathrm{E}\left[V_t - \sum_{t=1}^{T} c_t(w_t)\right] \tag{8}$$

Where $\sum_n X_{nt} - V_t = 0$ are the budgetary constraints, $t = 0, 1, \ldots, T$ represent time periods , V_t value of the asset portfolio, c_t is the cost function, w_t captures the decrease in revenue and X_{nt} represents the market value of asset *n* at time *t.*

In order to establish the financial planning strategies within the banks (Kosmidou & Zopounidis, 2004) propose the use a stochastic model, the proposed model uses the information available in the financial reports of the year $t-1$ to propose strategies for the management of resources and placements during $t+1$. The specific objectives that can be incorporated into this model are: liquidity, profitability, risk level, model proposed by (Kosmidou & Zopounidis, 2004, p. 90) taking the following form:

$$\min \mathrm{z} = \sum_P p_k(d_k^+ + d_k^-) \tag{9}$$

with the following restrictions:

$$LB'_X \leq X' \leq UB_{X'} \tag{10}$$

$$LB'_Y \leq Y' \leq UB_{Y'} \tag{11}$$

$$\sum_{i=1}^{n} X_i = \sum_{j=1}^{m} Y_j \tag{12}$$

$$\sum_{j \in \Pi_{Y''}} Y_j - a \sum_{i \in E_{X''}} X_i = 0 \tag{13}$$

$$\sum_{j \in \Pi_1} Y_j - \sum_{i \in E} w_i X_i - d_s^+ + d_s^- = k_1 \tag{14}$$

$$\sum_{i \in E_x} X_i - k_2 \sum_{j \in \Pi_k} Y_j + d_l^- - d_l^+ = 0 \tag{15}$$

$$\sum_{i=1}^{n} R_i^X X_i - \sum_{j=1}^{m} R_j^Y Y_j - d_r^+ + d_r^- = k_3 \tag{16}$$

$$\sum_{i \in E_p} X_i + d_p^- - d_p^+ = l_p, \forall p \quad (17)$$

$$\sum_{i \in \Pi_p} Y_j + d_p^- - d_p^+ = l_p, \forall p \quad (18)$$

$$X_i, Y_i, d_k^+, d_k^- \geq 0, \quad \forall i = 1, \ldots, n, j = 1, \ldots, m, k \in P \quad (19)$$

With X_i representing the assets *i*, Y_j liabilities, $\mathrm{LB}_{X'}(LB_{Y'})$ is the minimum level of asset X (liability Y), $\mathrm{UB}_{X'}(UB_{Y'})$ is the maximum level of asset X (liability Y), $E_{X''}$ $(E_{Y''})$ represents the specific category of assets (liabilities), k_1 (k_2) capital adequacy (respectively liquidity adequacy), k_3 is the expected value of return, P is the set of all objectives.

By using an objective driven model (Kosmidou & Zopounidis, 2004) show that we can quantify: the constraints imposed by supervisor authority, the structural constraints imposed by the equality of assets on the one hand and the liabilities / capital on the other, the specific objectives of the financial institution (structure of assets and liabilities, solvency, liquidity, efficiency, deposit / credit level); The model also incorporates credit risk, market risk, interest rate risk, liquidity risk, country risk. The Prometeia model, developed by (Consiglio et al., 2007) which is based on the use of dynamic models with scenarios, is applied on an Italian insurance company, the authors note that using dynamic models with multiple objective can eliminate some inefficiencies and improve the insurer's financial situation. When analyzing the strategic allocation of assets with high risk liabilities (Hoevenaars, Molenaar, Schotman, & Steenkamp, 2008) notes that the investment horizon, the diversification of risk, the evolution of inflation and interest rates, the covariance between assets and liabilities have a significant impact on profitability.

In order to capture the relationship between assets and liabilities (Decamps, De Schepper, & Goovaerts, 2009) uses a Brownian geometric movement and the variability of cash-flows is modeled using spectral decomposition. (Geyer, Hanke, & Weissensteiner, 2010) show that scenario tree models can quickly become intractabile, using methods for reducing scenarios is not feasible for financial variables, concluding that the level of complexity of these models cannot be substantially reduced.

The ALM models are used not only on companies and financial institution but even for countries, (Das, Lu, Papaioannou, & Petrova, 2012) discusses the application of sovereign asset liability management (SALM) which has as the main objective the economic sustainability of the countries by increasing the economic diversification, the export level, the reduction of the import dependence. The model's constraints are: the degree of indebtedness, the structure and level of assets held, the inflation and interest rate, market development, institutional efficiency, exchange rate, price of prices, risk appetite.

3. Conclusion

The assumptions underlying the quantification of the relationships between variables used in assets-liabilities management can undergo sudden changes, especially in the context of shocks such as financial crises (Bae, Kim, & Mulvey, 2014), so the correct specification of models is particularly important. The optimization models presented provide the optimal solutions depending on the variables chosen and in which way we quantify their evolution, but it is often possible that the assumptions are not formulated correctly. However, we may be in a situation

where the assumptions we have built optimization models are wrong, poorly specified, or do not include important variables. The large number of models developed by researchers offer the possibility of reducing the risk of model misspecification and can mitigate the main risk which effect financial institutions.

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SECTION: *INTERNATIONAL BUSINESS, EUROPEAN INTEGRATION, FOREIGN LANGUAGES AND BUSINESS ENVIRONMENT*

PRODUCTIVITY PROSOPOPOEIA IN GCC'S COUNTRIES: A GROWTH ACCOUNTING PERSPECTIVE

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Abstract: *Through the past 16 years, the GCC region, testified swift changes such demographic, economic, and societal. GCC countries have taken important strides in economic development over the past, but it faces a number of challenges in the light of developments in the changing of the global economic environment, which affect the path of sustainable economic growth in the GCC countries, that rely heavily on oil. Since 2001, the GCC's GDP has risen by an annual average of 11.28% and by a cumulative total of 346.39%. Meantime, the population has increased from 30.80 million in 2001 to 51.50 million in 2014, as same period the annual average increase of gross capital grown formation by 13.41%, that accumulative total of 482%. This study aimed to outlook the productivity tendency in two dimensions as a whole country and labor productivity trend among GCC member countries through using growth accounting model. The question of this study, diversification strategies adopted by them, especially after declining of oil prices in 1998-1999, resulted seemed to have no impact on productivity performance throughout examined inputs. GCC member's countries have not achieved optimal productivity at the aggregate production level, or even at the grade of labor productivity not to all members, but with some exceptions. The productivity performance was moving in negative trend in all members specifically from 2001-2014. Unlike, the period between 2010-2014, where just the UAE achieved positive productivity growth. The contribution growth share of labor inputs was dominated from 2001-2014, unlike the spot in the SAU, where was affected mostly by the gross capital formation. In the UAE, the labor productivity per capita achieved positive growth from 2001-2014 and 2010-2014, where had the similar in the BHN and KWT just the period from 2010-2014. The performance of TFP was moving in negative direction specifically between 2002-2010.*

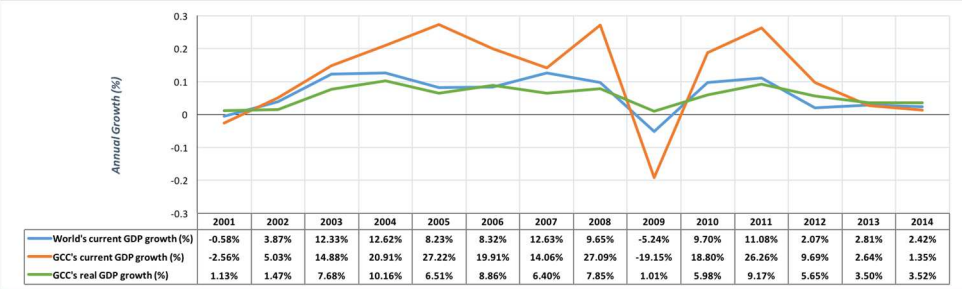
Keywords: *Productivity growth; labor productivity; TFP; growth accounting; GCC.*

JEL classification: *C23; E23; E24.*

1. Introduction

The Gulf Corporation Council (GCC) states include Saudi Arabia (SAU), Kuwait (KWT, Oman (OMN), Bahrain (BHN), Qatar (QTR), and United Arab Emirates (UAE). The economies of the GCC characterized by similarity components were largely dependent on oil production and export as a key resource for financing development operations (Olah & Pakurár, 2013). During the period 2001-2014the GCC nations have passed varying periods of growth rates, depending on the developments in the global economy due to the relevance of those economies to the outside world largely in terms of the reflection of the changes in world oil prices. That are associated with

knives recovery or recession achieved by advanced economies, as those countries with the primary consumer of petroleum produced in the GCC countries.
GCC countries have achieved during the period 2001 to 2014 high growth rates in real GDP as a result to 1.13% in 2001, raising to 10.16% in 2004, until it arrived in 2008 to 7.85 % as a consequence of higher recorded levels of oil prices until the beginning of the second half of that year, where there were signs of the global financial crisis, which affected most of the developed economies (Figure 1). And thus moved its influence to most of the economies in the nations of the world, including the GCC's countries.
By virtue of the GCC has connection to the global economic system as indicated in Figure 1, that leading to a kind of recession included all the Gulf economies, where real annual growth rate reached in 2009 to 1.01%, as a result of the decline in global demand for oil and thus lower prices, which has affected the decline in oil revenues. As an outcome of fiscal and monetary policies and procedures support taken by the governments of the GCC countries, these have been able to achieve the best growth rates in 2011 that recorded 9.17%.



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
World's current GDP growth (%)	-0.58%	3.87%	12.33%	12.62%	8.23%	8.32%	12.63%	9.65%	-5.24%	9.70%	11.08%	2.07%	2.81%	2.42%
GCC's current GDP growth (%)	-2.56%	5.03%	14.88%	20.91%	27.22%	19.91%	14.06%	27.09%	-19.15%	18.80%	26.26%	9.69%	2.64%	1.35%
GCC's real GDP growth (%)	1.13%	1.47%	7.68%	10.16%	6.51%	8.86%	6.40%	7.85%	1.01%	5.98%	9.17%	5.65%	3.50%	3.52%

Figure 1. Annual growth rate of GDP from (2001-2014).
Source: (World, 2017).

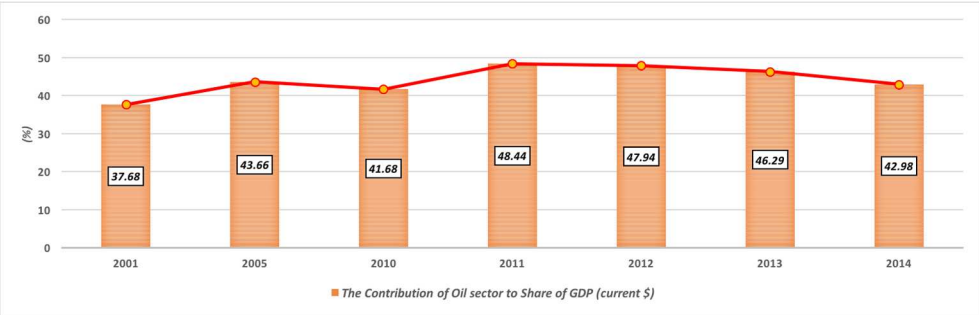


Figure 2. The contribution of oil sector to GDP's share for 2001-2014 for GCC's countries.
Source: GCC statistical center (GCC-STAT, 2017).

GCC countries have taken significant strides in economic development over the past decades but it faces a number of challenges in the light of developments in the changing of global economic environment, which affect the path of sustainable economic growth in the GCC countries relying heavily on oil commodity that suffered setbacks price in the global market during the last years, where oil has lost more

than 50% of its market price. As illustrated in Figure 2, the oil sector is considered the most effective sector in moving the Gulf economies and economic growth rates, which constitute over 40% of the GDP of the GCC countries.
In front of these challenges, the importance of economic diversification was toning up the industrial basis of production by supporting the non-oil exports, and improving the competitiveness of the Gulf economies. Thence, it confirmed future economic visions in the GCC countries on the need to adopt policies aimed at diversifying the economy and freeing it from the domination of a single sector and rely on more than a single sector for growth (Table 1). Especially in the wake of the decline in oil prices in 1998-1999. And attest to all the plans that have been developed in the recent period to diversify economic activity and increase citizens' participation in the workforce. It is worth mentioning that most of the plans emphasize the need to increase productivity and competitiveness.

Table 1. Development visions of GCC's member countries.

	Country	Development vision
1	United Arab Emirates	UAE Vision 2021
2	Bahrain	Economic Vision 2030
3	Kuwait	Kuwait Vision 2035
4	Qatar	Qatar National Vision 2030
5	Oman	Oman Future Vision 2040
6	Saudi Arabia	Saudi Vision 2030

Source: (Cabinet, 2017; BHN, 2017; KW, 2017; QNA, 2017; SCP, 2017; SAU, 2017).

Thus, the question of this study, as long as the overall development plans for the GCC countries, that included a part of strategy to increase productivity and competitiveness. The question: Did the GCC countries achieve an increase in productivity and in particular between the time period of 2001-2014? Hence, the aim of this research is to analyze the productivity in the whole economy as labor productivity between GCC member countries, to see whether the diversification strategies has made any impact in the productivity as witnessed in remarkable growth in others macro variables such country's GDP, population, and gross capital formation from 2001-2014. Respectively, this study is divided in sections, where the first section describes the GCC's GDP, population, and gross capital formation, the literature review of the production function is analyzed in the second section, data and methodology in the third section, and empirical analysis and results is included in the last section.

2. GCC's GDP Structure

The current GDP of total GCC countries grew an annual average growth rate of 11.28% or total cumulative 346.39% from 2001 to 2014. According to the Gulf Corporation Council, Statistics Center (GCC-Stat), the total output achieved at current prices for the Gulf States growth rate of 345% in 2014 compared to 2001, arising from $367 billion in 2001 to $1635 billion in 2014, an increase of $1268 billion. It is worth mentioning that the GDP at current prices lost billion dollars after the sharp decline that occurred in 2009, where the rate of decline in GDP was -19.15% (Figure 1).

Saudi Arabia's GDP total for the GCC in 2014 contributed 46%, an output of $754 billion, followed by the UAE with a contribution amounted to a quarter of the GDP of the GCC countries and the estimated value of $402 billion, and Qatar came in the third place with a contribution rate of 13% and an output capacity of $206 billion. And dissolved the State of Kuwait in fourth place with a contribution of 10% with an output capacity of $163 billion. While Oman and Bahrain contributed by 5% and 2.0% with the estimated value of $81 billion and $33 billion respectively (Figure 3).

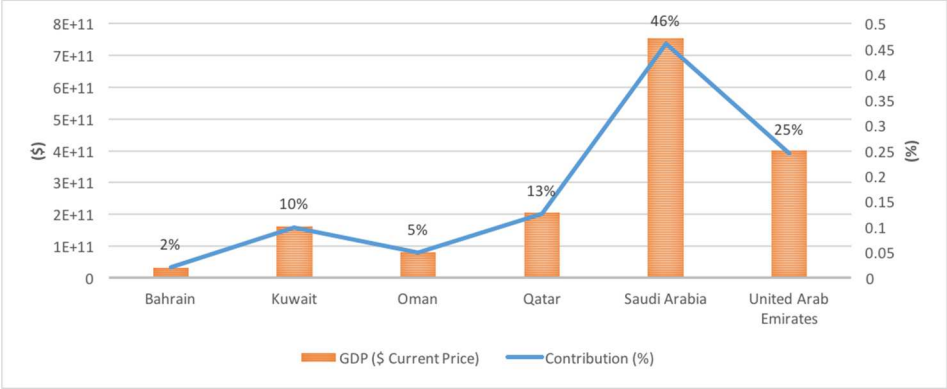


Figure 3. Contribution (%) at total GCC's GDP at current prices ($) for year 2014. Source: (GCC-STAT 2017).

GDP per capita is used to assess the level of economic development, the strength of the economy, and evaluate the economic performance of the country, where its reflecting the change in the output value of goods and services. Also, used to gauge the wealth of nations and improve the level of per capita income (Fleurbaey & Blanchet, 2013). As illustrated in (Table 2), that described the income per capita for GCC's member countries for selected years between (2001-2014), indicated an increase during the period (2001-2014) more than doubled in all GCC's countries except in the UAE. According to IMF, World Bank, and CIA, that Qatar ranked the top ten globally countries in per capita GDP.

Table 2. GDP per capita (Current US $) for period from (2001-2014)

	2001	2005	2010	2011	2013	2014	CHANGE (%)
BHN	12,917	18,418	20,386	22,034	24,114	24,515	90%
KWT	17,533	35,694	37,725	47,551	48,463	43,332	147%
OMN	8,560	12,399	19,921	21,164	20,205	19,130	123%
QTR	28,577	53,207	70,870	88,051	94,574	94,944	232%
SAU	8,316	13,274	18,754	23,256	24,646	24,406	193%
UAE	32,106	40,299	34,342	39,901	42,987	44,239	38%

Source: (World, 2017).

The oil sector remains the main driver in the leadership of economic activities. Every bit was its contribution to the GDP in the GCC 42% in the year 2014 compared to

2013, where it was 46% according to (Figure 2). In contrast, the development of non-oil activity rate rose in GDP for the GCC countries in the 2014 year rose 8.53% from a year earlier, as the value added of $949 billion in 2014, compared to $874 billion in 2013. Where, the accumulated growth rate of non-oil sectors from 2001-2014, witnessed high increased in Qatar comparing to other states according to (see Table 3).

Table 3. Accumulated growth rate of non-oil sectors (2001-2014).

	BHN	KWT	OMN	QTR	SAU	UAE
Accumulated growth rate (2001-2014)	264%	240%	294%	1284%	268%	238%

Source: (GCC-STAT 2017).

The mining and quarrying sector's share of each country's GDP as illustrated in Table 4, showed that Qatar and Kuwait, the mining and quarrying production sector contributed more than half of GDP as average figure from 2001-2014. While, state of Bahrain shared about 22.98%, followed by UAE by 32.59%. In Oman and Saudi Arabia average figures were 46.18% and 42.54%, respectively.

Table 4. Mining and quarrying sector average contribution share (%) to GDP from 2001 to 2014.

Country	Average (%) from 2001-2014
BHN	22.986
KWT	53.262
OMN	46.818
QTR	54.581
SAU	42.540
UAE	32.599
GCC	42.131

Source: (GCC-STAT, 2017).

A. Population Structure

In term of the total population in GCC countries (Table 5), statistics show a remarkable growth from 2001-2014. The growth with the increasing intensity of economic activity in the GCC countries to reach 30.8 million in 2001. As a result of the evolution in the volume of economic activity, population growth continued to increase until the population of the GCC countries in 2014 amounted to a total of 50.51 million people, an increase of 67.21% over the 14 years. According to (Table 5), Qatar and UAE had a remarkable increased in population for each from 2001 to 2014 which were 256% and 182% respectively. While, in Saudi Arabia just increased as 40% from 2001 to 2014.

In parallel, the labor force number was 11.04 million in 2001. In 2014, the number jumps to 24.99 million, which is equivalent to growth rate of 126.28% from 2001 to 2014. On the other hand, the number of engaged workers in 2001 was 10.59 million, which has risen to 17.2 million in 2007. The number rises to 23.83 million workers in 2014, which the growth rate was 125.11% from 2001-2014. In terms of group ages, the total population ages from 15-64 was recorded 19.44 million people in the year 2001, and jumped to 37.78 million in year 2014, which an increase of 94.34%.

Table 5. Total populations of GCC's member countries (2001 and 2014).

	UAE	SAU	BHN	QTR	KWT	OMN	TOTAL
2001	3.22	22.01	0.69	0.61	1.99	2.27	30.80
2014	9.09	30.89	1.36	2.17	3.75	4.24	51.50
CHANGE (%)	182	40	97	256	88	87	67
- (Numbers in millions)							

Source: (World 2017).

Figure 4 describes the percentage of population group ages (15-64), labor force, and engaged workers for each member of GCC countries for year 2001 and 2014. As indicated that the total numbers of engaged workers were higher in UAE and Qatar, which 67% and 73%, respectively, of total population for year 2014. On other side, the engaged workers were lower in Saudi Arabia in year 2014 was 37% of total population and even in year 2001 was 29%. While, the population ages (15-64) indicated for most of the members a higher share than 70% especially for the year 2014, which represents the structure of populations for GCC's countries that could be involved in potential active workers.

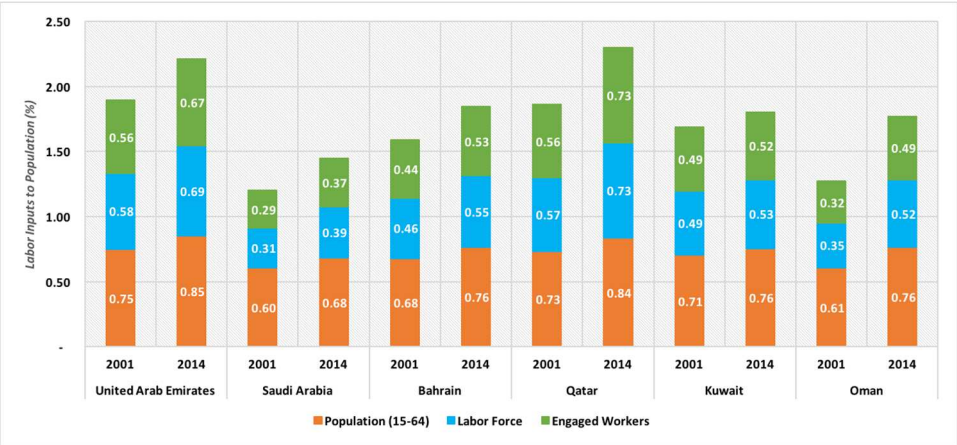


Figure 4. Percentage (%) labor inputs to populations
Source: (World 2017).

B. Gross Capital Formation (GCF)

GCC's countries invested hugely as a percentage of their surplus or outputs in capital stock. Since 2001, the annual average growth rate of GCC's gross capital formation grown 13.41% and by total accumulative 482.29% to year 2014. In year 2001, the GCF has valued $72 trillion and $429 trillion in 2014, rose 429% compared to 162% in the world according to Figure 5.

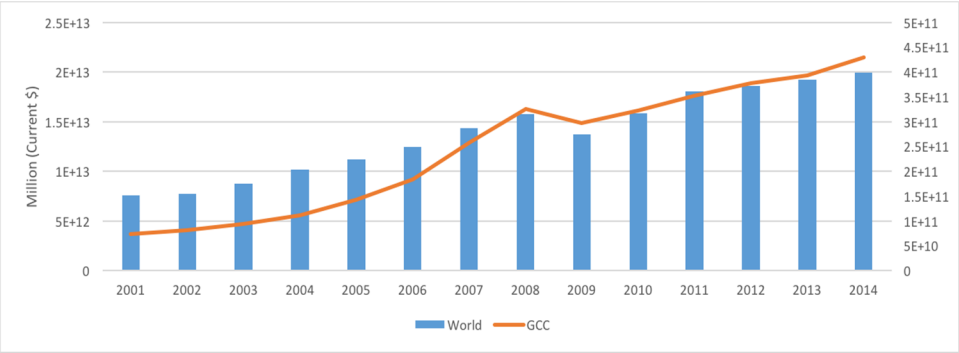


Figure 5. Gross capital formation (2001-2014)
Source: (World 2017).

The change of growth of GCF from 2001-2014, were 847%, 714%, 621%, 1180%, 431%, and 313% for Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and UAE, respectively. The previous figures indicate that the state of Qatar was the highest in growth percentage from 2001 to 2014 about 1180%, while in the UAE was 313%, which was the lowest (Figure 6). On other hand, and according to Figure 6, GCF's trend showed the Saudi Arabia the UAE, and Qatar had more valued compared to Bahrain and Oman.

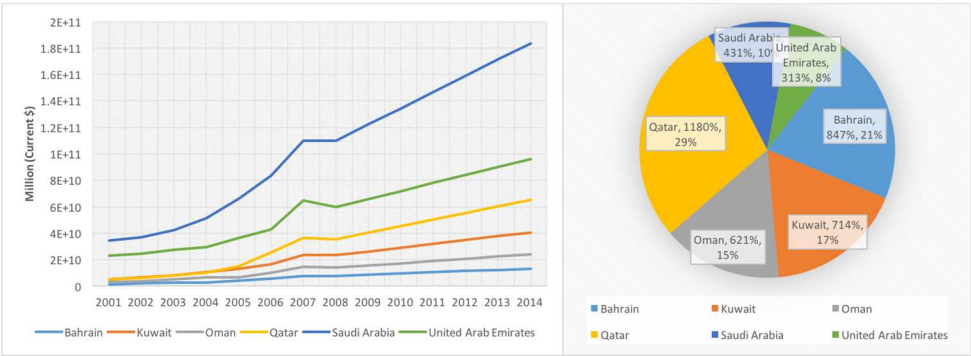


Figure 6. GCF's dollar ($) valued trend and moving growth rate.
Source: (World 2017).

C. The Production Function and Factors Input.

The productivity of any nations relies on many things such as the capital stock, the level of skills and education level of the worker, the technology used the efficiency due to good allocation and utilization of capital and labor, and so forth (Miles, et al., 2012). Following this suggests which ultimately thinking of GDP that produced with three factor inputs: capital, labor, and total factor productivity (TFP). These three inputs are combined to produced output. The relationship of inputs and output is addressed in Figure 7:

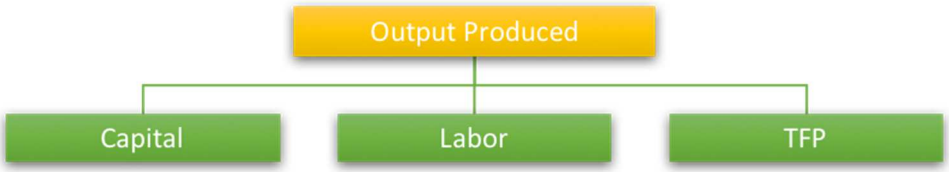


Figure 7. The production function
Source: (Miles & Scott, 2008).

2.1 Capital Stock

Capital stock is defined as durable assets that serves to generate output of goods and services, as for example the buildings and machines used in production of GDP. The capital stock is divided into three components: residential buildings, nonresidential buildings, and equipment (Miles, et al., 2012). The accumulation of capital stock happens over time, which is much larger than the flow of GDP produced within a period of one year. Mostly, the ratio of capital to GDP in OECD countries ranges between 2 and 3 (Miles & Scott, 2008). The capital takes the shape of a stock of goods and services used in the production. It includes:

- The circulating capital: inventory of goods and services destroyed or transformed in the course of the production.
- The fixed capital: inventory of durable capital goods, equipment, building, and software used more than a year in the process of production.

2.2 Labor

Labor represents the most significant factor of economic development. Especially in the past (in the classic school) it was considered an essential input of production (Harbison, 1973) contributing to the production of goods and services. Training and education of workers are the most welling investment that help to advance the productivity of the workforce (Barro, et al., 1991). Another perspective about labor is that economic growth does not only mean an increase in the gross domestic product (GDP), but a consequent increase in real per capita income, in the sense that growth to be higher than the population growth rate (Barr, 1996). Labor force as part of the population is defined as working age between 15 and 64 years old. The labor force is made up of employed and unemployed persons.

2.3 Total Factor Productivity (TFP)

TFP is considered as a source for long-run growth that measures the technological change which has increased due to technological inventions or improvements. According to Solow (1956), TFP is the most significant elements needed to achieve sustained economic growth in the long term. As called “Solow residual”, that can only be explicated by the "technical progress" in the broad sense, including essentially technology, innovations, skills, knowledge, training, etc. The measuring for TFP cannot calculated directly but it can be obtained by deducting output from inputs, or calculates the ratio of output to inputs.

In conclusion, three inputs are primarily associated with production to increase the productivity. But, raising the production of ordinary working hours by labor not the beneficial factor to elevate the productivity as labor input factor. The solution to increase the productivity is by increase the capital accumulation and improvement

in multifactor productivity (Miles, et al., 2012). According to economic growth model such as AK growth model, which pronounced the country can achieve sustained growth with an increasing in capital deepening that relies on saving rate without technical progress (Acemoglu, 2008).

3. Data and Methodology

The appropriate function of growth accounting techniques depends on the availability of reliable statistics on output and inputs. The growth accounting is a quantitative approach for understanding and assessing the contributions through the production inputs (capital, labor, and TFP), and will be used as quantitative and descriptive method in this study (McGraw-Hill 2013). The source of data is at most gathered and composed by the World Bank, Country databank and GCC Statistical Center (GCC-Stat).

As previously noted and pointed out, that the source of growth are the capital, labor, and total factor productivity (TFP). And can determine the percentage or the sum of the contribution of each of the three components of the production using the simple neoclassical Cobb-Douglas production function referred to the below equation:

$$\mathrm{Y_t = A_t K_t^{\alpha} L_t^{1-a}} \qquad (1)$$

Where [Y] represents the output (GDP), [K] represents the capital accumulation stock, [L] is the human capital stock, [A] denoted as technology progress impact on productivity without affect by inputs (labor and capital) such improvement in production processes, innovations, institution's practices and management, and so forth. The study takes the constant return to scale which [a] is equal 1/3 in proportion of capital and human inputs, and [t] indicates the period of time.

The total figure of active workers, mostly not available for some nations. Therefore, the researcher used approach to generate the total engaged workers from available world bank data and following to (Molnár & Máté, 2016). Known that The labor force (LF) is two parts that amount equals the employed and unemployed people. And, the labor [L] which is the total engaged workers should be equal the LF minus the number of unemployed persons which expires in the equation $[L] = LF - U$, where [U] denote the number of unemployed individuals, that estimated with $[U] = u * LF$, where [u] equaled the unemployment ratio. Put another way, $[L_t] = LF_t * (1 - u_t)$. Moreover, the labor capital can be calculated with $L_t = p_t * a_t * P_t * (1 - u_t)^{1-a}$, where [p] is participation rate that estimated with $[p] = \mathrm{LF}/N$, where [N] represented the working population in the age group of (15-64 years old), and [a] as a sample of the active to total population ratio that calculated with $[a] = N/P$, where [P] sampled the total population. Consequently, the production function equation (1) can be written as:

$$Y_t = A_t K_t^a (p_t a_t P_t (1 - u_t))^{1-a} \qquad (2)$$

From the last equation (2) we rewrite the equation in logarithm to indicate in log-liner form as follow:

$$lnY_t = lnA_t + a\ lnK_t + (1-a)lnp_t + (1-a)lna_t + (1-a)u_t \qquad (3)$$

With regard to time, and differentiations of equation (3), were typified to the changes in logarithm of GDP [Y] as productivity performance and its contribution inputs denoted with K, L, and A. And, labor productivity [y], can be approximated by dividing each side of the equation (2) to [P], as written in equation (4), where labor productivity expressed as [gy], that indicated the changes in GDP per capita, capital productivity per labor as [gk], and [gA] as TFP per labor. The purpose of labor productivity estimation to indicate was how much average value-add that generated by each employed person.

$$\mathrm{y} = \mathrm{A_t K_t^a (p_t a_t (1-u_t))^{1-a}} \qquad (4)$$

As used in this study a time-series analysis from 2001 to 2014, for GCC member's countries, the model used to calculate the contribution of capital, labor, and TFP in the whole economy and average value-added per capita manner. The data for variables have obtained from World Bank Countries Database from 2001-2014. As described the GDP (constant LCU), gross capital formation (constant LCU), and labor (total population, total population ages (15-64), total labor force, and total unemployment % of labor force).

4. Results of a Growth Accounting Exercise.

Figure 8 shows the output and TFP movement tendency for GCC's countries from 2001-2014 and clearly indicate the similarities between these countries due to movement of those two variables. In general, TFP movement trend fluctuated mostly in negative side specifically between 2002 and 2010 beside other spots. On the other side, the output trends explained by real GDP showed mostly hard fluctuations but in positive side, unless in the year 2009 due to the world financial crisis. It is worth mentioning here that Saudi Arabia seemed to be still in positive side, even in the year 2009, although growth rate declined from 8% in 2008 to only 2% in the year 2009.

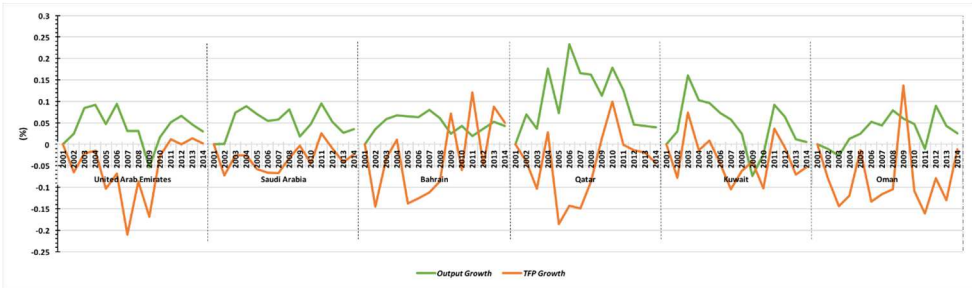


Figure 8. Output and TFP growth for members of GCC region from 2001-2014
Source: (World 2017).

In conclusion, these countries need to focus on improvement in technology, and innovations. Also, it can be stated that oil prices had more impact on the turnout of these nations suggesting the need to diversify their incomes and reevaluate the diversification strategies because their productivity were indicating poor performance as next explained.
In Table 6 that describes in average of the 5 years broken periods and a period of 14 years the annual average growth rates of testing variables and a share of growth of inputs (capital, labor, and TFP).

Table 6. Analysis descriptions of growth accounting exercise.

	Average Annual Growth Rates				**Share of Growth Due to:**		
UAE	Y	K	L	A	K	L	A
2001-2014	4.0%	9.0%	10.6%	-6.1%	67%	184%	-150%
2001-2005	6.7%	6.9%	10.1%	-2.5%	31%	106%	-37%
2005-2010	1.9%	10.8%	13.9%	-11.1%	174%	523%	-598%
2010-2014	5.0%	8.9%	2.8%	0.3%	54%	40%	6%
SAU	Y	K	L	A	K	L	A
2001-2014	5.8%	15.5%	4.3%	-1.9%	81%	52%	-33%
2001-2005	6.3%	16.3%	5.0%	-2.1%	78%	56%	-33%
2005-2010	5.3%	17.7%	3.9%	-2.7%	101%	51%	-52%
2010-2014	5.0%	6.5%	4.9%	-0.4%	39%	69%	-8%
BHN	Y	K	L	A	K	L	A
2001-2014	5.1%	9.3%	7.7%	-3.1%	55%	105%	-60%
2001-2005	5.8%	24.0%	6.3%	-5.8%	124%	77%	-101%
2005-2010	5.5%	8.2%	11.0%	-4.7%	45%	142%	-87%
2010-2014	3.9%	-3.2%	1.1%	4.1%	-24%	20%	104%
QTR	Y	K	L	A	K	L	A
2001-2014	12.8%	20.0%	13.9%	-2.9%	47%	76%	-22%
2001-2005	9.2%	26.5%	9.4%	-5.3%	86%	71%	-58%
2005-2010	16.4%	18.4%	19.3%	-2.6%	34%	82%	-16%
2010-2014	6.0%	11.6%	4.7%	-0.8%	58%	55%	-14%
KWT	Y	K	L	A	K	L	A
2001-2014	4.4%	11.7%	5.6%	-3.0%	79%	88%	-67%
2001-2005	10.4%	24.6%	3.3%	0.7%	71%	22%	7%
2005-2010	1.0%	7.7%	7.7%	-6.0%	236%	481%	-617%
2010-2014	4.2%	7.1%	5.6%	-1.9%	50%	94%	-44%
OMN	Y	K	L	A	K	L	A
2001-2014	3.9%	14.6%	8.0%	-6.1%	113%	143%	-155%
2001-2005	-0.2%	19.7%	4.0%	-8.8%	3786%	-1785%	5671%
2005-2010	5.8%	15.3%	6.8%	-3.5%	79%	82%	-61%
2010-2014	4.2%	9.7%	13.7%	-8.3%	69%	227%	-195%

Source: Own calculation based on World Bank Database.

The annual average growth rate was 4.0% in the UAE, 5.8% in SAU, 5.1% in BHN, 12.8% in QTR, 4.4% in KWT, and 3.9% in OMN. The state of QTR was the higher recorder figure for the period from 2001-2014. On the other side, the average growth

rate for the period from 2010-2014 indicated closed figures between these countries. Given the average growth rate of productivity performance for the period 2001-2014, the figure was -6.1% in UAE, -1.9% in SAU, -3.1% in BHN, -2.9% in QTR, -3.0% in KWT, and -6.1% in OMN. Regardless, in the period of 2010-2014, this figure was 0.3% in UAE, unlike the ease of the country that gave the continuing negative indicators of productivity performance. In terms of development of gross capital formation and labor for the period 2001-2014, all countries observed more yearly average increase rate in gross capital formation, unlike the situation in the UAE where labor was more dominated.

Counting to the share of growth due to three inputs and according to Table 5, it was found that, the share contribution of labor growth was dominated with184%, 105%, 76%, 88%, and 143% in UAE, BHN, QTR, KWT, and OMN respectively, which unlike in SAU where the growth due to the capital was dominating about 81% beside 52% for the share of labor growth for from 2001-2014. Another fact observed with TFP improvement in the UAE in the period 2010-2014 was the shifting of the growth contribution of labor to capital with 40% and 54% respectively.

Figure 9 describes the labor productivity for GCC member's counties in group of periods (2001-2014, 2001-2005, 2005-2010, and 2010-2014), and classified in productivity components analysis such growth per capita (gy), capital produced per capita (gk), and TFP per capita (gA). Consequently, the UAE was deserved the positive trend for the period from 2001-2014, while other countries deserved negative figures at least in two components of the labor productivity analysis. On the other side, in specifically the period from 2010-2014, the UAE, BHN, and KWT were deserved positive labor productivity, such as 2.05%, 1.45%, and 0.13% in TFP per capita, respectively. Moreover, the growth caused by gross capital formation was between 0.20% and -1.23%, and TFP growth was between 1.89% and -0.07, for the period from 2001-2014.

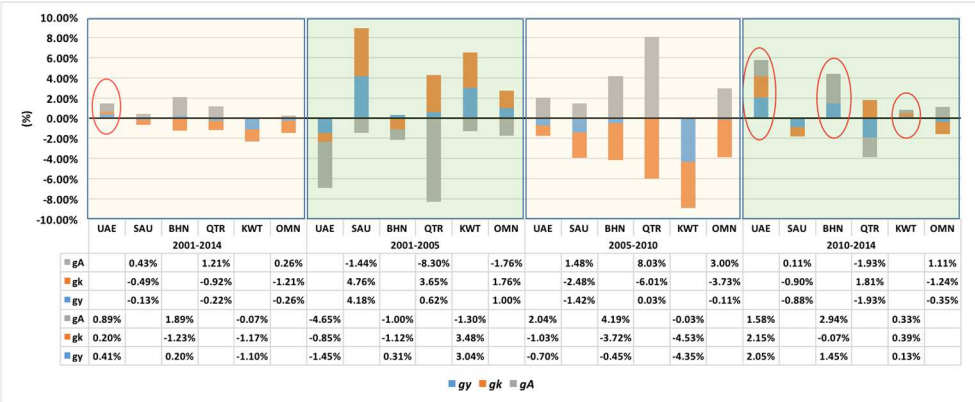


Figure 9. Labor productivity from (2001-2014).
Source: Own calculation based on world bank database.

5. In Conclusion

We concluded after employing growth accounting exercise for time-series period 2001-2014 and divided periods of almost average 5 years that economic growth, economic diversification strategies, and the abundance of natural resources, which

undoubtedly contributed to the economic development in the Gulf Cooperation Council (GCC) have not achieved optimal productivity at the aggregate production level, or even at the level of labor productivity with some exceptions.
Gross capital formation, labor inputs, and TFP were three inputs examined in equal to total output country's constant GDP. In summarizing the results, the TFP was moving in negative trend especially between 2002-2010. The annual growth rate was higher in Qatar by about 12.8%, which the highest that compared among other members. The productivity performance was trended negatively in all members from 2001-2014. Unlike, the period between 2010-2014, when only the UAE achieved positive productivity growth. On the other side, the contribution share of labor was dominated from 2001-2014, unlike the situation in the SAU, where it was the gross capital formation. The labor productivity per capita in the UAE was positive from 2001-2014 and 2010-2014, and BHN and KWT were deserved positive in the period of 2010-2014.
In conclusion, it seemed that diversification process had made an improvement in whole economy's productivity performance only in 2010-2014 in the UAE. While, the results of labor productivity showed positive trend in the UAE from the period of 2001-2014, beside the other members such BHN and KWT, specifically between 2010-2014.

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FINANCIAL EQUILIBRIUM IN THE ENERGY INDUSTRY

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Abstract: *The development in the energy market has shown that a large number of companies in this area are often confronted with the issue of investment, the issue of the purchase price of energy raw materials (oil, coal and gas), with problems related to the distribution of electricity to consumers, but especially with the problem related to the collection of energy bills. The global financial crisis has also affected the energy sector and the banking sector and, with the outbreak of the sovereign debt crisis, the crisis has also affected the budget sector. Against the background of the exit of the economy from the crisis, the energy industry has revived, although the problems related to the operational activity and the investment activity remained almost unchanged. The main concern of big companies in the energy industry is to permanently secure electricity consumers on the backdrop of companies' stability and equilibrium. That is why our analysis will focus on comparing the results of the financial equilibrium indicators between two major energy companies in Europe, namely Transelectrica SA and Enel SpA during the pre-crisis, crisis and post crisis periods. As component of the entity analysis, the financial position is a constant concern of managers and aimes to ensure the necessary funds for the operational activity. In the industry in general and in energy industry in particular, the cycle of recovery is slowed down by the specific activity of these companies. That is why in the paper we analyze the equilibrium of two energy companies from Romania and Italy.*

Keywords: *earnings; liquidity; solvency; working capital.*

JEL classification: *D04; D22; D92.*

1. Introduction

The issue of the financial stability of the company is based on the financial statements, namely the balance sheet, the income statement and the cash flow statement. The balance sheet in any presentation form is the "picture" of the economic entity and should answer to a number of user-specific questions. These questions arise from the way in which the equality between assets and liabilities represents at the same time the equality between the sources of funds and the uses (needs) of the company. In assessing the financial health of a company one must look not only at the liquidity or solvency, meaning the capacity of a company to cover the debts (to be solvable), but also at its capacity to pay at maturity both short term loans and long term loans.

2. Literature Review

Based on the financial reporting system, many analysts have shown that between short term financial stability (on one hand) and performance and cash flow (on the other hand) there is a relationship of functional dependence that can be established by financial rates of liquidity, performance and cash flow as well. Certainly the balance sheet is inextricably linked to the working capital, this aspect being reported by both Romanian and foreign authors. The informational system needs to ensure also the evaluation of the company's liquidity, which is necessary in order for the suppliers (generally, short-term creditors) to evaluate the company's ability to pay off its current obligations. This ability depends on the cash-on-hand resources which are available on the date of the balance sheet elaboration and on the cash-on-hand which will be generated by the operational cycle of the company (Bătrâncea *et al*., 2010:54 -59; Moscviciov, et al., 2010:600-603). Thus, cash conversion cycle (CCC) is analyzed in today's literature by many authors from several points of view: the correlation with working capital, profits, the correlation with value added, the correlation with liquidity or the correlation with company's size.

Trying to group these works, we found that most researches focus on the relationship between cash conversion cycle and performance. In a recent study from Japan it is investigated the relationship between a firm's cash conversion cycle and its profitability using dynamic panel data analysis in the Japanese industry (Nobanee, et al, 2011:147 - 156).

An Italian researcher verifies the impact and the influences of the cash conversion cycle on the 4,226 Italian SMEs performance. Thus, he showed that the cash conversion cycle affects profitability. The study considers EBITDA on Net Sales as a measure of profitability and as dependent variable (Muscettola, 2014: 25 - 35).

Another expert offered empirical evidence on the negative relationship between a company's net trade cycle and its profitability as measured by the Total Return on Total Assets. The results show that shorter net trade cycles are most commonly associated with higher profitability while the reverse is also true (Soenen, 1993:53). Referring to same issue, Walker (1998:30) demonstrates that the cash conversion cycle (CCC) is a concept and a method of analysis which varies from book to book, and the results of computation are ambiguous, difficult to interpret, and not of much use in providing input to the financial planning process and to performance measurement. Also, for the same purpose, other authors from Finland (Talonpoika, et al., 2014:341-353) show that the computation of cash conversion cycle (CCC) has to takes into account advance payments as a component of operational working capital.

Other academic papers regarding equilibrium analyze the liquidity and the cash conversion cycle aspects. Thus, authors from Taiwan examined if the cash conversion cycle period (CCC) is a better liquidity measure compared with the current and quick ratios. The results show that CCC indicators better reflect the company's actual short-term debt-paying ability and liquidity (Li-Hua, et al., 2014:97-103). Regarding the relationship between CCC and liquidity, invested capital, and firm performance, a recent research showed that US firms with more efficient cash conversion cycles were more liquid, required less debt and equity financing, and had higher returns. The results also indicate that small firm owners/managers may be reactive in managing cash conversion cycle (Ebben, Johnson, 2011:380-396). Another relevant cash conversion cycle study investigates whether non-financial firms listed on the Nairobi Securities Exchange (NSE) exhibit a target cash

conversion cycle (CCC). Thus a higher return on assets, investment in capital expenditure and growth opportunities has a significant negative association with the CCC. The results also show a significant positive relation between inflation and the CCC (Mutua, 2014:175 - 196). In the oil and gas industry an important study has revealed the impact of economic and financial variables on cash conversion cycle of energy, oil and gas sectors listed on the Muscat Security Market. The results show a statisticaly significant impact of growth sales, firm size, and cash flow as financial variables and average daily production of oil, consumer price index, total merchandise import and total government expenditure as economic variables on cash conversion cycle (AL-Shubiri, 2015:174-181)

In the financial equilibrium analysis, we take into account in the same time current assets and short-term creditors (like suppliers for instance) which measure the entity's ability to meet its current obligations, which in turn depend on the cash resources available at the time when financial statements are drawn up and on the operating cash flow to be generated (Bătrâncea *et.al.*, 2009:57-62). Thus, the analysis of short-term creditors (for example suppliers) has to evaluate the capacity of the entity to pay its current obligations which depends on the cash resources available at the date of developing financial situations and the cash that is to be generated by the entity's operational cycle (Bătrâncea *et al.*, 2010:68-72). In the same time, the ability to "replicate" this cycle depends upon the *entities' short-term liquidity* and on their ability to *generate cash flow or equivalents of this* (Bătrâncea *et al.*, 2010:92-98).

Financial equilibrium is based and reflected in the cash flow statement which shows the cash obtained or cash consumed in the operating activities. Thus, Ohlson and Aer (2009:1091–1114) consider that cash flow analysis is efficiently performed when modified cash accounting enters the scene. This method is based on standard financial reporting and addresses the recognition of assets and liabilities. Modified cash accounting takes into consideration just cash and assets easily convertible. On the other hand, Silhan (2014:1357-1379) investigates interfirm differences concerning earnings variability. Namely, he examines the manner in which the ratio of accrual variability to cash flow variability changes depending on firms and the manner in which the ratio components and the correlations between cash flow and accruals impact on economic performance. Also Bible and Mills (2001:150-173) observe that using cash flow ratios instead of the traditional ratios yields more confidence in the liquidity and solvency of gaming corporations.

The cash flow statement is divided into three major sections: cash flows from operating, investing and financing activities. The manner of displaying the operating activities depends on the method used to determine the cash flow. The direct method adjusts the profit before tax and the cash from operating activities. The indirect method adjusts the profit with the effects of transactions that have no monetary nature and also with deferrals or accruals (Bătrâncea *et al.*, 2008:52-56)

In what follows, we analyze the financial equilibrium of the two companies in the energy industry in Romania and Italy.

3. Method and Results

To achieve the research purpose, we used the method of liquidity rates and the comparisons method in 2005 - 2015, thus emphasizing the three financial cycles of the world economy in recent years, namely: pre-crisis, financial crisis and post-crisis

periods. Information about liquidity and solvency are required to estimate the economic entity's ability to pay its debts. Paragraph 16 of the general preparation and presentation of financial statements prepared by the Committee for International Accounting Standards liquidity "refers to the availability of cash, in the next period after covering the liabilities" and solvency "refers to cash resources to pay on the long run entity's debts."

In the same time, the working capital and the current assets highlight the ability to make cash on hand, to cover debts of the economic entity. In the group of the short term equilibrium, there is the liquidity ratio (RLC) between current assets and current liabilities:

$$RLC = \frac{Current\ \ Assets(ACR))}{Current\ Debts(DCR)} x100$$

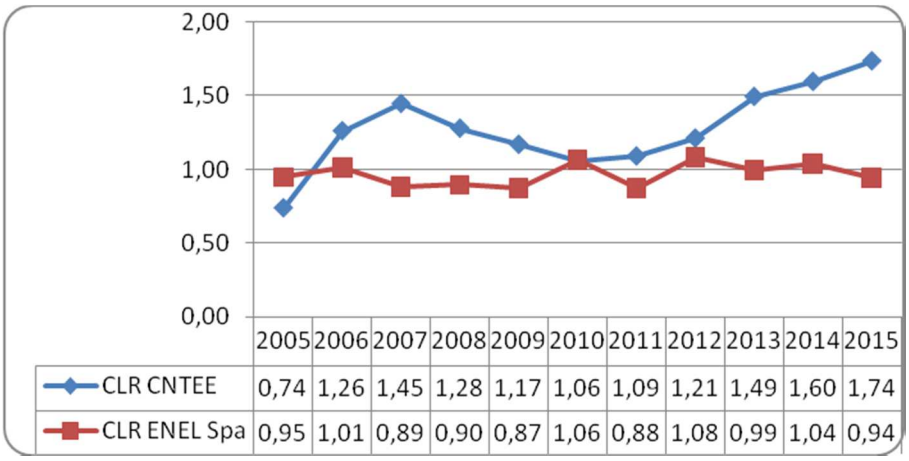


Chart 1: The evolution of current liquidity ratio
Source: Own calculus based on balance sheet

Current liquidity ratios in the Transelectrica SA case were mixed, recording a full coverage of short-term debt based on turning current assets (less stock) into cash. ENEL SpA liquidity ratio has fluctuated, recording partial coverage of short-term debt based on turning current assets into cash.

Acid Ratio or Quick Ratio shows the capability of current assets (other than inventories) to participate in debt financing due.

$$QR(AR) = \frac{Current\ \ Assets(ACR) - Inventories(S)}{Current\ Debts(DCR)} x100$$

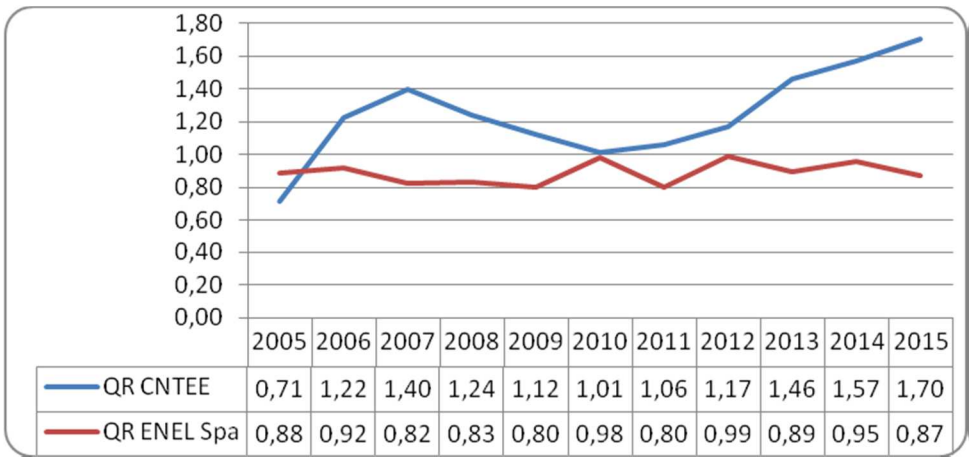


Chart 2: The evolution of quick ratio in the analyzed companies
Source: Own calculus based on balance sheet

The quick ratio both at Transelectrica and ENEL SpA moved in the security range of [50%, 100%] in all the analyzed years. This means that energy companies can cover on a large proportion short-term debt based on cash and receivables.
Cash ratio (CSR) measures the proportion in which the cash and the cash equivalents cover payments due.

$$CSR = \frac{Cash(CS)}{Current\ Debts(DCR)}.100$$

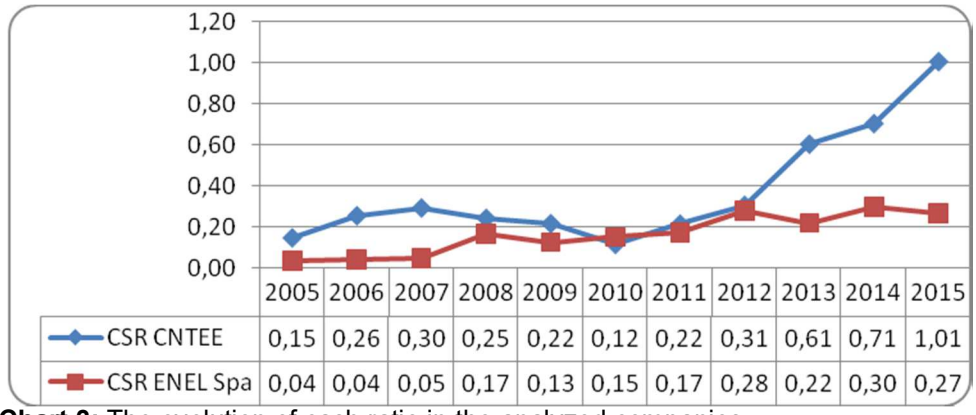


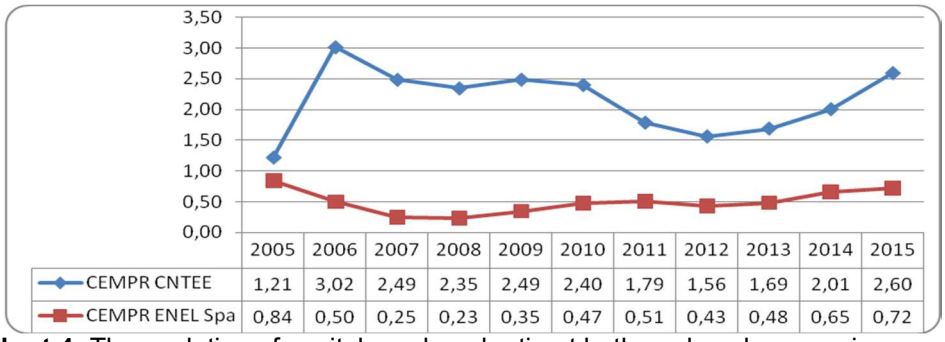
Chart 3: The evolution of cash ratio in the analyzed companies
Source: Own calculus based on the balance sheet

Cash ratio for Transelectrica SA, although increasing, remained outside the range of financial security [50%, 100%] except for the post-crisis period in 2013 to 2015. This means that the company can cover its short-term current revenues. In the Enel case the, cash ratio does not fall within the financial security range, which means that the entity may partially cover the short-term debt due the cash. Comparing the liquidity

rates evolution between both companies, we observe that if Transelectrica SA rates have a tendency to increase from year to year, the rates of ENEL SpA have a tendency to maintain constant or even to slightly decrease, especially in the post-crisis period.

Another important aspect in ensuring a financial stability fund is to provide a long-term development that can be assessed by solvency. Maintaining a long-term equilibrium is based on converting current assets and a part of the fixed assets in liquidity and covering due debts during the cash conversion cycle. Thus, in our opinion, the Du Pont analysis is an important indicator in analyzing how the capital invested is employed in business. Considering the company size, solvency assessment can be done by comparing liquidity remaining assets (capital employed) and chargeability of long-term debt and capital. This is achieved using an indicator employed ratio (CEMPR).

$$CEMPR = \frac{Working\ Capital(WK) + Fixed\ \ AssetsFA)}{Long\ term\ Debt(LTD)} x100$$



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CEMPR CNTEE	1,21	3,02	2,49	2,35	2,49	2,40	1,79	1,56	1,69	2,01	2,60
CEMPR ENEL Spa	0,84	0,50	0,25	0,23	0,35	0,47	0,51	0,43	0,48	0,65	0,72

Chart 4: The evolution of capital employed ratio at both analyzed companies
Source: Own calculus based on balance sheet

Data analysis shows that if Transelectrica S.A. investments in fixed assets and current assets are financed by banks, the company is solvent. ENEL SpA investments are underfunded foreign funds and it is possible that in the next period the company will need long-term funds to finance its investment. Assessing the long-term equilibrium can be done with the long-term debt to turnover ratio (LDTLR):

$$LTDTR = \frac{Long\ Term\ Debt(LTD)}{Turnover} x100$$

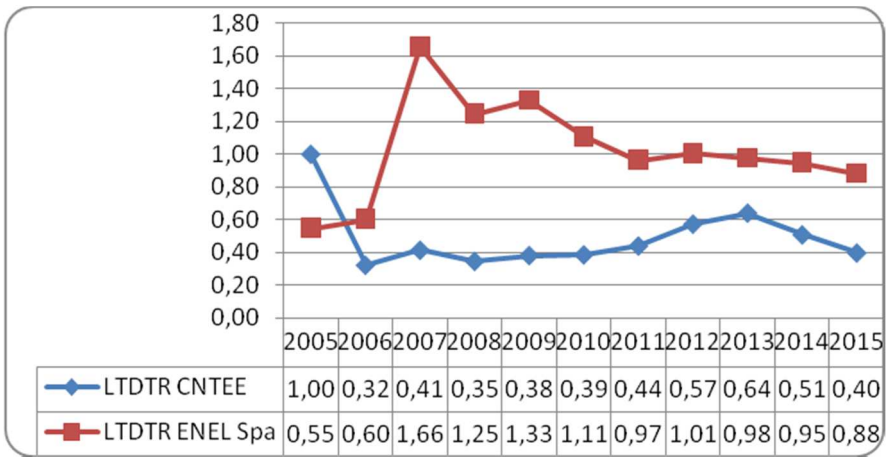


Chart 5: The evolution of long term debt to turnover ratio in the analyzed companies' case
Source: Own calculus based on balance sheet

Since the reimbursement of long-term loan rates can be performed from current sales, we observed that Transelectrica S.A. can return 50% of the funds, while ENEL SpA has a higher capacity for repayment of long-term loans. We think that these rates highlight the leverage or dependence on long-term loans which influences inflation.

4. Conclusions

Maintaining a company's business can be done only through continuous financing of the current activity and investment. On the other hand, the process of generating cash in a continuous and adequate proportion increases the company's lending credibility with its creditors and investors. Therefore, the proposed indicators alongside standard indicators are important financial instruments with which managers evidence dysfunctions in the company system. During the financial crisis, the decisions taken by both companies ensured their short-term and long-term financial equilibrium. At the same time, we found that European economies were secured with electricity, the industrial and the domestic consumers were not affected by the financial crisis. During the financial crisis, both companies increased their indebtedness as a result of investing measures in the energy infrastructure. We believe that these investments will lead to decreases in the price of electricity in the next period together with an increase in the energy consumption in Europe.

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EUROPEAN ENERGY MARKET DEVELOPMENTS. OMV AUSTRIA CASE

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Abstract: *The evolution of the energy market in Europe was influenced by the unprecedented development of the economy in 2007 and by the evolution of oil prices. From the analyses carried out in the energy field, we found that although American economy slowed down after September 11, 2001, the war in Iraq and then the other local conflicts in the Middle East forced an increase in oil consumption which led to an increase in the barrel price, which reached a level USD 145/barrel with the outbreak of the financial crisis. Against the background of the banking crisis and the sovereign debt crisis, the growth rate of the world economy has slowed down and the oil price has stabilized today at a level of 45-55 USD/barrel. Present in Romania through Petrom, OMV Austria is a multinational company whose main activity are exploration, production and marketing of oil and gas, petroleum refining and electricity generation. In this paper, we will assess the financial situation of the company on the European energy market into three periods: before, during and post-financial crisis, taking into account assets, liabilities, equity, performance indicators and market indicators.*

Keywords: *assets; liabilities; equity; ROE; ROA; ROS.*

JEL classification: *B21; D22; G01.*

1. Business developments in the financial crisis

Public debt was considered one of the main reasons of concern for many countries. This problem became acute in the early 80s, when the early signs of the crisis appeared across several countries. This was manifested by the cessation of foreign debt payments. Such problems caused by public debt have come to the attention of both the creditor states and those responsible for payment. In the early 1980s, foreign debt crisis was manifested in several countries particularly indebted countries in Central and South America (Găban**,** 2016:146-152). OMV Austria was established on July 3, 1956 under the name "Österreichische Mineralölverwaltungs Aktiengesellschaft" and then was officially registered in the Commercial Register following the takeover of Company Assets Soviet Mineral Oil Administration (Sowjetische MineralölVerwaltung, SMV), which was established in the area of Soviet occupation in post-war Austria.

The company analysis for the period 2005–2015 will be made based on the financial statements which we divided into three periods: the pre-crisis (2005-2007), the financial crisis (2008-2010) and the post–crisis period (2011-2015).

Many analysts believe that the financial crisis was an unprecedented phenomenon in the world economy. From real estate, the credit crunch has generated a world

financial crisis, during which central banks and governments of developed countries pushing for the release of credit supported economy, which gradually came into recession. A review of the world economy found that there have been crises in other countries such as Brazil and Mexico, but these were due to mismanagement generated by the government policies based on low taxation and a fixed exchange rate of currencies. The global financial crisis was in turn described as "Economy's Pearl Harbor's" or "The new spill", name but a few of the descriptions of the global financial crises (Bătrâncea, Bătrâncea, 2009:143-155).

From 2010 onwards, the sovereign crisis caused by Greece's impossibility of paying the national debt of the state without the financial support of IMF and the EU was probably the hardest blow for the European Union over the last decade, preceded only by the "crash" - the European Constitution referendums in France and the Netherlands since 2005 (Găban et al, 2016:44-58).

In analyzing the financial position of OMV Austria, we had in mind that almost all multinational companies have been affected by the global situation, the events that occur internationally, namely: the global financial crisis, global warming and labor migration. The impact of the financial crisis for a company that manufactures and sales oil and that produces electricity will be strongly felt in terms of the negative effects, especially of the oil price in the market. The oil price strongly affects the company's activity, especially its turnover (it will still be able to sell large quantities, but if you sell at a lower price, the turnover will be strongly affected, its level is much lower than when you sell a smaller amount at a higher price). A company in the petroleum industry is strongly affected by the oil price on the international market, and also by the legislation of the country in which it operates, as well as by international regulations on environmental protection.

The real estate credit crisis led to the global financial crisis, and, since then, central banks and governments of developed countries have made great efforts to unlock credit economy, which gradually came into recession. Analyzing in retrospective the world economy, there were crises in other countries such as Brazil and Mexico, but they were due to faulty government policies based on low taxation and a fixed rate of conversion of national currencies (Bătrâncea, et al, 2009:58-64).

The current crisis led to a significant decrease in the confidence level of consumers, investors and businessmen, which in turn affected stability and economic strength. This created a vicious circle of economic growth based on excessive consumption sustained by debts. Deregulation and financial liberalization did not generate an efficient allocation of resources. Recent measures taken by governments numbered assets acquisition, banks recapitalization, injecting liquidity into the banking system. In spite of these measures, many banks have not escaped the subprime lending problem. At least in Europe, counterbalancing the effects of the financial crisis appears to be an extremely difficult mission. France, for example, created a sovereign fund to assist strategic companies (Bătrâncea, et al 2013:16-29). In the chart below, one can see the oil price on the international market in different periods (financial crisis, events experienced by OPEC members).

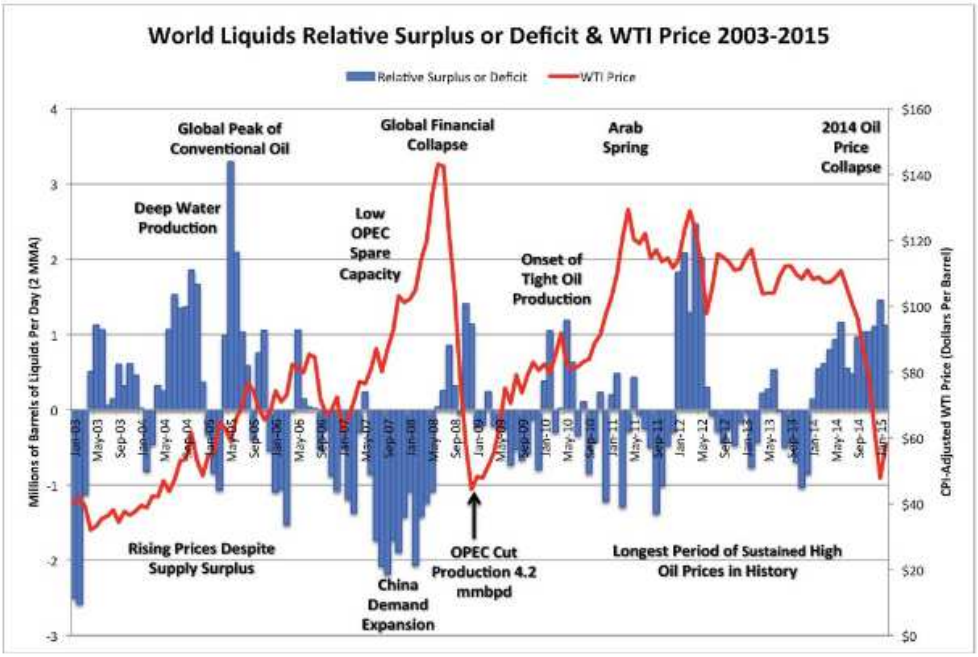

Chart 1: The evolution of oil price between 2003-2015
Source: www.oilprice.com/Energy/Oil-Price)

The chart indicates that one of the causes of the financial crisis was an unprecedented increase in oil price amid overheating national economies. Due to the collapse of the Leman Brothers bank in May 2008, in less than three months the oil price fell from $ 150 per barrel to a level of 70 $ per barrel. The financial crisis has led to a gradual recovery in the oil price, followed by the post-crisis period, when the oil price remained constant at 70 US $ per barrel since 2015. This was generated by lower oil imports of the US. Nevertheless, as a result of economic sanctions against Russia, the price per barrel having settled at a minimum of USD 40-45 per barrel.

2. Literature Review

The analysis of economic and financial environments requires a multidimensional approach towards a company, from taking into account the financial position and changes in the financial position to performance. Relevant works in two major segments of the disclosure of this analysis are presented in the following. An analysis of the financial position and how this changes is based on the balance sheet and the cash flow statement. The balance sheet shows the changes which took place in different items, during the analyzed period (Bătrâncea, et at, 2010). Each change implies that an amount of money entered or exited the company and that cash has been generated or consumed (Bătrâncea, et al, 2008:52 – 56). In order to respond to global competition challenges, the wood-processing industry in Finland and other countries are outsourcing round wood harvesting to harvesting contractors. The weak profitability, liquidity and solvency of harvesting contractors and the consequent difficulty in hiring qualified machine operators make networking and

enterprise growth a complicated process (Mikkola, et al, 2011:211-219). Cash flow analysis can be found in numerous papers. Thus, Găban (2016) shows that in the financial reporting system, the balance sheet and profit and loss account are key elements throughout the world as part of periodical financial reporting, while the cash flow statement is not mandatory in many countries (e.g. Germany and the Netherlands). In Japan, cash flow reporting is mandatory only for companies listed on the stock exchange market (Găban, 2016: 46-52).

Other authors noted that "if cash flow reports are mandatory, their format may differ from country to country. For instance, in the United Kingdom interest and dividends are grouped into a separate category, are not included in the cash flows reports from operations or in the financial one. Although this format is considered superior to SFAS 95 format (US format), cash flow reports are not comparable in terms of financial information sent to users without making some adjustments (Moscviciov et al, 2010:600-603). Operating activities affect the net profit through the cash inflows and outflows that it generates. (Bătrâncea, et al, 2009:92 - 98)

Another paper examines the relationship between working capital management and profitability for small and medium-sized enterprises (SMEs) by controlling unobservable heterogeneity and possible endogenity. The results point to the fact that there is no non-monotonic (concave) relationship between working capital level and firm profitability. This indicates that SMEs have an optimal working capital level that maximizes their profitability (Baños-Caballero, et al, 2012:517-529). On the other hand, the cash flow analysis is replaced by funds flow. Therefore, in some countries from South America, entities draw up reports of funds changes. Funds are defined in this case as *net working capital* (current assets minus current liabilities), this financial indicator reports on the changes recorded in the entity's working capital. Fund flows limits were recognized in the late 1970s, and this method of financial reporting was abandoned in the United States since 1973 (Bătrâncea, et al, 2009:57-62). Another research shows that lower profitability has left companies with little resources to undertake renovation and modernization. Fiscal measures have been imposed by the government, together with a proposal for modernization, the latter being effective for reconstructing the condition of the Indian cement industry (Banerjee, 2015, 171-179).

Other researchers report that the working capital is a form of liquidity highlighting the resources available after covering short-term liabilities (Bătrâncea, et al, 2008:34 – 40). For this reason, the analysis of the working capital ratio is an important target for every manager of Romanian companies (Moscviciov, et at, 2010:600 – 603). The liability–asset ratio of China's industrial state-owned enterprises (SOEs) has increased dramatically in the course of the economic reform period. Western observers point out the inherent dangers to enterprise solvency. The research shows that the increase in the liability-asset ratio of industrial SOEs is the inevitable result of systemic changes and a low-profitability SOEs tends to have a high liability–asset ratio (Holz, 2002:1-26).

The purpose of another study was to find a function for the profitability of Swedish micro firms in the sectors of health, transport, trade and metal. In order to understand how micro firms relate to key variables such as firm size, growth of sales, productivities, lagged profits, asset turnover and firm's age, OLS (Ordinary Least Squares), and the more robust quartile regression techniques were used to estimate micro-firm profitability (Khaik, Darush, 2012:94-106). Data advances in panel data econometrics were used to investigate the determinants of profitability for

manufacturing and service sector firms in Belgium, France, Italy and the UK, for the period 1993–2001. The paper synthesizes empirical models that have been used by researchers in industrial economics, strategic management and accounting, finance. (Goddard, et al, 2005:1269-1282)

3. Methods and Results

Results were based on the comparison method, the indices method and the rates method. These methods are conducted with respect to the three periods mentioned in the above: anti-crisis, financial crisis and post-financial crisis. A first component of financial analysis refers to the company's financial position. An analysis of the structure of the assets and liabilities of the company during 2005-2015 found that, compared to other companies such as Shell, Exxon, MOL, OMV Austria was not affected by the financial crisis as shown in the following table.

Table 1: Evolution of OMV Austria in the period under review-million Euro-

Before Financial Crisis	**2005**	**2006**	**2007**	**Minim**	**Maxim**	**Average in EU**	
Assets	15.451	17.804	21.250	15.451	21.250	18.168	
Liabilities	7.758	8.628	10.910	7.758	10.910	9.099	
Equity	7.694	9.176	10.340	7.694	10.340	9.070	
Financial Crisis	**2008**	**2009**	**2010**	**2011**	**Minim**	**Maxim**	**Average in EU**
Assets	21.376	21.415	26.404	21.376	21.376	26.404	22.643
Liabilities	12.013	11.380	15.092	11.380	11.380	15.092	12.466
Equity	9.363	10.035	11.312	9.363	9.363	11.312	10.018
Post - Financial Crisis	**2012**	**2013**	**2014**	**2015**	**Minim**	**Maxim**	**Average in EU**
Assets	30.519	31.786	33.938	32.664	31.786	33.938	32.227
Liabilities	15.989	17.241	19.336	18.366	17.241	19.336	17.733
Equity	14.530	14.545	14.602	14.298	14.298	14.602	14.494

Source: The financial statements of OMV Austria

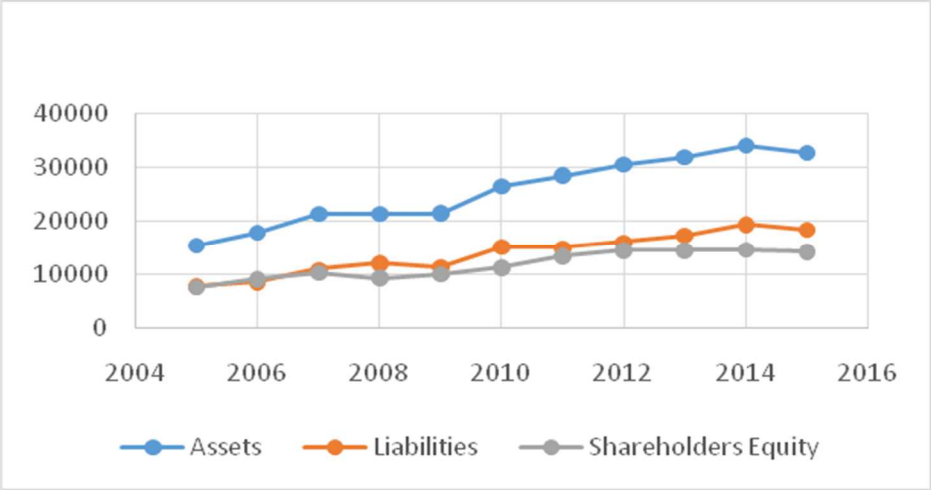

Chart 2: The evolution of assets, liabilities and equity of OMV Austria
Source: Own calculus based on the OMV balanace

As the data presented above and in chart 1 the assets, liabilities and equity show slight increases throughout the period analyzed, being generally above the European average of companies in the oil industry. Another component analysis company refers to its performance and features the turnover and profit as shown in the table below.

Table 2: The performance indicators as OMV Austria in three periods - million Euro-

The anti - crisis	2005	2006	2007	Minim	Maxim	Average in EU	
Earnings after tax (EAT)	1.495	1.658	1.842	1.495	1.842	1.810	
Earnings before tax (EBT)	1.947	1.966	1.956	1.947	1.966	2.012	
Earnings before interest and taxes (EBIT)	1.958	2.061	2.184	1.958	2.184	1.179	
Income Tax	452	308	114	114	452	9.244	
Turnover	15.580	18.970	20.042	15.580	20.042	9.265	
Dividends paid	134	378	487	134	487	333	
Financial crisis	2008	2009	2010	2011	Minim	Maxim	Average in EU
Earnings after tax (EAT)	1.528	717	1.214	1.572	717	1.572	1.257
Earnings before tax (EBT)	2.308	1.181	1.960	2.200	1.181	220	1.912
Earnings before interest and taxes (EBIT)	2.339	1409	2.333	2.473	1.409	2.473	2.139
Income Tax	779	464	746.8	628	464	746	654
Turnover	25.542	17.917	23.323	34.053	17.917	34.053	25.208
Dividends paid	547	336	334	441	334	441	414
Post- Financial Crisis	2012	2013	2014	2015	Min	Max	Average in EU
Earnings after tax (EAT)	1.790	1.728	613	-1.255	-1.255	1.790	719
Earnings before tax (EBT)	2.857	2.289	877	-1.909	-1909	2.857	1.028
Earnings before interest and taxes (EBIT)	3.103	2.716	1.054	-2.006	-2.006	3.103	1.217
Income Tax	1.067	561	264	-654	-654	1.067	309
Turnover	42.649	42.414	35.913	22.527	22.527	42.649	35.875
Dividends paid	626	627	649	530	530	649	608

Source: The financial statements of OMV Austria

Analyses of the evolution of performance indicators during the entire period reveal positive developments with the exception of the year 2015, when the indicator earning after tax has fallen dramatically mainly due to the lower oil price. However, the company distributed dividends to the dividend level of 2008. The third component of the financial analysis refers to the OMV Austria market indicators, whose evolution is shown in the following table.

Table 3: The evolution of the dividend per share (DPS) and earnings per share (EPS)

Indicators	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Dividend per share (DPS)	0.9	1.05	1.25	1	1	1	1.1	1.2	1.25	1.25	1
Earnings per share (EPS)	4.21	4.64	5.29	4.6	1.91	3.07	3.38	4.18	3.56	1.09	-3.37
Stock exchange capitalization (mil EUR)	14.780	12.840	16.560	5.590	9.170	9.290	7.640	8.920	11.350	7.180	8.530

Source: The financial reports of OMV Austria

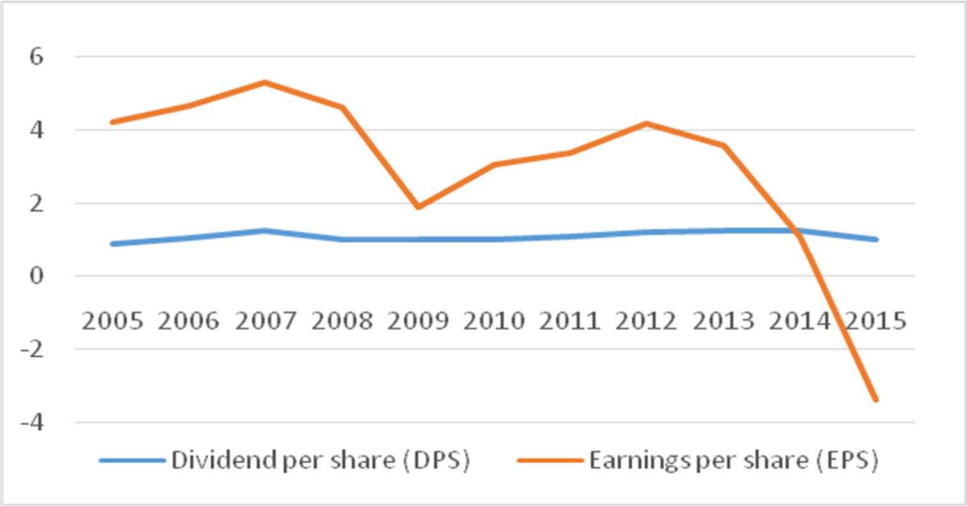

Chart 3: The evolution of market ratios of OMV Austria
Source: Own calculus based on the annual reports

An analysis of the market indicators of OMV Austria reveals a constantly evolving dividend per share and a steady decrease pointing to 2005-2009 and 2012-2015, which indicate the beginning of a new global financial crisis. In order to identify the causes of oil companies' performances, we chose a sample of six companies such as: OMV Austria, MOL Hungary, Rompetrol SA form Romania, AGIP Italy, BP from UK and PK ORLENE from Poland. In this sense, we took into account four ratios to analyze whether return on assets (ROA), debt ratio (DR) and current liquidity ratio influenced the variable return on equity (ROE). For this reason, we used the RStudio software to build the statistic equations between ROE as dependent variable and the independent variables ROA, DR and RLC.
Firstly, we analyzed the relation between ROE and ROA, DR and RLC with correlation coefficients:

	ROE	ROA	DR	RLC
ROE	1.00000000	0.8693797	-0.09194262	0.6733242
ROA	0.86937969	1.0000000	-0.17390510	0.4154050
DR	-0.09194262	-0.1739051	1.00000000	-0.1583505
RLC	0.67332420	0.4154050	-0.15835045	1.0000000

The results show that between ROE (dependent variable) and the independent variables ROA, DR and RLC there is a connection.
Secondly we build the linear model of ROE (ROE is a function of ROA, DR, RLC).

```
> Model ROE = lm (ROE~ROA +DR+RLC)
> Summary (Model ROE)
Lm (formula = ROE ~ ROA + DR + RLC)
```

Residuals = squared differences between observed and computed data.

```
Residuals:
Min          1Q      Median       3Q          Max
-43.241      -3.685  0.366        5.203       30.336
```

We note that approximately 75% of residuals are in [-3,685,5,203]

We estimate the coefficients of regression equation:

```
                Estimate Std. Error t value  Pr (>|t|)
(Intercept)     -26.45668   3.91156  -6.764  5.50e-09 ***
ROA             2.29063     0.15238  15.033  < 2e-16 ***
DR              0.06991     0.03254   2.149  0.0356 *
RLC             0.13335     0.01657   8.049  3.26e-11 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

We note that the coefficients are significant (p-value<0.05).

```
Residual standard error: 11.85 on 62 degrees of freedom
Multiple R-squared:  0.8824,      Adjusted R-squared:  0.8767
F-statistic:   155 on 3 and 62 DF, p-value: < 2.2e-16
```

Then we analyzed the variance based on ANOVAs test.

```
> ANOVAs (Model ROE)

Response: ROE
          Df Sum Sq Mean Sq  F value    Pr (>F)
ROA        1  55924   55924 398.3418 < 2.2e-16 ***
DR         1    268     268   1.9077    0.1722
RLC        1   9095    9095  64.7824 3.257e-11 ***
Residuals 62   8704     140
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

ANOVA analysis emphasize that DR coefficient is not significant; so we remove the DR (debt ratio) variable.
The new model is: ROE = ROA + RLC (using R software convention)

```
Model ROE = lm (ROE~ROA+RLC)
Lm (formula = ROE ~ ROA + RLC)

Residuals:
   Min      1Q Median      3Q     Max
-46.278 -3.401   0.321   4.720  32.326
```

```
Coefficients:
            Estimate Std. Error t value Pr (>|t|)
(Intercept) -20.30551    2.74067  -7.409 3.86e-10 ***
ROA           2.25121    0.15555  14.473  < 2e-16 ***
RLC           0.12992    0.01696   7.662 1.39e-10 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 12.18 on 63 degrees of freedom
Multiple R-squared:  0.8736,      Adjusted R-squared:  0.8696
F-statistic: 217.7 on 2 and 63 DF, p-value: < 2.2e-16

> ANOVAs (Model ROE)
Analysis of Variance Table

Response: ROE
          Df Sum Sq Mean Sq F value    Pr (>F)
ROA        1  55924   55924 376.719 < 2.2e-16 ***
RLC        1   8715    8715  58.705 1.393e-10 ***
Residuals 63   9352     148
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Conclusion: Both lm and ANOVAs functions show us that the model is significant:

$$ROE = -20{,}30551 + 2{,}25121\ ROA + 0{,}12992\ RLC$$

For a change of 1 unit of ROA, ROE changes by 2,25121.
For a change of 1 unit of RLC, ROE changes by 0,12992.
For a change of 1 unit of ROA and RLC, ROE changes by 2,38113 (2,25121 +0,12992)
For RLC =0 and ROA =0 ROE = -20,30551 (no action from ROA and ROE)

4. Conclusions

The financial crisis has had an impact on the world economy with negative consequences on macroeconomic indicators such as the GDP, the inflation rate, the unemployment rate, wages, taxation etc. Although oil prices fell steadily after the financial crisis, oil companies have successfully overcome the difficult period caused by industrial production decrease due to the increase of domestic consumption. The performance of the oil companies has succeeded both during the financial crisis, and in 2015, due to lower oil prices, companies pay dividend and increase investor confidence in the capital market. The statistical analysis shows that between the dependent variable ROE (return on equity) and the independent variables ROA (return on assets) and RLC (current liquidity ratio) there is a strong linear connection. Also, we note that between performance and liabilities there is no connection, which means that debts did not influence the companies' performances.

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POLITICS VERSUS ECONOMIC AND POLITICAL THINKING

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Abstract: *In a world where man has been regarded since ancient times by philosophers as a zoon politikon (Aristotel, 2001), and whose traits reverberates through centuries, focusing upon some of its peculiarities could only be refreshing. As the military, social, economic, and cultural traits of globalization have been accelerating, the leaders of different nations felt there is a slippery ground upon which they could take decisions. Lot of them have been bad prepared to fully understand these processes, or haven't been capable to harness the national potential of their countries towards extracting benefits from these processes. There are small countries which have well understood the path the world was heading to, and they have acted accordingly; Singapore, South Korea, Finland or Switzerland could be such positive examples. All these have gained a lot as globalization has been widening. While others, with far greater potential in comparison with all these countries, are fighting for their survival. For these others, globalization has brought more pain than relief. The domestic society in all these examples and its traits has played important roles for these different paths, but there couldn't be neglected the crucial role of political leadership in both, the successful countries, and the less successful ones. Without naming a peculiar state, the paper focuses in fact upon the character a man of state should have in a globalized world, and which should be the main focuses for him. There are presented in a contrasting manner the characteristics of political man, face-to-face with the characteristics of the man who thinks politically. In a globalized world the economic diplomacy can help a state in its geopolitical interests' promoting, and a successful economic diplomacy is of crucial importance for having a healthy statehood. The paper mention that a healthy state is formed and is based on its citizens, while a weak or even a failed stated has the illusion of being based on individuals. There are presented the differences between individuals and citizens, and which are the benefits for having a society formed by citizens leaded by a man who thinks and acts politically, in a globalized economy and society.*

Keywords: *citizens; individuals; man who tinks politically; political man*

JEL classification: *F49; P41; P50; Z1*

Background

Common people and men of state are searing for freedom, security and prosperity, and in most cases, of power *per se*, defining their aims in the name of a religious, philosophical, economic, or social ideal.

Nowadays, there are very few cases of states where their elites are entitled by custom and force to lead the societies. With the exception of North Korea, Sri Lanka, and Cuba, there are a plethora of democracies in the world; at least on papers…

In this context, if there is a difference between common man and the man involved in politics, this difference would be much larger between a political man and a man who is used to think politically. We can see and understand this difference if we throw even short a bird-eye view upon Mommsen's political testament (Mommsen, 1987), opened fifty years after his death, in 1903. Even there could seem a commonality between these two categories there is a huge gap between them. Political man is looking at a constantly changing picture, being more attuned to domestic politics, and election cycles, these being of outmost importance to him; his calculations are focused upon votes in election years. His key-interest is success in elections – and because of this reason, all his actions are determined be *public opinion*, and its evolution. Sometimes he searches to influence this opinion and its evolution, to canalize it, and to exploit it in his (or his party) interests, when the elections take place.

Propaganda and politics are inseparable in this case, sometimes with dramatic consequences for state as a whole, and for each tax payer in particular. The situation is more dramatic, when political man who created a public opinion and a trend connected to it, has to follow it. He sees himself engulfed by this public current and it must follow it. He is facing the situation of being swallowed by the trend it had created. Put shortly he committed a fraud upon electorate; an ideological fraud. He could create a trend which has nothing to do with reality and real life events and he could find himself trapped in the position following this trend, finding in the end that he committed a fraud, first upon himself, and then upon his voters. First he lied himself regarding the finality and benefits of his actions, and then – of course – his voters… Myths, imagined fears, fraudulent economic and social doctrines could be created in this way, but then their negative effects impact their promoters, and society at large.

Past events (old and recent), individual character, informal networks, all push political man to act in the manner mentioned. He wishes political power for himself and for political faction to which he is belonging to. Of course, there could be a situation where his interests and his party's interests overlap national interests, but this situation has a character of probability, being filled with unknown facts.

There is a peculiar discipline – political marketing – which is focused upon identifying ways to promote peculiar interests (narrow party, or even personal interests) on voters' market, his conspicuous aim being this market's conquering, and competition's marginalization. It is one of the purest types of political struggle, but its vision is shortsighted, and its effects, in most cases, negative.

Face-to-face with him, and in a very contrasting position is situated man who thinks politically; he is focused upon the national interest. Contrasting the political man, a man who thinks politically is always focused upon strategic and long term interests of his nation, looking through all means to provide it a prosperous future among other nations of the world. If he gets to this point using all means, but force, his policy would be an extremely wise one and full of finesse, attaining in this way both, peace and prosperity. He would be regarded as a promoter of human civilization; anyway, peace and civilization are two facets of the same coin. A man who thinks politically must possess traits which promote him into this venerable position: vision and character. He who thinks politically must possess both these traits; one without the other makes him to vulnerable, and, in fact, pushes him quickly out from the national and humankind history.

Having vision, but missing character could help him in understanding the evolution of international political context, and of the path world is heading to, but he could exploit this personal talent to attain only narrow interests (personal or small group interests). Having character, but missing vision could endow him with a rigidity which could cost him its political "death", and, as a consequence, of the ideas and ideals it has intended to promote.

In this context, for example, could one dare to accuse Talleyrand of treason? And the answer is fully: No! Nowhere could one ever find an indication reflecting had he ever betrayed the interests of France, which mean all to him. This is one of the best examples of a man who thinks and acts politically. We now turn our attention towards Machiavelli, who had dedicated all his life and efforts to study and develop the means and methods to create a unified and powerful Italy. His endeavors were rewarded over three centuries, when, in his honor, the first capital city of Italian Republic was chosen Florence, the city which he had served as Secretary of the Florence's Second Office (nowadays the equivalent of foreign minister position).

Even they were regarded with suspicion bin some circles – especially religious circles – their life's cornerstone was their nation's prosperity. Centuries after their death, the humankind rehabilitated them, and their home country rewarded both, granting them their deserved places among peoples who marked humankind history. As one walks from Palazzo Vecchio towards Ponte Vecchio, he could observe the Machiavelli's statue, on the left side of the road. With his specific smiling, he seems to be pleased with the noise he had created through "*Il principe*", book which is the base of modern political theory, being the philosopher who methodically pointed first the separation between State and the Church. And this is an extraordinary example of a man who thinks politically…

Or, closer to our times and souls, stays the example of a man of state: Alexander Ioan Cuza. He had to defy not only the national opposition coming from an agrarian society, crystallized over one millennium, along the interests of an old and powerful institution – the Orthodox Church – but he had to counter the interests of three political powerful neighbors, the Russian Empire, Austrian Empire, and Ottoman Empire with its Phanariot influences. His vision and character – coupled with the French support which cannot be overlooked – had pushed Romania out of the Middle Age onto modernization, during his short tenure (1859-1866). Carol the I-st continued Cuza's vision and gave life to the reforms initiated by his predecessor, placing Romania on the orbit of civilization and independence.

And these are all examples of men who think and act politically…

Contrasting political man – who concentrates his attention on political sociology, with its subdivisions given by religious orientation, sex, age, social class, and ethnic groups of the *individuals* who generate his electoral basin – the man who thinks and acts politically *must* comprehend the deep traits of the *citizens* of his nation, or their peculiar *style*, as Lucian Blaga (2011) synthetically pointed to them. Taking account of this peculiar national style, and of geographical, historical, and prospective contexts, the man who thinks politically struggles to provide to his nation a better place among other nations of the world. He is in the position of man in searching for solutions – not votes – to present and especially future problems the nation he is belonging to would encounter.

Behold these traits supporting the thesis that a man of state must possess the attributes of a man who thinks politically, and not those of a narrow political man…

But the power of a nation could achieve the highest summit when a man who thinks politically is supported and followed in his actions by *citizens*.
There is a huge gap between citizens and individuals; the last legitimate themselves with a credit card when they are buying goods and services provided by different private companies, which promote first and foremost their narrow financial interests, which are sometimes coupled with the interests of countries where they are coming from.
The citizens legitimate themselves with an identity card (Maliţa, 2012: 170), both when they manifest their voting preferences, and when they interact with forces coming upon their state from outside sources. They know they belong to a powerful state; while the individuals belong to a weak state, or even to a failed state. A nation formed by individuals generates a weak state while the nation created by citizens gives a strong state. In the same time, a strong state's institutions know they can rely on citizens, while a weak state's institutions have the illusion they could rely on individuals.
The country where citizens are politically active and, being involved through legal means in administration (locally, regionally, and nationally), witness a vote which is expensive and hard given; while the responsibility of the elected ones is great relating to nation.
The country where the individuals are becoming apathetic towards political phenomena, this apathy being due to a material or cultural impotence, the vote is cheap. As man of state, it is impossible to base the actions and projects upon a population which is dissatisfied and ignorant about its own history and geography, living modestly, where national creed and culture has lost its meanings…
He faces a complex situation where it is impossible to jump from unsophisticated music to Bach; it is hard to identify a future for a nation where individuals are focused only on short term interests, where citizens which would support large and long term projects are few.
In such a case, even a man who thinks politically finds his hands tied, and his aspirations and reflections are impossible to meet real world affairs.
He recognizes himself as being isolated, facing the difficulty of reforming a nation composed from very few people, and a lot of population…

In conclusion

As the reader could observe through paper's reading, there is a huge difference between the political man and the man who thinks politically. In the same time, there is a large gap between individual and citizen.
In a globalized world, the happiest situation is to be found where the man who thinks politically is leading a nation formed by citizens, while the worst situation could be found in cases where a political man pretends to lead a nation formed by individuals, ignorant of their history, geography, and their real potential. It is a striking presentation which signals that in a globalized world the character and the *grey gold* – the brain – is more important than national endowments, pointing to the importance of the men who could think and act politically, in order to promote a resuscitation of a national rebirth.

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IMMIGRATION IN EUROPEAN UNION. ECONOMIC EFFECTS, LEGISLATIVE FRAMEWORK AND STATISTICAL OVERVIEW

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Abstract: *Presently, immigration is a global subject that generates many challenges and controversy all over the world. Its positive and negative effects in the society can not be ignored. So, in every state, government and population has to colaborate and find solutions for the immigrants integration for the overall well-being. More than ever, the countries that are confronting with an ageing population and the large flows of refugees must take action. This is also the case of most European Union countries. There are many debates among European Union's decision factors on this theme. Through its legal framework, its policies, the European Union has tried to build a balance between regular immigration and EU citizens and to fight against irregular immigration. The present paper provides an overview of immigration phenomenon in the European Union. It combines the theoretical presentation with a short statistical analysis of the immigrants flow in all member states. This theme is of great interest not only at institutional level, but for each of us. Why? According to the World Bank, one in seven individuals in the world is currently a migrant. The inflow of immigrants in the European Union is a reality and is generating serious challenges in many fields of society: law, finance, economy, labour market. Integrating immigrants and their children into the labour market and society as a whole is essential for promoting social cohesion and economic growth of receiving countries. The paper outlines the economic effects of immigration, the main directives of European Union in the field of immigration and some solutions of better integration of the immigrants and their children.*

Keywords: *immigration; European Union; economic effects; directive; integration; immigrants.*

JEL classification: *F22; O15; J15; J61.*

1. Literature review

Nowadays, immigration is a subject of high interest for European Union (EU). There are many debates among EU's decision factors on this theme, having in view the problems that EU has to cope with: an ageing population, the refugee crisis and the anti-immigration politics. Despite all of these, we can't deny the various economic effects of migration.

The authors Jaumotte, Koloskova and Saxena (2016) outline the impact of migration on better living standards. They agree that „in the long term, both high and low-skilled workers who migrate bring benefits to their new home countries by increasing income per person and living standards". Low-skilled workers are essential for the occupation of jobs for which natives are in short-supply.

Furlanetto and Robstad (2016) demonstrated the benefic effects of immigration in Norway through the reduction of unemployment and with positive effects on public

finances, as immigrants support like any native worker, taxes and help to the Gross Domestic Product (GDP) redistribution in society.
Another opinion (d'Artis Kancs and Lecca, 2016) takes into account the refugee integration' scenarios promoted by European Commission. Their study suggests that even „refugee integration is costly for public budgets, in the medium to long-run the social, economic and fiscal benefits may significantly outweigh the short-run integration costs". Integration policy has positive effects regarding Europe's main challenges on demographic issues, labour matters and overall economic growth in the European Union.
Many studies determine the possible impact of EU migration's decreasing. One of these studies, conducted by Portes and Forte analysis the impact of migration falling (considering the Brexit case) on GDP growth and GDP per capita growth. The final effect would be the reduction of this two indicators values.
Peri (2016) argues that the economic effects of immigration has to be analysed through the specific skills brought by immigrants.
One in four immigrants of working age holds a high level of education and they can compete with the native-born persons. In 2012 and 2013, the employment rate of immigrants was three percentage points lower than that of the native-born in EU. But 42% of immigrants with higher-education degrees have jobs that demand lower level of education (OECD/EU, 2015).
Most immigrants have lower incomes and due to this fact they usually live in overcrowded accommodation. Almost two thirds of settled immigrants have adopted the nationality of their host country.
In European Union countries, the children of low-educated immigrant parents are usually going to school. „Education is a strong driver of the labour market integration of youth from migrant backgrounds" (OECD/EU, 2015). The share of young immigrants tends to be high. Generally, the immigrant population has grown by one-third in the last ten years. Women account for about 52% among the immigrant population of working age.
Immigrants are overrepresented in Austria, Belgium, France and the Netherlands, in densely populated areas (OECD/EU, 2015).

2. Legislative framework regarding immigration policy in European Union

The legal basis of immigration policy is represented by articles 79 and 80 of the Treaty on the Functioning of the European Union (EU). The main objective of this policy is to be comprehensive and forward-looking and to be based on solidarity. The European Union has tried to build a balance between regular immigration and EU citizens and to fight against irregular immigration (European Parliament, 2017). In 2009, the Lisbon Treaty introduced new legal measures for integration and also, co-decision and qualified majority voting on regular immigration. Since 2011 the Commission has proposed many developments measures concerning immigration policy, such as:

- The "Global Approach to Migration and Mobility" in 2011;
- The agenda "An open and secure Europe: making it happen" in 2014;
- The European Agenda on Migration in 2015;
- The communication "Towards a reform of the common European asylum system and enhancing legal avenues to Europe" in 2016 (European Parliament, 2017).

The “Global Approach to Migration and Mobility” refers to the EU’s relations with third countries in the sector of migration, stressing out four poles: regular immigration and mobility, irregular immigration and trafficking in human beings, international protection and asylum policy and migration and mobility impact on development.
The European Agenda on Migration establishes strategic guidelines in the field of migration, focusing on: a stronger common asylum policy, a new policy on regular immigration, decreasing incentives for irregular immigration, securing external borders, modernising and revising the Blue Card directive, optimising the benefits of migration policy for individuals and their origin countries (COM 240 final, 2015).
The communication “Towards a reform of the common European asylum system and enhancing legal avenues to Europe” completes the European Agenda on Migration with proposals to attract innovative entrepreneurs to the European Union, developing a more effective model for regular immigration in the EU and fostering the cooperation with the key countries of origin.
The legislation adopted in the field of immigration comprises (European Parliament, 2017):

- Directive 2003/86/EC on the right to family reunification;
- Directive 2003/109/EC on a long-term resident status for non-member nationals;
- Directive 2004/114/EC on the admission of students;
- Directive 2005/71/EC for the facilitation of the admission of researchers into the European Union;
- Directive 2008/115/EC for returning illegally staying third-country nationals;
- Directive 2009/50/EC concerning the admission of highly skilled migrants.

In the table below I have tried to present shortly the European Commission’s Directives applied to all EU member states (except for United Kingdom, Denmark, Ireland) in the field of migration.

Table 1: EU Directives in the field of migration

Directive	Role	Values in 2014 in the European Union
Blue Card	-regulates admission conditions, procedures and residence rights for highly qualified third-country nationals.	-13852 Blue Card Permits issued.
Students and Researchers	-regulates admission conditions, procedures and rights for young and talented third-country nationals.	-228406 first permits issued for study reasons; -9402 first permits issued for researchers.
Intra-Corporate Transferees	-gives an easier and quicker mode for multinational companies to assign highly skilled employees temporarily to subsidiaries in the EU.	-reporting starts in 2017.
Seasonal workers	-establish rules for the entry and stay of seasonal workers from third countries in a member state	-first report in 2017.

Directive	Role	Values in 2014 in the European Union
	for a maximum period of between 5 and 9 months in any 12 month period.	
Long-term residents	-allows member states to grant long-term resident status to third country nationals, who have resided legally and continuously in that member state for 5 years and respect a set of conditions.	-2,9 million long-term residents permits.
Family Reunification	-regulates admission conditions, procedures and residence right for family members of third-country nationals residing in an EU member state.	-
Single Permit	-combines work and residence for third country workers and provides for a set of common rights to be granted.	-1757458 single permits issued.

Source: European Commission

3. Brief statistical analysis on immigration flow in European Union

Eurostat stated that a total of 3,8 million people immigrated to one of the EU-28 member states during 2014. Among this value, almost 1,6 million citizens are from non-member countries, 1,3 million people with citizenship of a different EU member state from the one to which they immigrated, around 870 thousand people who migrated to an EU member state of which they had the citizenship and some 12,4 thousand stateless people (Eurostat).

Regarding the distribution of immigrants in the EU's member states, the picture of this indicator can be illustrated in the table below.

Table 2: Number of immigrants in EU countries in 2008 and in 2015 - thousand-

Country	2008	2015
Belgium	-	146626
Bulgaria	-	25223
Czech Republic	108267	29602
Denmark	57357	78492
Germany	682146	1543848
Estonia	3671	15413
Ireland	82592	76888
Greece	66529	64446
Spain	599075	342114
France	296608	363869
Croatia	16883	11706
Italy	534712	280078

Country	2008	2015
Cyprus	-	15183
Latvia	4678	9479
Lithuania	9297	22130
Luxembourg	17758	23803
Hungary	37652	58344
Malta	6043	12831
Netherlands	143516	166872
Austria	73772	166323
Poland	-	218147
Portugal	29718	29896
Romania	138929	132795
Slovenia	30693	15420
Slovakia	17820	6997
Finland	29114	28746
Sweden	101171	134240
UK	590242	631452

Source: Eurostat

Considering the available Eurostat data, I have chosen to analyse 2015's flow of immigrants compared to the reference year, 2008. In this period there are many European Union countries which have positive evolution regarding the number of immigrants received. For example, Germany recorded the biggest increase from all with 126,32% in 2015 compared with the value from 2008. Significant growths have known also, Estonia, France, Lithuania, Luxembourg, Hungary, Malta, Austria and Sweden. In contrast, countries like Czech Republic, Spain, Italy have registered major declines in the number of immigrants.

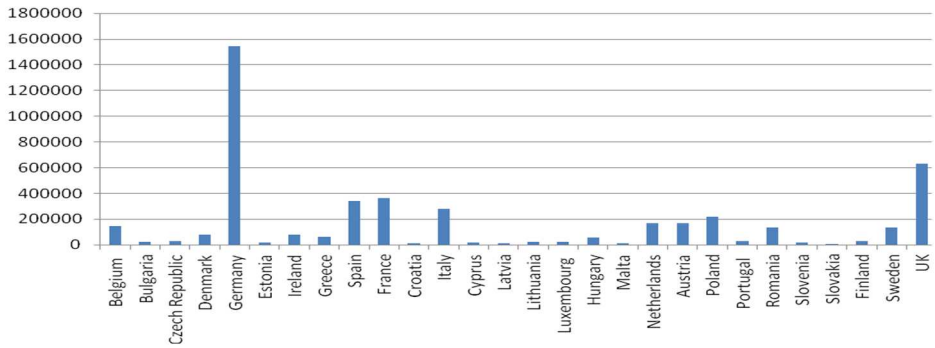

Figure 1: Immigrants flow in the European Union in 2015
Source: Eurostat

Analysing the structure of immigrants flow in 2015 in the European Union member states, the figure below show us the following: Germany accounts for 33% of the EU immigrant population, the UK for 14% and France for 8%. After the first three EU countries in terms of the number of immigrants, the next group of member states

with significant values of this indicator are: Spain (7%), Italy (6%), Poland (5%), Belgium (3%), Netherlands (4%), Austria (4%), Sweden (3%). In the group of countries with the smallest values are: Slovakia, Latvia, Croatia, Estonia, Cyprus, Slovenia, Malta.

4. Conclusions

One in seven individuals in the world is currently a migrant according to estimates, having migrated internally or across borders (World Bank, 2014). The International Labour Organisation estimates that there are 232 million international migrants. The current inflow of immigrants to Europe is unprecedented in terms of the number of people involved and is creating significant challenges for integration policies in host countries. This fact makes essential the development of integration monitoring tools at international level.

The integration of immigrants and their children is high on the policy agenda of the European Union for many reasons. Their integration into the labour market and society as a whole is vital for enhancing social cohesion and economic growth of host countries and for helping immigrants to become productive citizens.

Another solution for immigrants' integration is their active participation in economic and financial activities in their host countries. Financial education is a key factor of influence for this solution. Facilitating social and labour market inclusion contribute also to the integration process and improve their life standards.

In order to protect the social model of European Union and to resolve better the challenges of the immigrants flows, the Commission works on reforms of legal migration to Europe and of integration policies. These comprise: a structured resettlement scheme, a reform of the Blue Card Directive, an EU Action Plan on Integration, a full review of the existing legal migration rules, measures to attract and support innovative entrepreneurs.

European Union's member states have to build close cooperation relations with third country nationals they receive on labour market, in education system and in research field, respecting the EU rules on admission conditions, procedures and rights for immigrants. Immigration can be precious for the economic development and society progression as a whole in the European Union, if the integration policy permits immigrants to become self-reliant and productive in order to maintain the strong position of European Union worldwide.

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ANALYSIS OF ROMANIA'S ENERGY MANAGEMENT FROM 2000 UNTIL TODAY

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Abstract: *The aim of energy management is to provide good quality and proper quantity energy in an economic and continuous way for the energy consumers in different parts of the country with minimal energy costs. We did our calculations because many changes happened during the last 15 years in the energy management of Romania. Year by year the percent of the import energy is increasing. Most of the energy is produced by nuclear, hydro and thermal plants. Looking at the year 2016 in the energy production of Romania the most dominant is the coal and gas usage to produce electric energy in thermal plants. In this paper we wanted to look through the energy management of Romania both in the field of conventional and renewable energy sources based on different aspects. In our research we have made several forecasts considering the consumption and production. In this paper we have reviewed the Romanian energy management from 2000 until recently, since a continuous change can be seen in the energy management of Romania. In the analysis descriptive statistics, dynamic indices and polynomial trend values were used. At the calculations many databases were taken into consideration. For some of the analysis we used the data found on Transelectrica. Besides, we used the data of BP Statistical Review of World Energy and their descriptions. In case of Romania we also utilized the governmental strategies, professional political materials, action plans and different professional studies as well. In the course of our research we used long time series in which the component effect of the time series must be filtered out, so it had to be 'smoothened'. There are two methods for this: the method of moving averages and the analytical trend calculation. We chose the analytical trend calculations (polynomial trend function) based on the proper fitting.*

Keywords: *energy management; electricity; primary energy; energy production; energy consumption; Romania.*

JEL classification: *Q4.*

1. Introduction

In general, energy use can be interpreted on service and household levels where we can differentiate fuel usage, heat and electric energy usage. The heat and electricity has the highest significance in the households. Thermal energy is produced by de-allocating the materials' chemical energy which can happen depending on the technology at the place of usage or centrally in the thermal power plants. In contrary, electricity is the most popular energy form because of its favourable use and

transportation characteristics. Usually it is produced in electric power plants in industrial size.
Forms of energy can be separated into 6 groups according their everyday use: mechanical, heat, light, chemical, electric and nuclear energy. In the process of energy supply the energy is transmitted by the energy sources (primary and secondary energy sources). Primary energy sources are the coal, oil, gas and renewable energy sources (the most significant is the biomass, by-products of forestry and agriculture mainly). Among the renewable energy sources solar, wind, water and geothermal must also be mentioned, however, the amount of these compared to the total energy use is minimal. It can be stated that energy sources produced by the conversion of primary energy sources are called secondary energy sources.
In our research we examined Romania's energy management which analyses the rate of the produced energy, the imported energy, the exported energy and the used energy compared to each other. Energy management on the level of companies and national economy shows how much and what kind of energy is used or with the given energy use how big is the production and the production value (Barótfi et al., 2007). In this paper we have reviewed the Romanian energy management from 2000 until recently, since a continuous change can be seen in the energy management of Romania. In the analysis descriptive statistics, dynamic indices and polynomial trend values were used.

2. Material and method

At the calculations many databases were taken into consideration. For some of the analysis we used the data found on Transelectrica. Besides, we used the data of BP Statistical Review of World Energy and their descriptions. In case of Romania we also utilized the governmental strategies, professional political materials, action plans and different professional studies as well.
In the course of our research we used long time series in which the component effect of the time series must be filtered out, so it had to be 'smoothened'. There are two methods for this: the method of moving averages and the analytical trend calculation. We chose the analytical trend calculations (polynomial trend function) based on the proper fitting.
In the basic case, it is supposed in the analytical trend calculations that the permanent trend (increase/decrease) can be plotted by some analytically descriptive function (linear/non-linear).
The applied polynomial trend curve can be used in case of fluctuating data. The polynomial trend curve is determined by the number of data fluctuations and the arcs on the curve (hills and valleys). If a curve has one hill or valley, the quadratic polynomial trend line must be applied. Among the p-polynoms we know and use the parabola most.
If there are one or two valleys/hills on the curve, cubic, if there are three valleys/hills, cyclic polynomial trend curve must be applied. The general formula of polynomial trend line (based on the method of least squares) is the following: $y = \beta_0 + \beta_1 t + \beta_2 t^2 + \beta_3 t^3 + ... + \beta_p t^p + \varepsilon_t$ where β can be considered as constant.

The reliability (and the strength of the statistical relation) of the trend line can be assessed by the value of R^2 (discrimination equivalence). The value of R^2 can be between 0 and 1 which shows how close the estimated values are to the real data of the trend line. The trend line is the most reliable when the value of R^2 is 1 or very close to it. If the value of R^2 is above 0.7, it shows strong statistical relation between two variables. If the R^2 value is between 0.5-0.7, it is mid-strong, between 0.3 and 0.5 the relationship is weak. If the value of R^2 is under 0.3, it is not worth talking about statistical relations at all.

2.1 Energy management of Romania

The most important raw materials of energy production are the primary (fossil) energy sources. Primary energy sources are those energy sources which contain chemically, physically or nuclear, renewable or non-renewable energy (Energy, 2017).

According to another definition, the fossil (petrified) energy sources were created by vegetal and animal remains under airless conditions during millions of years (I1). Their advantage is that their energy density is high and they contain mostly coal and hydrogen compounds. These can be solid (coal, lignite), liquid (oil), or gaseous (field gas).

Whatever definition is followed, the most significant fossil energy source is the coal in the world now.

Considering the energy production of Romania, there are fossil and nuclear fuels (coal, oil, gas and fissile materials) and the renewable energy sources and waste are also present in the energy production. In the examined period (and also before that) gas and oil have the highest significance. These two materials come out at almost 50% of the total energy production every year.

It is interesting that compared to other European Union member states data are expressed in oil equivalence in Romania (10000 kcal/kg). Oil equivalence is the measurement for energy which gives the quantity of raw oil to be burnt for producing a given amount of energy.

2.2 Energy production of Romania

If we take a look at the rate of primary energy sources, it can be stated that the highest rate had the gas (25-30%) in Romania which only slightly overcame the oil in the second place. Considering the time series data, we can say that while in 2002 the rate of fossil energy sources was more than 80%, it decreased to 68% in 2015. From 2000 to 2015 it means 6.44% decrease.

It is important to notice that the renewable energy sources have higher and higher significance in the energy production. Renewable energy sources are those sources which do not run out but reproduce during their use (solar, wind, geothermal energy, wave, tide or water energy, biomass, energy produced directly or indirectly from biomass, furthermore, gas from landfill and sewage treatment plants, and biogas). With their use the environment is not polluted and the energy stocks of the Earth is not decreasing. Alternative plants are those which produce energy from alternative energy sources. Nowadays, the most widely used renewable energy source is the water in Romania, and then the wind energy.

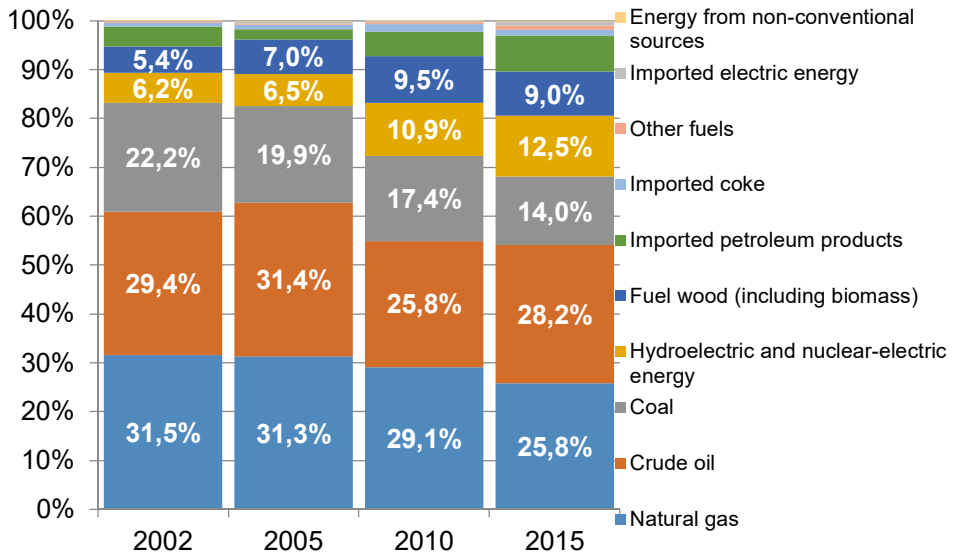

Figure 1. Primary energy sources in Romania from 2000
Source: Own calculation based on NIS data

The examined period can be separated into two periods concerning the total energy production (Phase 1 and 2) (Figure 2). The first phase is the period of 2002-2008 when there was 9.5% increase compared to the base year. The second phase is from 2008 until today when there is a decreasing tendency. There is 15.3% decrease compared to 2008. According to our forecast, this tendency will continue slightly in the future. This is due to the more mature energy production, and also the energy saving also plays a role in decreasing the quantities.

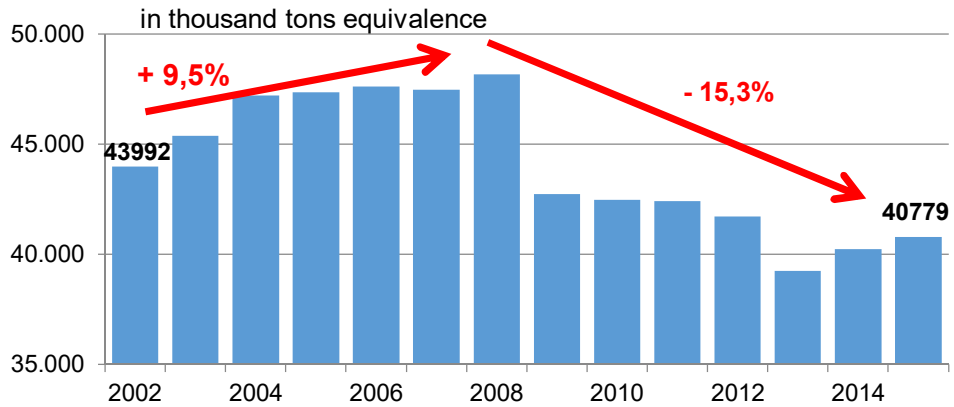

Figure 2. Quantity of primary energy sources in Romania
Source: Own calculation based on NIS data

60-65% of the total energy comes from own production, 35-40% is imported in Romania in the examined years. Considering the rate of produced and imported

energy, it can be stated that the produced quantity always exceeded the imported quantity (Figure 3).
From 2009 due to the Romanian regulations (and EU directives) the production has increased, so the dependence on import energy has decreased a bit.

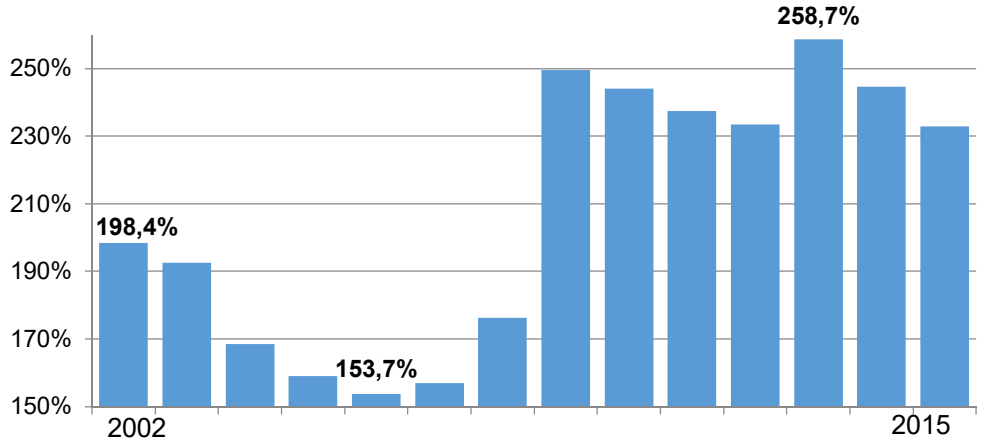

Figure 3. Production of Romania between 2002-2015
Source: Own calculation based on NIS data

In each of the examined years the production was almost the same (27 million oil equivalence), but in parallel with it the quantity of import decreased from 14 to 11 million tons equivalence.
In case of raw materials in Romania raw oil, gas and electricity (nuclear, wind, water plants and solar energy) were used for energy production. In the last 15 years the rate of coal, raw oil and gas has slightly decreased with the higher rate of electricity. The electricity rate increased from 10.3% in 2000 to 22.6% in 2015 (Figure 4).

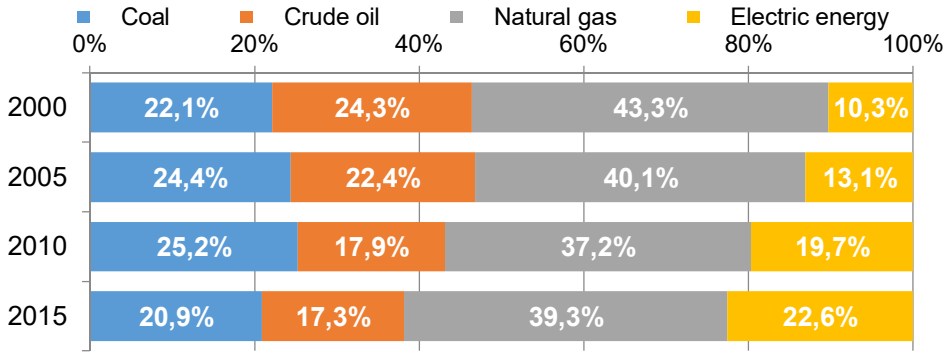

Figure 4. Materials of energy production in Romania between 2002-2015
Source: Own calculation based on NIS data

Recently in Romania electricity is produced in power plants by converting primary energy sources. The produced electricity is transported to the consumers by devices through a network.

Electricity is produced in thermal, water and nuclear power plants. In Romania the most important plants are the nuclear ones. Nuclear plants produce great amount, cheap electricity by using small amount of fissile materials (in a safe way). During the production it is aimed to avoid climate depletion. Its advantage is that the fissile materials can be stockpiled for years, so the unit cost of electricity production can be planned more or less on a long term.
In Romania (as in all of the EU member states) the most important task of the following years is to lengthen the existing blocks' running time in a way to be suitable from security, technical and economic points of view.
At the electricity production it will be aimed to use more renewable energy sources (primarily biomass and water), because they can be good supplements to the recently used materials. Renewable energy sources will never be competitors to the conventional raw materials because of the quantity, but by using renewables the dependence of Romania can be decreased.
Comparing Romania's with the neighbouring Hungarian power plants' net built-in capacities, we can state that both in Hungary (73.4%) and in Romania (42.6%) the thermal plants have the greatest significance based on the official statistic data (Figure 5).
In Romania thermal plants are followed by hydro power plants (31.6%) and the wind power plants. The significance of other power plants is negligible. In contrary, in Hungary thermal plants (the most significant is the Mátrai and Dunamenti thermal plants) are followed by nuclear power plants (in Paks) with 22% rate. The significance of other power plants is not major.

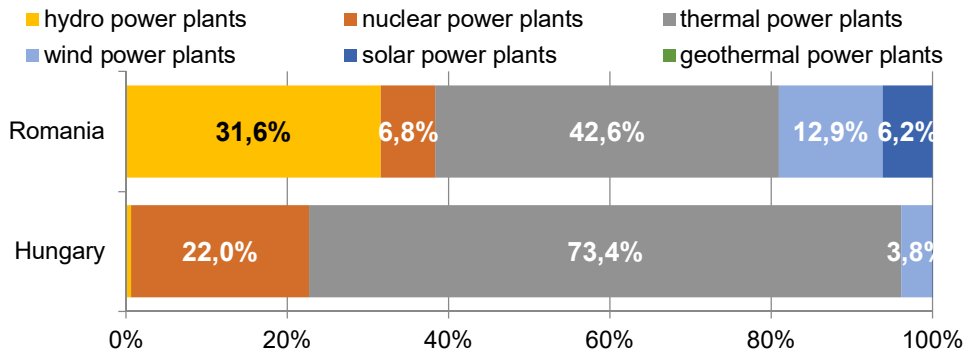

Figure 5. Net built-in capacities of Romanian and Hungarian power plants in 2015
Source: Own calculation based on NIS data

2.3 Energy consumption of Romania

Within energy consumption we can differentiate gross Romanian energy consumption, final energy consumption and energy consumption per capita.
Gross energy consumption decreased from 32 million tons equivalence in 2000 to 25 million in 2015. Based on the polynomial function, we can state (with 80% reliability) that in the next year the gross energy consumption will increase by 851 thousand tons equivalence.

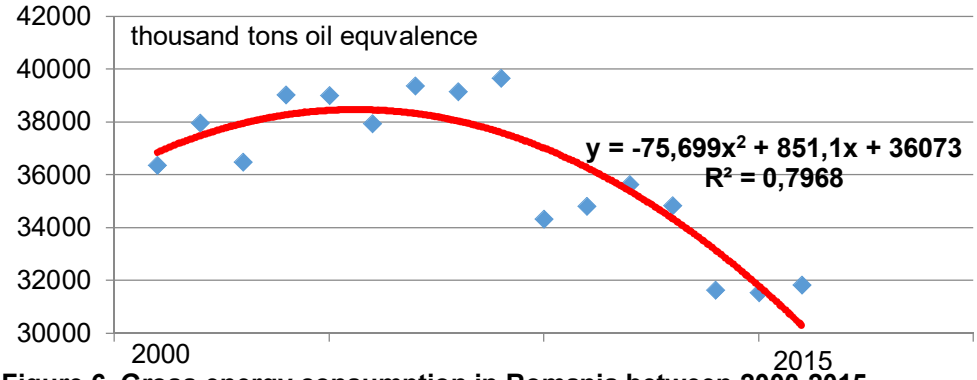

Figure 6. Gross energy consumption in Romania between 2000-2015
Source: Own calculation based on NIS data

Within the gross energy consumption, the gas has the highest rate in all of the examined years, but this value is continuously decreasing (Figure 7). Based on our forecasts, in some years the rate of raw oil and oil products will exceed the gas according to the official statistical data.

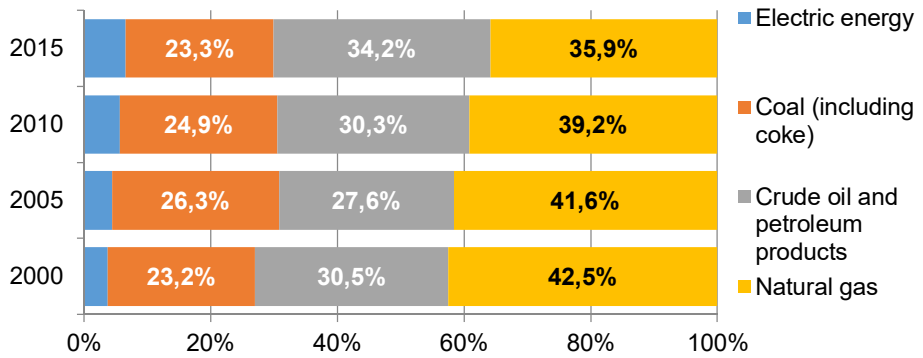

Figure 7. Subgroups of the Romanian gross energy consumption between 2000-2015
Source: Own calculation based on NIS data

Two users of energy are the population (household consumers) and the industrial users. Their significance has decreased in the last 15 years (5% in the population, 10% in the industry) compared to the transportation and broadcast, which value has increased in the last 15 years by 10%. The significance of agriculture and other activities is not major.
At last we would like to present the analysis of energy consumption per capita. With 90% reliability we calculated that based on the last 15 years' data this index will increase by 28.8 tons oil equivalence per capita. This means positive advance for Romania.

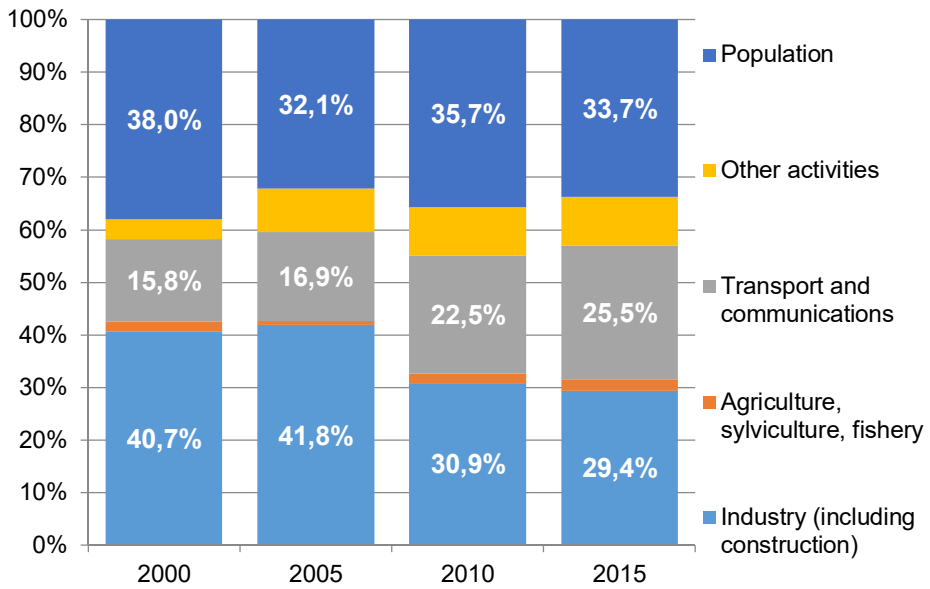

Figure 8. Subgroups of final energy consumption in Romania between 2000-2015
Source: Own calculation based on NIS data

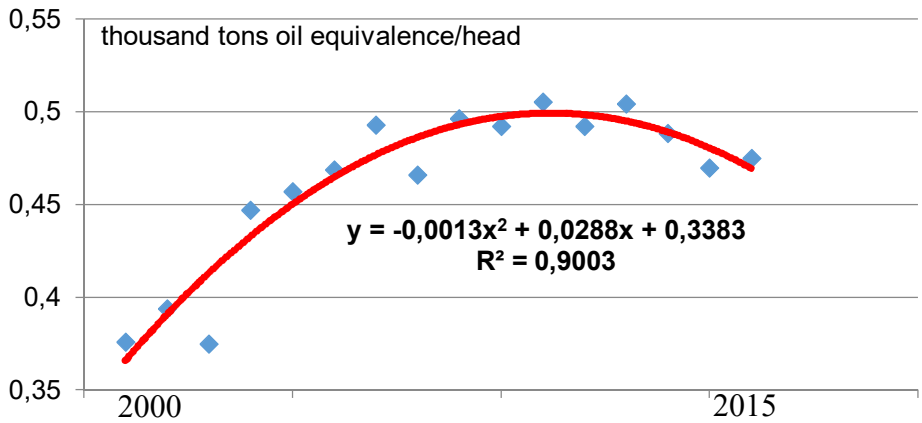

Figure 9. Energy consumption per capita in Romania between 2000-2015
Source: Own calculation based on NIS data

Summary

In this article we examined Romania's energy management from 2000 until now. In our opinion this topic is relevant, since by the accession to the European Union Romania has undertaken that it will use more and more renewable energy sources in the energy production beside the conventional energy production. Of course, renewable energy sources cannot substitute but supplement the conventional sources.

In this paper we have taken a look at the energy production and consumption in the last 15 years, and we have made forecasts on a short term.

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THE BUSINESS PERFORMANCE AND COMPETITIVENESS OF THE LARGE ENTERPRISES OPERATING IN HUNGARY

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Abstract: *The study examined the business performance and competitiveness of the large enterprises operating in Hungary. The company competitiveness research is a topic relevant and can be considered as current economic problem, because the company stakeholders are meeting with the fact on a daily basis that the power and intensity of the competition is constantly growing. Hungarian and foreign analysts and researchers are continually analysing this topic, which also verifies the actuality of the competitiveness surveys. In recent years numerous bank and large corporation bankruptcy and financial and economic crisis also pointed out to the danger and power of the speculation. Therefore it became clear for the stakeholders that they should have reliable and real information about the business performance and competitiveness of the companies. This information is the financial statements of the corporations, which are prepared by accounting professionals and disclosed to the public in accordance with legal provisions. The company stakeholders should continually monitor the changes in the economic environment, in view of available creditable information they should find correct answers to these changes in the different competition, and adapt in the most appropriate way. The large enterprises performances are significant in the national economy level in the gross value added production, in export ensuring and in employment. Their economy is very important, and the knowledge and examination their business performance. The forthcoming changes in the global economy, the system change and the EU accession have been constantly challenging the companies; they force them to face with competition in local and global levels, therefore the creation, preservation and growth of competitiveness became a basic objective for every corporation. The result of every company activity appears in the business performance, which can be analysed with financial indicators, and in comparison with the competitors' results characteristics and peculiarities of their competitiveness can be revealed.*

Keywords: *corporate economy; business performance; competitiveness; globalization.*

JEL classification: *M21; L25; I2; M11; F40.*

1. Generally Introduction or Background

The technical, economic paradigm shift, the globalisation of the economy, the Hungarian political and economic system change, accessing the European Union affected to the frame and operation of the Hungarian business sphere. The major proportion of the state enterprises got into domestic or foreign private ownership.

The aims of the enterprises and companies were directed to the creation of better production and sales conditions, high income and profitable management, market share growth and export activity broadening, which were demanding tasks for them. The new economic environment, where they started their activity, the lack of the business connections, business traditions and institutional framework made difficult the start-up firms' operation. The economic weight and role of the foreign-owned enterprises have steadily increased, by which a company duality was established based on foreign and domestic-owned separation. The Hungarian owned companies start with a handicap over the foreign owned companies with activities on international level. It is due to the lack of technical progress, technology level, operational practice, leadership skills and capital shortfall. The two company groups should find the appropriate answers within the same national economy and global economic life to the questions arising from the new economic environmental issues. That is the way to increase their business performance and competitiveness. The forthcoming changes in the global economy, the system change and the EU accession have been constantly challenging the companies; they force them to face with competition in local and global levels, therefore the creation, preservation and growth of competitiveness became a basic objective for every corporation. In today's modern market economy, where the competition affects the economic activity, it is important for the stakeholders to have creditable and real information about the enterprises' operation, business performance and competition. The owner would like to know whether the investment returns, the management and employee wonder about ensuring their subsistence in long term. The creditors would like to make sure the solvency, the competitors would like to estimate the main attributes, the government is interested in the assurance of stable tax collection and in the contribution to the national economy performance; and for the partners the reliable business connection is important. For the stakeholders it is necessary to have dependable and correct information about the enterprises' operational features, business performance and competitiveness to give the most appropriate answers in every situation for decision-making.

The main question of the research what is the nature of the business performance and competitiveness of the large corporation sphere operating in Hungary. During the research the basic aim is the capture of the business performance featured competitiveness, and with the examination of the business performance and competitiveness' connection revealing the new knowledge with regard to the ten years after the EU accession (2005-2014). The following hypothesis was formulated in connection with the phrasings in the research aims: The companies can be ranked into groups with the help of the cluster analysis according to their business performance. It creates a possibility to explore the distinctive competitive advantages and disadvantages, thereby referring to their competitiveness. The size of the enterprise has a significant effect on the business performance and corporate competitiveness transformation.

The most important interest of every company is to operate their tools in the most efficient way in the value-added process. The competitive advantage can be received from the capping of the company resources usage, therefore firm level competitiveness can be measured by the business performance with the profitability, efficiency financial indicators (Hansen and Weernerfelt, 1989). Porter (1990) the new entrants in the market, the supplier bargaining power, the buyer bargaining power,

the threat of the replacement products and industry concurrent enterprises mean the company competitiveness in the five competitive force model.

Table 1: Company competitiveness economic and competitive features

Competitive features	Economic features
Strategy framing, scheduled operation, clear company directives	Company size
Change, ability to flexible adaptation to the environment	Physical and human resources beeing available
Company age and past, good repute	Financial stability, solvency
Technological standards, innovation ability	Owner system (private,public)
Networking, connection with other companies within the given industry	Complexity of the activity
Management age, qualification, professional experience, loyality	Profitability
Social responsibility, ethical business behaviour	Corporation, ownership
Corporate culture	Efficient operation with the resources
Networking, connection with public bodies	Indicators per employee mutatók, productivity
Organisational structure, organisational hierarchy and coordination	Cost and time management
Developing information system, effective maintenance	Taxation
Management efficiency	Durable operability and growing ability
Networking, connection with the suppliers and buyers, bargaining power	Sustainability, eco-efficiency
Co-ownership willingness to cooperate	Creditable, real financial and accounting information
Balance of corporational and individual purposes	Working location, infrastructure of the region
Product ans service quality, product's brand name, buyer value creation	Profit making ability
Knowledge of the leaders and employees, preservation of tacit knowledge within the company	Formalisation of key performance indicators within specific industry
Networking, connection with multinational companies	The foreign working capital in the own capital

Sources: Porter 1990; Barney 1991; Grant 1991; Hamel and Prahalad 1994; Kale 2002; Shen and Liu 2003; Lu et al. 2008, Syverson, 2011

The resource-bases approach indicates that the basis of the company competitiveness are those specific resources which are inimitable, represent value and their efficient usage is a competitiveness increasing factor, which can be measured by the enterprises' financial statement data with the help of financial indicators (Barney 1991; Grant 1991; Kale 2002). The financial indicators illustrate the sales growth, the profitable economy and the expansion of the market share for the stakeholders, and through these factors the efficiency of the resources usage and the impact to the corporations' competitiveness can be measured (Prieto and Revilla, 2006; Chen et al., 2009). The company competitiveness is the joint of the economic and competitive attributes, this way the corporations with the efficient usage of their resources are able to have better business performance. They are able to give the most suitable answers to the changes in the economic life, to the market signals and expectable development; and capable to contribute to the sustainable development by creating the balance of the economic, social and environmental factors.

2. Research methodology

In order to certify hypothesis, empirical examination was proceeded. The study analysed that how the companies' economic effectiveness appears in the business performance, and what kind of particular features have the large companies' business performance and competitiveness. It was examined the business performance of 1455 large companies with the help of cluster analysis method.

Table 2: Key data of the companies involved in the research

Industry descriptio	Hungarian ownership (quantity)	Foreign owned (quantity)	Total (quantity)	Total (%)
Building industry	17	43	60	4
Industry	63	387	450	31
Trade, repair of motor vehicles	43	356	399	27
Agriculture	30	9	39	3
Accommodation, catering	3	6	9	1
Transportation,wareh ousing	27	40	67	5
Other	126	305	431	30
Total	309	1 146	1 455	100

Source: own composition

The chosen sample, they consisted of the companies' real and distinguished units, well represented the companies operating in Hungary both in industry and owner composition (Table 2). After the selection, it was calculated the most important business performance indicators from the public data between 2005 and 2014 in ten years' average, which provided the database of the examination. With the collection of the public company data one of our goals was to build a reliable database for the research of the large companies' activities. The research procedure was done in the

SPSS system with cluster analysis. Among the non-hierarchical methods k-central cluster analysis was chosen, whose one of the main characteristic is that we give the numbers of the clusters at the beginning of the procedure's execution.

3. Research results and findings

3.1. The main features of database

With the cluster process in the SPSS programme it was managed to create four groups with 1455 enterprises included in the analysis according to their ten year average financial indicators, which creates the possibility to investigate their business performance and competitiveness.

Table 3: **The main features of the reference clusters 2005-2014**

Clusters statistical indicators		Employees (person)	Revenue (thousand EUR)
1	Number of items	165	165
	Average	280	82 785
	Deviation	1 098	463 252
2	Number of items	381	381
	Average	194	50 622
	Deviation	489	191 180
3	Number of items	262	262
	Average	191	48 982
	Deviation	981	200 827
4	Number of items	647	647
	Average	321	51 784
	Deviation	1 744	215 003
Total	Number of items	1 455	1455
	Average	260	54 491
	Deviation	1 314	248 272

Source: own composition in SPSS programme

3.2.The key features of the business performance and competitiveness of the company groups resulting from the cluster analysis

Through the financial indicators, with the help of the cluster analysis the enterprises can be ranked into groups, which cretaes possibility to reveal the distinctive competitive advantages and disadvantages, thereby referring to their competitiveness. The presumption was that the size of the company has significant influence on the business performance and to the conformation of the company competitiveness. An analysis was conducted with unfolding the major features inside the group to verify the statement, and also industry analysis was applied. It was determined that the company group number 1 is the largest size and best performing one. The best performing companies are making activities such as telecommunication, financing, broadcasting, cable television service, arranging entertainment, asset management, property utilisation, real estate management, buying and selling of own real estate, household technology, construction, real

estate development, car manufacturing, manufacturing of medicines, energy production and distribution. Cluster 2 and 4 show diverse picture, but at cluster 3, which is the smallest size company group according to the average turnover and employment, it is clearly visible that they performed blow the average and lagging behind the other clusters. It was verified with the analysis, that the size of the company has a significant impact on the business performance and to the shaping of the company competitiveness. It was determined that the company group number 1 is the largest size and best performing one. Cluster 2 and 4 show diverse picture, but at cluster 3, which is the smallest size company group according to the average turnover and employment, it is clearly visible that they performed blow the average and lagging behind the other clusters.

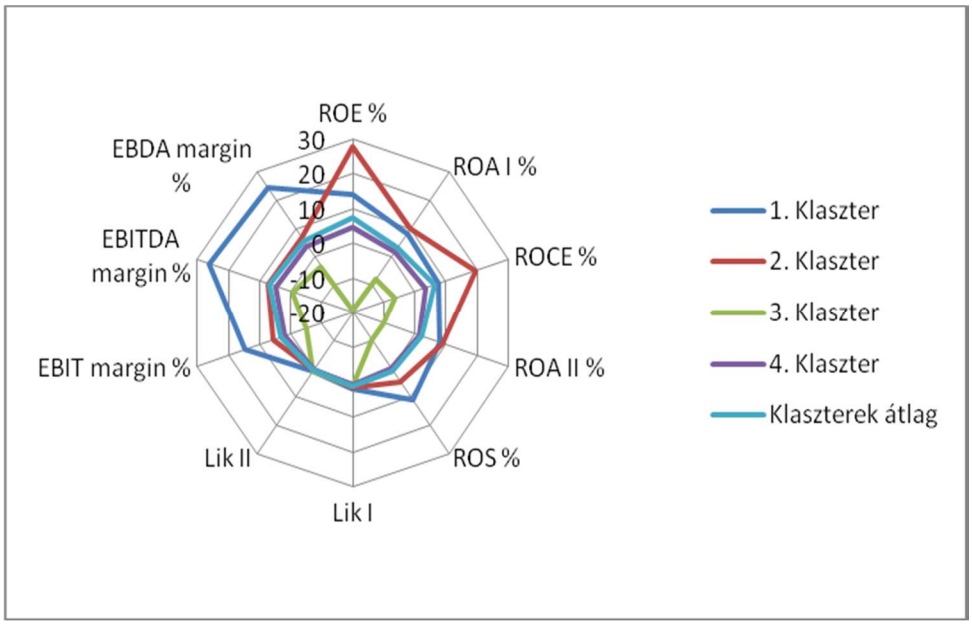

Figure 1: The business performance of the analysed large corporations 2005-2014
Source: own composition with data of SPSS Programme

ROE illustrates the return and profitability of the own capital. The average value of the ROE was 7,44%, and 18,85 % deviation characterises the average. In the case of Group 2, where there are 381 companies, the indicator's value was remarkably above the average (27,81 %), this group treated the most effictively with the corporation capital. At Group 1, there are 165 companies, the performance is above the average (14,02 %). Group 4, which shows the data of 647 enterprises, performed below the average, but the value of the indicator is positive (4,58%). The Group 3, where are 262 corporations, reached negative result and is below the average (-19,27%). The return of the tools, and the efficiency of the management with the tools are examined in the case of ROA I. Among the resources only the own capital is in the denominator of the ROE. The average value of the ROA I. is 3, 03%, which is lower than the value of the ROE, and 8,88 % deviation characterises the average. The value of the indicator is above the average performance at Group 2 (10,01 %) and at Group 1 (8,35 %). Group 3 performed below the average with positive value

(2,01%), while the performance of Group 4 is negative (-7,99 %). The ratio is similar like in the case of ROE, 82 % of the corporations operates its tools effectively referring to the result before tax.
ROCE is the durable resources' return, the index of those efficient usages. The durable resources are the own capital and the long-term obligations, which ensure the company's capital supply for a longer period. The own capital is ensured by the owners for the company, the long-term obligations are generally bank, or parent company long-term credits. The average value of ROCE is 6,31 %, which is between the value of ROE and ROA. The average value of ROCE is characterised by 13,92% deviation. Group 2 (19,52 %) and Group 1 (7,47 %) are above the average. Group 3 performed below the average with positive value (3,42 %).Group 4 reached negative performance (-6,5 %), it performed below the average. For the 82 % of the corporations the return of the durable resources and the efficient usage is appropriate. In the case of companies in Group 4, what is the 18 % of the sample, the result of the index refers to the fact that they do not treat efficiently with the available long-term resources by their management. he value of ROA II is lower, because the tax payment obligation worsens the rate of the tools' return and the efficient usage of the tools. This illustrates well that the rate of taxation affects to the economy of the enterprises, because the taxed result creates the possibility for dividend payment, or increases the amount of own capital the in the form of cumulative reserves. The value of the deviation are 2.02 % and 9,25 % in ROA II. Group 2 (8,91 %) and Group 1 (7,76 %) reached above the average performance. Group 4 implemented below the average but still positive (1,39%) tool effectiveness after taxation. The cause of the negative and below average performance of the Group 3 (-10,09 %) may be explained by the loss-making operations, and on the one hand they cannot use the tools effectively, on the other hand they cannot replace the tools, or obtain new instruments. ROS is the index of return on sales, the rate of the taxed result and turnover shows what proportion of the turnover from business activity remained at the company as a taxed result, how profitable was the sales from main activit. The average value of the ROS is (0,69 %) which means that in the case of 1455 large corporations included in the research 0,69 % of the turnover remained as a taxed result, the profitability of the turnover is very low. the average value is defined by a 10,02 % deviation.
While in the case of previously introduced return indicators Group 2 reached the most remarkable result, till at the ROS indicator Group 1 (10,98 %) outdistanced Group 2 (4,78 %) with its performance. The low rate of the ROS average value was caused by the turnover return and profitability of Group 4 (0,02 %) and Group 3 (-10,07 %). 909 companies (62 %) from 1455 companies have 0 around, or negative ROS indicator value. The enterprises need to increase the turnover or it is necessary to apply a significant expense reduction oppositely with the reached turnover.
The development of the EBIT, EBITDA and EBDA was analysed to the turnover within the durable operability and growing ability. The turnover is the revenue of the enterprises' main activity, which creates possibility to the compensation of the expenditures and expenses. The growth of the turnover contributes to the growth of the company and improves the market position. In the Hungarian accounting the EBIT is the operating (business result), which gives a view of the main activities and results of the companies. EBIT margin represents that what operating (business) result appear on the turnover, how efficiently carrying out the enterprise's main activity. The average value of the EBIT margin is 3,08 %, deviation is 8,78 %. Group

1 (14,77 %) and Group 2 (5,81 %) are above the average value. Group 4 is below the average, but still produces positive value (1,76 %). Group 3 (-4,97 %) during the operating (business) activity could not reach positive result or recognise profitability.The turnover do not create possibility to cover the expenses and expenditures at these companies, refers to that their long-time operation and growing abilities are not provided. The EBITDA is a half cash flow based indicator, because to the operating (business result) category, or rather the expense accounted depreciation will return to the after tax balance accounted over the year, because it has no cash outflows at the companies. The EBITDA margin examines the EBITDA revenue correlated ratio and gives a reliable view of the enterprises' working efficiency and growing ability. The higher is the value of the index, the better ensured is the durable operability and growing ability. The average value of EBITDA margin is 6,84 %, the deviation is 10,34 %. Group 1 (26,16 %) and Group 2 (7,11 %) are above the average with their performance. Below the average performed Group 4 (4,7 %) and Group 3 (-0,42 %). While Number 2 company group's business performance was better within the Return and profitability factor, Group 1 received the leader role within the Durable operability and growing ability factor. The EBDA likewise to EBITDA is also a half cash flow based indicator, because over the year the expense accounted depreciation will be added to the balance sheet, because it has no cash outflows at the companies. The balance sheet, the result after tax and dividend payment, what increase the own capital; contribute to the growth of the corporation's assets and size. If the balance sheet is added to the depreciation, we filter out the differing amortisation policy at the enterprises comparison. EBDA margin shows what proportion get into the turnover from the total value of the balance sheet and depreciation. The average value of EBDA is 5,63 %, deviation is 10,23 %. Group 1 (24,46%) and Group 2 (6,48 %) are above the average which is similar to the EBIT and EBITDA indexes, and verifies the leader role of Group 1 in view of Durable operability and growth. Group 4 (3,96 %) performed below the average, but it is still considered as well-performing. Group 3 (-3,35 %) reckons Lagging ones, because of its loss-making operating (business) result.
The index of Liquidity I. shows the rate of the enterprises' most mobile current assets in the rate of short-term obligations, which average value is 1,22 and the deviation is 3,15. Group 1 (2,02) and Group 2 (1,41) achieved performance above the average, and Group 3 (1,18) and Group 4 (0,92) performed below the average. The average value of Liquidity II. is 0,54, which is considered as low value, it does not reach even 1. It means, that they cannot satisfy the payment obligations, only if their assets flow in from the customers or from the connected enterprises, but with all of these it can be assumed that they do not have payment problems. The average is characterised by 2,26 deviation. Group 1 (0,96) and Group 3 (0,65) exceed the average value. Group 2 (0,5) and Group 4 (0,41) are below the average. The assumption was verified, because in Group 1 there are 117 foreign companies, in Group 2 there are 322, in Group 3 there are 221, and in Group 4 486 companies are.

4. In conclusion

Four company groups evolved: above the average is the first Group the Especially well-performers (Advanced), the second Group is the Well-performers. Performing below the average was the Group 4, the Less well-performers, and the group 3 is the Poorly performers (Lagging ones). The research was continued with revealing

the key features inside the group, and with industrial analysis. It was stated, that the company group number 1 is the biggest size and biggest performing company group. The companies with the best performance are making activities like telecommunication, financing, broadcasting, cable television service, arranging entertainment, asset management, property utilisation, real estate management, buying and selling of own real estate, household technology, construction, real estate development, car manufacturing, manufacturing of medicines, energy production and distribution. Cluster 2 and 4 show diverse picture, but at cluster 3, which is the smallest size company group according to the average turnover and employment, it is clearly visible that they performed blow the average and lagging behind the other clusters. In the hypothesis the presumption was that the size of the company has significant influence on the business performance and to the conformation of the company competitiveness. It was conducted an analysis with unfolding the major features inside the group to verify the statement, and industry analysis was also applied. It was determined that the company Group number 1 is the largest size and best performing one. The best performing companies are making activities such as telecommunication, financing, broadcasting, cable television service, arranging entertainment, asset management, property utilisation, real estate management, buying and selling of own real estate, household technology, construction, real estate development, car manufacturing, manufacturing of medicines, energy production and distribution. The goal of the study was achieved; it presented the domestic large companies' business performance and pointed out that the company competitiveness consists of economic and competitive factors. The economic factors can be displayed through the financial indicators, and competitiveness related connections can be revealed from them. The analysis pointed out why the company size is so important in the company competitiveness.

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CORPORATE SOCIAL RESPONSIBILITY (CSR) PRACTICES OF ISLAMIC BANKS IN JORDAN A CASE STUDY ON JORDAN ISLAMIC BANK

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Abstract: *Nowadays Corporate Social Responsibility (CSR) is a common concept in the world, and it is considered as a part of the culture of any organisation. Many banks in Jordan realise the importance of adopting CSR which helps in community building, sustainable development and increases productivity by presenting distinctive programs that support small and medium enterprises, and also it contributes to solving the problems of unemployment and poverty. In line with modernity, CSR is being seen as the source of new competition edge for the banking sectors specially the Islamic banks of Jordan. Practicing CSR is not only to improve community relations but also as a source of significance that Islamic banks can benefit from in Jordan. The purpose of this study is to provide deep understanding of the practices of CSR of Islamic banks in Jordan. The study has taken Jordan Islamic Bank as a case study to shed light on the contribution of the bank and its role in implementing CSR in several sectors. This study has found that the amount of contribution by Jordan Islamic banks to CSR activities is significant in proportion to their profit. The information disclosure has helped stakeholders to get an in-depth insight. Provide social contribution in these sectors and continue with renewable energy and water consumption programs. Furthermore, increased attention to sponsorship of scientific conferences and educational institutions are strongly recommended due to their positive impacts on the contribution of employees and other parties to the costs of employees' study. Also, encouragement for employees to participate in social activities and voluntary work are essential, similarly to continue funding in the health and education sectors. Training may provide help for the bank to raise their academic qualifications; in addition, it is a new added value for the bank, this is why the Jordan Islamic bank pays increasingly more attention to social and environmental issues.*

Keywords: *Corporate social responsibility; Banks; Islamic Banks.*

JEL classification: *G21; G29; M14.*

1. Introduction

In the last decades the Islamic banks have witnessed rapid expansion of Islamic banking services inside and outside the Arab countries. The financial products that are offered by Islamic banks must not infringe or contravene with the Sharia, and the law of human behavior. Islamic values and edicts upon which banks give the work a significant role in social issues. Consequently, the age of banks and length of implementations of Islamic banking in the respective countries does also matter (Zulfiqar et al, 2014).

The Islamic Banks business practices are based on a system of values and rules which control its trajectory, determine its milestones, and regulate its policies in order

to achieve its goals. This system is represented, in its most essential form, by a network of applied precepts in Sharia'.
To achieve the concept of community sustainability that meets the needs of the community and supports the national economy by building partnerships with official government institutions and the civil society organizations to provide products characterized by social responsibility and contribute to the preservation of the environment and culture. In addition to the contributions and participation in initiatives and programs that serve the community as a whole to achieve the overall vision in the field of sustainability, which its impact positively reflects on everyone. There is a pressing need for the study of social responsibility in the Jordanian Islamic banks (Association of bank in Jordan, 2017).
The banks affirm that its role is not limited to its existence as a business institution, which strives to realize the interests of its shareholders, for it is also a joint investment institution which strives to achieve the interests of its investors, just as it is a social institution that strives to recognize and meet societal needs as much as possible. All this stands side by side with the existence of the bank as a national institution, which endeavours to actively support national socio-economic development. (Central Bank of Jordan, 2017)
The Jordan Islamic bank to amass national savings, and channels those savings, directly into social and economic activities and programs, which are capable of producing goods and services of real benefit to peoples' lives. Likewise, the bank assumes to provide those services and business transactions which life demands, without handling goods and services which might harm the public or the national economy. (Social Responsibility Report, 2015)
The bank's commitment to Sharia' Law requires its activities to aim not only for the fulfilment of material needs, but also for the practical embodiment of Islamic values in reality, and for the achievement of society's comprehensive interests, by means of attaining a balance between the interests and advantages of all those bearing a relation to the bank, including shareholders, employees, investors, financiers, and beneficiaries of the funding and investments undertaken by the bank, and of the services which it provides; a process which confers benefit on society and the national economy on the whole.
Activities, policies, and goals are conducive to improving wealth and income distribution between members of society, and moving towards the achievement of a type of justice among them. Just as they are conducive, on the economic level, to guaranteeing a more efficient use of economic resources, and higher productive capacity of available national capital, which helps, in turn, to increase national production, and to increase exports, and to furnish new sources of foreign currency, just as it contributes to the expansion of job opportunities, in service of the developmental and social and economic goals outlined above. Social Responsibility Report, (2015) the programs and initiatives, thus making social responsibility an integral part of the strategy of the bank that reflects on its reputations and operations.
Banks in Jordan are seeking to achieve through the practice of social responsibility a number of things such as:
The formation of a marketing interface which reflects societal role and another point is that it would support and care for community service which might attract customers. (Qandah, 2012)
International Organization for Standardization (2010) issued (ISO) standard ISO 26000 which is related to corporate social responsibility, in order to help them

contribute to sustainable development. This standard has identified seven areas of social responsibility: (ISO, 2010)
1. Governance. 2. Human Resources. 3. Workers. 4. Environment. 5. Operations. 6. Customers. 7. Community.
The Dutch Economic and Social Council has considered that the company's contribution to the welfare of society includes achieving value in three areas, namely: (a) the economic dimension, (b) the social dimension, (c) the environmental dimension, and it must integrate the social responsibility in the mission, vision and philosophy of the company and its culture. (Elasary, 2011)

2. Literature Review

The definition of Islamic bank is a bank that is governed by the Islamic law, which is called the Shari'ah. This commitment according to the Islamic law is expressed only in modes of financing and its contractual relations with suppliers of funds Basah and Yusuf, (2013) and it meets with Mannan, (1982) that the Islamic bank is a financial institution, that's applies statutes, rules and procedures and commitment to the principles of Islamic Shari'a and prohibit the receiving and paying of interest (riba) on any of its operations.
It can be distinguished that Islamic banks are conventional by foundation, management and products. (Lewis and Algaoud 2001) In Islamic banking, the banks are disallowed to offer a business in term of goods or services with an interest rate which considered as forbidden (Aḥmad, 2007).
In the final decades of the last century Islamic banks has spread rapidly, that is more than 200 Islamic banks and financial institutions operating worldwide with over $200 billion in assets. (Wilson 2002).
Jordan is one of the most developed Muslim countries. In Jordan the Islamic banking was introduced in 1978 with the name of Jordan Islamic Bank of Finance and Investment (JIBFI). Beside the JIBFI there were two other banks; Jordanian Islamic banking industry has strong growth patterns as all the three banks efficiently perform with increased product innovation capacity (Ajlouni & Omairi, 2013). The central bank of Jordan has taken many steps to initiate the parallel system of banking that can address the issues of interest and "Hlalal" that means not forbidden transactions. (Zulfiqar et al, 2014)
Corporate Social Responsibility (CSR) has been defined as the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large. Holmes and Watts (2000) mentioned that this is consistent with the definition of the European Union which states the "concept whereby companies integrate social and environmental concerns into their business operations and in their interaction with their stakeholders on a voluntary basis" (European Commission, 2001).
Hunati and Hasan (2008) study showed that there is a recognition of the concept of social responsibility through the administrations of Islamic banks in Jordan, which was different from the application of social responsibility level of accountability from one area to another. Banks social responsibility applied accounting on clients at a high level and the average level for the community and the workers' service, but application at a low level in the field of environmental protection.

UNIDO (2013) defines CSR as a "concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders

Milton Friedman Stated that the only social responsibility of the corporation is to increase profits. But his ideas are not accepted by society or in the business science world itself (Friedman, 1970).

Given the social and developmental aspects of CSR, by the late1990s and early 2000s, the CSR discourse had disseminated into the international development literature (Natufe, 2001; Walker, 1998); thus Moin (2008) stated that there is a difference between voluntary practices and moral obligations.

CRS affects the financial performance of the firms. Financial performance means measuring and analyzing the financial objectives of the firms to see whether they are accomplished or not. (Kotler et al., 2005)

S.I. Nimsith et al, (2016) found that there is a statistically significant relationship between CSR and financial performance of banks in Siri Lanka, and moreover there are positive impact of corporate social responsibility and financial performance licensed banks

García-Sánchez and García-Meca (2017) shown in their study if the banks have followed the CSR practices that would augment the profits quality. And the differences in "earnings quality" in another words it is express the amount of earnings attributable to higher sales or lower costs rather than artificial profits created by accounting anomalies such as inflation of inventory, that are driven by CSR engagement are affected by levels of investor protection and bank regulation for financial institutions. The findings indicated that a bank's commitment to CSR practices enhances earnings persistence as well as cash flow predictability and more specifically socially responsible banks have higher earnings quality in a stricter regulatory environment.

Qandah (2015) stated the benefits to disclose social responsibility and issue a report around it. Those benefits are: Increasing the understanding of risks and opportunities, influencing the policies and action plans and the strategic management in the long term. In addition to that, it affirms the link between the financial and non-financial performance. Furthermore, the streamline operations, reduces the costs and improves the efficiency, and also it measures and evaluates the performance of sustainability. Moreover, it mitigates environmental and social impacts and governance negatively. What’s more, it improves the reputation and increases the loyalty for the company.

3. Data and Methodology

Secondary data were used for the study. The data were collected from the social annual reports of Jordan Islamic Bank (JIB) that has been published on the website of the bank. This study is shed light on the role of Jordan Islamic bank and it also examines and analyses the CSR initiatives and how to get advertising for the CSR actions and how to improve it.

4. Social Role of the Jordan Islamic Bank

The JIB has continued to assume its social responsibilities, consolidate the Islamic values in the normal banking transactions and positively interact with the activities of

social nature. Below are some examples of the Bank's activities in this field during 2015:

4.1. Conferences and Seminars

Throughout 2015, the Bank had a continuous participation in conferences and seminars that aimed at disseminating and developing the business of Islamic banks

4.2. Scientific Research and Professional Training

The Bank continued its activities in scientific research and training. The total expenditures on such activities in 2015 reached around (338.000) JD distributed as follows Table 1:

Table 1: The total expenditures JIB for social activities 2012-2015

Description	2015 JD/Thousand	2014 JD/Thousand	2013 JD/Thousand	2012 JD/Thousand
Direct expenditures of the Bank Training Academy	4.200	4050	3500	3000
Contribution to the costs of employees' study and training	184.897	153512	88323	72900
Participation in the expenses of the Banking Studies Institute affiliated to the CBJ	7.982	5370	3500	1500
Sponsorship of scientific conferences and educational institutions	141.213	120750	10667	9000
Total	**338.292**	**283682**	**105899**	**86400**

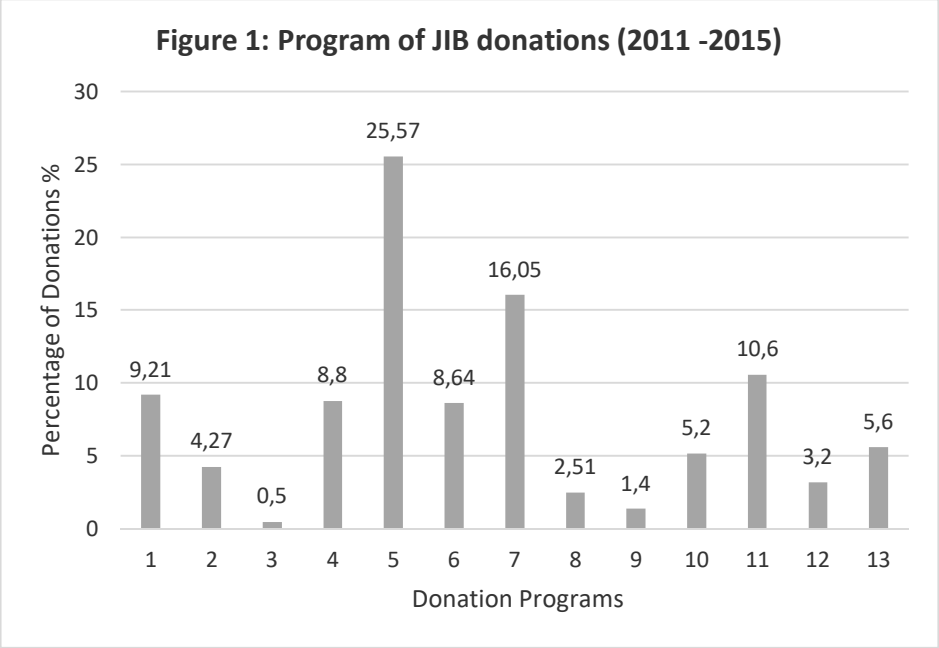
Source: Create by author based on JIB reports.

It is clear from the above table that the Jordanian Islamic Bank has spent about (814273) Jordanian Dinars (JD) on social activities during the years 2012-2015,the expenses of the bank training academy in 2012 amounted to (3000) JD, while these expenses increased over the years to reach 4200 during the year 2015.
We note that during the year 2015 was invested in the costs of employees' study and training amount (184807) JD while the year 2012 (27900) JD, which indicates an increase in spending over the years.
It is clear that there is an increase in support of conferences in 2014, where total expenses increased to JD (120750) compared to the previous two years, while 2015 remained at the forefront by JD (141213)

4.3 Donations

The Bank continued to support many social and cultural events and provide donations for different relevant activities. Those events include the Jordanian Hashemite Fund for Human Development (JHFHD), Al Aman Fund for the Future of

Orphans, Jordan Hashemite Charity Organization (JHCO), King Abdullah II Fund for Development (KAFD), Martyr Ma'ath Al Kasasbeh Fund, Societal Financial Culture Dissemination Project, Jordan Armed Forces – Borders Guard, and the competitions organized by the Ministry of Awqaf and Islamic Holy Places, Associations of Holy Quran Memorization and collective wedding parties organized by Al-Afaf Charity Association, in addition to other social activities organized in Jordan. The total donations provided by the Bank during 2011-2015 for such events and activities reached around JD (994160), distributed as follows in Figure 1 and Table 2:



Source: Create by author based on JIB reports.

Table 2: Accumulative donations for JIB (2011-2015)

#	Description of Donation Programs	Number of assistant	(JD/Thousand)
1	Jordanian Hashemite Fund for Human Development (JHFHD)	1	91,585
2	Al Aman Fund for the Future of Orphans	1	42,500
3	Jordan Hashemite Charity Organization (JHCO)	1	5,000
4	Associations and competition of Holy Quran Memorization	7	80,300
5	Charity Associations and Organizations and Zakah committees	101	254,250
6	Scientific Conferences and educational and cultural programs	12	85,925
7	Mosque Commissions	46	159,595
8	King Abdullah II Fund for Development (KAFD)	1	25,000

#	Description of Donation Programs	Number of assistant	(JD/Thousand)
9	Martyr Ma'ath Al Kasasbeh Fund	1	14,005
10	Societal Financial Culture Dissemination Project	1	51,700
11	Jordan Armed Forces – Borders Guard	1	100,000
12	Princess Alia foundation	1	34000
13	Other Groups	1	50300
	Total	**173**	**994160**

Source: Create by author based on JIB reports.

4.4 Al Qard Al Hasan "The Good Loan"

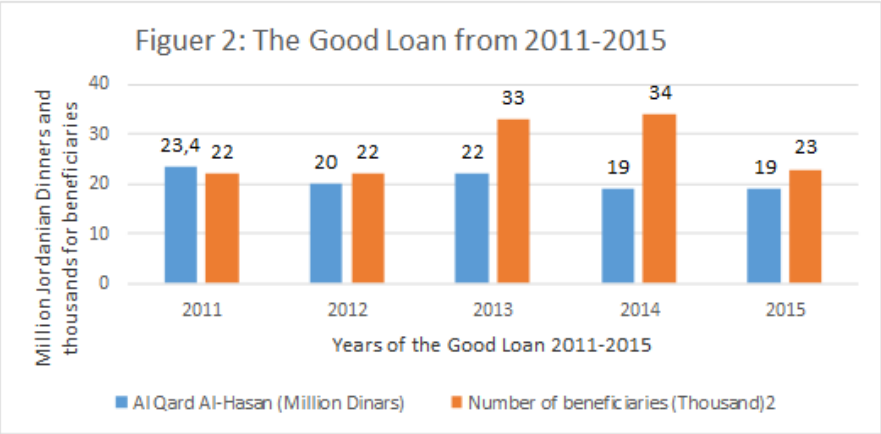
The Bank continued to receive deposits in "Al-Qard Al Hasan" from those wishing to lend such deposits through the Bank as good loans. At the end of 2015, the balance of this account reached around JD (1,300,000).

The Bank also continued to provide "Al Qard Al Hasan" for justified social purposes, such as education, medical treatment and marriage. The loans provided by the Bank in 2015, from the fund and the money allocated for this purpose, reached around JD (19,300,000) benefiting nearly (23,000) citizens, compared to JD (19,400,000) in 2014 benefiting nearly (34,000) citizens.

It is worth mentioning that the Bank has been granting such loans since its incorporation, where the granted loans totalled JD (236.000.000) till the end of 2015, benefiting nearly (406.000) citizens.

In addition to that, some loans were granted for youth who were about to get married in cooperation with Al Afaf Charity Association. The total of such loans in 2015 reached about JD (144.000) benefiting (206) young people compared to about JD (138.000) benefiting (198) young people in 2014.

Some of these loans were granted to teachers through the agreement signed with the Jordanian Teachers Syndicate in 2015 where the total of such loans reached about JD (1,500.000) benefiting (2,266) teachers, against JD (1,100,000) in 2014 benefiting (1,622) as follows in figure 2.



Source: Create by author based on JIB reports.

4.5 Funding Professionals and Craftsmen:

The Bank was keen from the beginning to fund the projects and requirements of professionals and craftsmen by a method which is called Murabaha. In 1994, the Bank developed an ad hoc program to finance this category by the method of Diminishing Musharaka al Muntahia Bittamleek which provides for repaying the financing from the revenues generated by the project. To pay more attention to these projects, the Bank increased the capital of its subsidiary Al Samaha Funding and Investment Company to JD (8.000.000) and amended its memorandum and articles of association to include funding projects and small craftsmen in 2013.

4.6 Mutual Insurance Fund:

The Bank continued to sponsor the Mutual Insurance Fund for the Bank debtors which was created in 1994.

Through this fund, participants share in indemnifying the damage that may be inflicted on any of them to repay all or some of his/her debt to the Bank in case of death, permanent disability, or permanent insolvency. In addition, this Fund is considered risk exposure mitigation as of 2014 after the approval of the Central Bank of Jordan. Throughout 2015, the number of indemnified cases reached (169), and the compensations paid in this year amounted to nearly JD (871.000). Since the Fund establishment until the end of 2015, the total compensation cases reached (2,024) cases, and the amount of compensations paid reached around JD (7.000.000). At the end of 2015, the Fund's balance amounted to around JD (64,200,000), with about (138.000) participants and a total balance of indebtedness of around JD (982.000.000) against the Fund's balance of around JD (53,600,000), and a total balance of indebtedness of around JD (861.000.000) in 2014.

It is worth mentioning that the bank has expanded the umbrella of the insured people as of 1/3/ 2015, to include all people with indebtedness of JD (100.000) or less instead of JD (75.000). The Bank expanded the umbrella of the insured people to be JD (50.000) and less instead of JD (40.000) and less while earlier it was JD (25.000) and less.

4.7 Interaction with the Local Community

The Bank participated with the Public Security Directorate / Central Traffic Directorate in its Ramadan Campaign and during Eid Al Fitr by supporting the printing of some guiding and awareness leaflets to the drivers and distributing them all over the Kingdom to increase awareness and provide guidance and important information to minimize traffic accidents and jams. In addition to the distribution of some water and dates to the drivers at the traffic lights at the time of calling for Maghrib (Sunset) Prayer. The Bank is a major and active participator in different activities and events performed by the public security directorate/central traffic directorate that aim at disseminating awareness to minimize traffic accidents.

The bank provided the Hajj and Umrah department at the Ministry of Awqaf and Islamic affairs and holly places with laptops and PCs, modern printers, and office furniture to facilitate the department's performance of transactions and services rendered to the pilgrims.

In addition, there is a partnership between the Bank, the Eye Bank and the Friends Society of Jordan Eye Bank for the Prevention of Blindness. This partnership is crowned on a yearly basis with an honouring lunch ceremony of the cornea donators,

supporters, and volunteers and the distribution of acknowledgment certificates to them for the six consecutive years.
The Bank, in cooperation with the Public Security Radio Station, distributed some in-kind aids such as heaters and blankets to the needy families and the families who were affected by the blizzard.
The Bank continued to launch blood donation campaigns in many governorates in cooperation with "Blood Bank Directorate" to donate blood where the Bank's employees of all administrative levels donated blood. Some of the Bank's clients participated in the campaign. In addition, a workshop was held on the first aids in cooperation with the Retired Military Cooperative Organization with the participation of many employees.
The Bank also issued the family card, which is designated to those who are convicted in executive cases at the Sharia Executive courts where holders of these cards can get cash from the card balance through the ATMs or the sale points

4.8 Energy and Environment

The Bank continued providing alternate energy in its headquarters by utilizing the electric power generation using the solar cells, taking advantage of space on the roofs of branches for the installation of those cells, which reduces the electricity consumption and decreases the high electric loads in the Kingdom. Table 3 Thus, contributing to the national economy and the environment protection. It is worth mentioning that this project began with three branches as first stage. It is currently applied in (18) branches.
The Bank operated renewed energy system units for Al Rawdah District Mosque in Amman and for other units for two schools in remote areas to meet their need of electricity. The Bank previously did this for a school in a remote area, too.

Table 3: Contribution JIB in energy (2012-2015)

Year	Energy JIB Support			
	Petrol JD/Millions	Electricity JD/Millions	Others JD/Millions	renewed energy JD/Thousand
2012	70	570	6	-
2013	70	775	6	-
2014	70	105	6	48600
2015	77	458	6	53000

Source: Create by author based on JIB reports.

5. Conclusion

The results of this paper suggest several conclusions and avenues for future research. In essence, information disclosure has helped stakeholders to get an in-depth insight into the role and image of the social responsibility of the Jordan Islamic Bank. Corporate social responsibility has been an obstacle in the measurement of the concept. The present study recommends that the contribution of the fund for Bank Training Academy should be improved; moreover, participation is required in the expenses of the Banking Studies Institute affiliated to the CBJ. Furthermore, increased attention to sponsorship of scientific conferences and educational institutions are strongly recommended due to their positive impacts on the contribution of employees and other parties to the costs of employees' study.

Training may provide help for the bank to raise their academic qualifications; in addition, it is a new added value for the bank. It may be more fruitful to increase the development of an ad hoc program to finance craftsmen from the revenues generated by the project. However, there is a need to expand the umbrella of the insured to get a better understanding of the role of the social responsibility of Islamic banks. CSR practices face several difficulties with measuring while the use of disclosure reports will create an added value to the stakeholders' expectations, provide social contribution in these sectors and continue with renewable energy and water consumption programs. Also, encouragement for employees to participate in social activities and voluntary work are essential, similarly to continue funding in the health and education sectors. Social responsibility is no longer sufficient, this is why the Jordan Islamic bank pays increasingly more attention to social and environmental issues.

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THE CHARACTERISTICS OF INTERNATIONAL AND HUNGARIAN TALENT SHORTAGE

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Abstract: *The current challenge of the labour market is the labour shortage appearing even on a global level. Nowadays the majority of employers face this problem the handling of which has become one of the central tasks of a human resource manager besides keeping the employees. The appearance of labour shortage is realised on different levels in the market (expert shortage, knowledge shortage, skilled worker shortage etc.) of which the latest approach is the lack of talented employees. It is vital to define precisely and interpret the problem in order to tackle it effectively. The research relied on Hungarian and international literature to provide an answer to the right definition of talented employee and the lack of it. The appearance of talent shortage cannot be connected to a single state but it can be looked upon as globally extensive. The most thorough mapping of the talented employee shortage on an international level has been done by a Manpower Group research with the help of which we can receive detailed information about the global scales and the tendencies experienced in the measured countries. The results of the research draw conclusions from the difficulties of filling positions highlighting the scale of talented employee shortage in the countries measured. We are given an answer to which professional fields are the most difficult to find the right employee for. It also reveals what difficulties the employers are facing and how they try to handle the problem. The study introduces a few targeted solution strategies to manage talent shortage based on literature and Manpower expert recommendations. The need for excellent people has undoubtedly become one of the most pressing economic questions which requires a targeted solution as soon as possible. To make this happen if would be useful to do a research which specifically reveals the Hungarian peculiarities which can interpret the question country-specific thus could provide a more efficient help to shape a solution strategy.*

Keywords: *talent, labour market, labour shortage, ability, human resource management*

JEL classification: *E20; E29; F66; J00; J24; O15.*

1. Introduction

An inevitable part of the current labour market situation is managing the labour related difficulties. From the employer's side the state of labour shortage makes the organizational everyday harder. One of its causes is the growing demand for quality labour. Nowadays labour shortage affects employers on several levels, it appears

most often in the form of professionals shortage, knowledge shortage, skilled worker shortage, at the same time experts have recently specified another area more frequently which is identified as talent shortage.
The lack of balance occurring in the talent market is obviously not unique and it affects not only one country but it can be observed as a global phenomenon. Because of the unbalanced labour market present in the majority of countries not only the small countries but even the biggest ones suffer spectacularly. "Despite the high unemployment global economy has entered the decade of unprecedented talent shortage" – stated at the World Economic Forum, which gathers the leading world powers, in 2010 (World Economic Forum, 2010). That is why it is worth examining the situation of other countries before dealing with the Hungarian statistics in order to receive a realistic benchmark and to view the state of the local labour market proportionately. Having measured the international situation in terms of talent shortage we can view the national tendencies in a more targeted way**.** Considering that this type of labour shortage has been defined on national level recently, no specific national survey has been made in this matter thus we can only work with international results or results that affect our country and the related data when we want to identify the Hungarian talent shortage.
The realization of the research could be justified from several aspects. On the one hand, in the current state of the national labour market we can observe unemployment and labour shortage at the same time which puts a heavy burden on the economy and it affects the employees and employers as well. Revealing the extent and details of talent shortage can provide useful information for both target groups that can support a more efficient employment and more efficient recruitment. On the other hand, the problem of labour shortage affects the whole enterprise and has been unable to reverse itself so a targeted intervention is essential to create a long-lasting solution. Supposing that the most important step to solve a problem is to get to know it in its minutest details thus revealing it can mean the vital background piece of the general solution and can serve as thought-provoking for the field's experts.

2. Labour market aspects of talent and talent shortage

According to Sternberg and Davidson (1990) the definition of talent can always be deducted from the expectations and needs of the prevailing society. This depends on in what aspect the notion becomes important at the given period thus we can state that the definition and the evaluation can change depending on the age and place. Based on the Hungarian Concise Dictionary (2003) talent means mostly an instinct and ability towards something. We cannot produce a generally applicable definition though scientist agree that it contains some kind of special inner power which assures the possibility of growing social productivity (Gyarmathy 2006). Examining from a practical point of view one of the most generally accepted notions on a national level is connected to Czeizel (1997) which says that talent is a certain degree of potential and promise regarding that the individual can produce outstanding result in the field of some kind of human profession or activity that is socially useful and on top of that it fills the individual satisfaction and sense of achievement. Under the definition of talent "we describe a complex not uniformly definable quality group which most generally enables the individual for a socially useful activity at a higher than average standard" (Herskovits, 2005). Starting from

these descriptions we can summarize that talent shortage on the labour market shows a shortage of those people whose work generally produces outstanding performances and involves high potential, the key to their achievements assumes a special inner driving force. The novelty of the expression “talent shortage” is supported mainly by the fact that the Hungarian Concise Dictionary cannot produce a meaning to the definition so when interpreting it we can mostly rely on what the researchers of the field have put down. Nevertheless it means that we deal with a relatively young expression which is not that well-spread in the Hungarian language and it is also justified by the low matches offered by the Google search engine. The interpretation is further made difficult because there is no notion that summarizes the phrase in the Hungarian literature mostly the meaning can be interpreted only by relating explanation. But in many cases there is no unified usage of the notion in terms of content in the not too rich literature related to the topic. According to one of the simplest national interpretations “talent shortage” means the increased demand for talents and the decrease of the talent supply available (Balogh, 2014). According to Szabó (2011) talent shortage can be defined as relative, which is quality labour shortage. According to Manpower’s report (2012) it can be connected to the lack of “good” experts who have the right technical and professional experience and the lack of them means obvious slowing down in the operational every day. Though there are researches which totally identify talent shortage with labour shortage among others Rácz (2013) applies the notion in the same context when he writes that as an effect of the world economic crisis the oversupply of labour and talent shortage appear on the labour market simultaneously. There is another interpretation which invests talent and knowledge with the same meaning the result of which is the almost equal interpretation of talent shortage and knowledge shortage. Szabó’s (2011) interpretation is a good example for that saying that the central aspect of human capital and knowledge brings with itself the importance of researching talent-related difficulties in a primary way both in practical life and on a theoretical level. In Manpower’s (2013) report unlike in the previous year talent shortage is related to professional skills and the labour market in general. *“In the American continent talent shortage is mostly caused by the lack of proper technical, professional skills (so-called hard skills) and the lack of applicants in general”.* Thus the expression talent shortage is related to the thin layer of employees who can help their employees to competitive advantage on the market through their certain, personal skills (talents). Their economic value thus can be looked upon as inversely proportional to their quantity available. It is also important to underline that talent shortage appears as quality shortage on the job market which means that in many cases quantitatively there are enough candidates for a position but for the lack of quality they cannot be employed for the given position. Moreover we should not forget that by interpreting labour shortage it remains a vital aspect to employ the right person for the right job which is the basic target of human resource management. The right person in the right position does not equal the talented employee though since from a job market point of view the talented employee will be the one who can not only stand his or her ground in one position but can be “deployed in several fronts”. We can ascertain that thanks to the changing environmental effects a special competition has evolved that has led to the appreciation of the significance of abilities and skills (Dajnoki – Kun, 2016). According to Gergely (2016) the abilities and skills become definitive not just in a general sense but obviously contribute to career development nowadays. Not to mention that from a Deloitte (2015) survey it is clear that possessing the necessary

abilities on an employer level is a key to consumer satisfaction which is one of the keys of organizational effectiveness. Furthermore quality labour is the determinant of business success as well which is a universal law that will never change based on the 2016 survey of SHRM. To use a common metaphor, if we look at the labour market as a house of cards – e.g. rummy – the right employee at the right place could be the "ace", but cannot compete with the "Joker" who can be a "King" anywhere, "Ace" too but if it is necessary can be a "Two", as well. So a good workforce can be very valuable and indispensable as well but only within its own field while a talented employee can continuously reproduce itself and stand its ground at the right place in the necessary condition and performs well – thus he/she becomes the Joker of the labour staff.

3. Talent shortage as a global phenomena

A lot of researches and analyses have been done concerning the impediments occurring on the job market from which the most often cited problem stems from the disproportion of job demand and supply. As a result of oversupply unemployment happens while over demand creates labour shortage. Both situations form an extreme state on the market as a result of which the economy will suffer and that is why there is a constant pursuit to create the optimum level.

The concept that talent shortage causes problems not just in our national economy is proven by Gordon's (2009:38) survey showing that already in 2009 62% of the total jobs in the USA require high qualification and simultaneously it means higher wages. To fill these positions approximately 97 million people would be needed but taking qualifications into account only 45 million people have the necessary qualifications. 38% of the jobs fall into low-payment category and requires low qualification. The economy would require 61 million people for these areas although for these types of jobs 100 million people would be available according to statistical data. While there is an over demand for higher quality jobs (labour shortage) there is an oversupply for lower quality jobs (labour surplus) in the American economy.

Manpower which is a company dealing with temporary employment and human resource has done several surveys in different countries concerning talented employees. Since the beginning of 2000 they have published international results concerning the extent of labour. It is important to point out that concerning the extent of talent shortage Manpower surveys do not differentiate between the demand for talent and knowledge thus they handle these areas as one topic. The reason of this is that the two aspects are hard to separate within the world of labour so in fact the survey shows the simultaneous lack of talent and knowledge in a global context. Thus from a methodological point of view the interpretation and approach become disputable however, currently there is no more precise and thorough publicly available survey that we know of, to measure this special labour market factor therefore my analysis has been made by using these data (Szabó 2012).

During its 2010 survey Manpower contacted 35,000 employees in 36 countries and from their answers it found that 31% of employers have difficulties to fill the available positions and one of the reasons is the lack of talented employees. In some sectors for example health, education, IT sector and business services – independent of their geographical location – there is a different but determinative shortage of talents. As a logical consequence to this condition during the "fight" for these well-positioned talents we could notice the "seduction" of talents from one organization to another or

from one country to another (Szabó 2011). In 2010 Japan was the country where it was the most difficult to find employees for the vacant positions (76 % of the employers indicated that they cope with these difficulties), the countries following Japan were Brazil (64%), Argentina (53%) and Singapore (53%), in Hungary the ratio was 30% in 2010 (Manpower, 2010 p.3). Since the 2010 results the situation has not changed much proportionally until now, one of the biggest changes is connected to the number of measured countries since in the 2016 survey 43 countries were involved (Figure 1.).

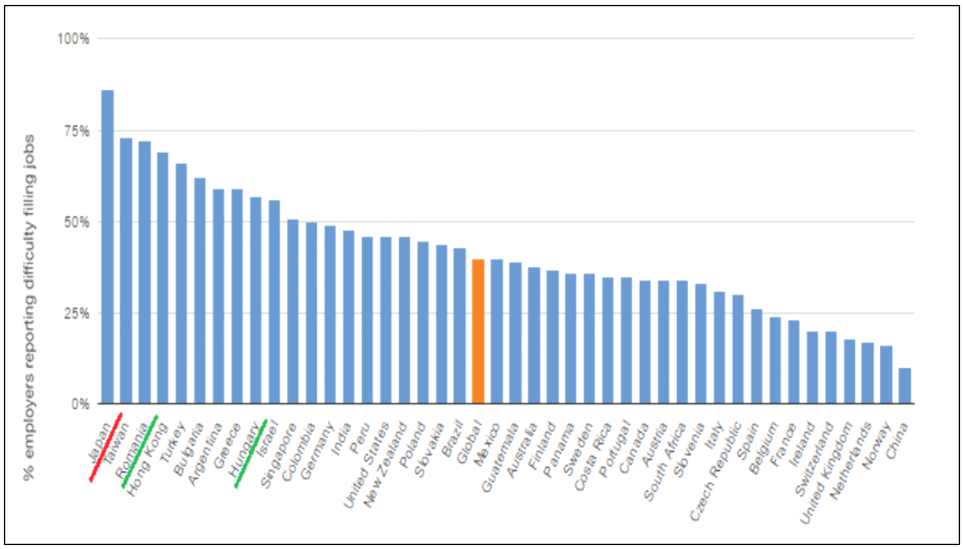

Figure 1. The difficulties of filling vacant positions according to employers based on Manpower survey (in a percentage)
Source: Manpower 2016/2017 talent shortage survey

According to the results Japan still tops the list of countries compared. Comparing the results with the ones in 2010 we find that in the last 6 years the number of employees facing difficulties to fill vacant positions have risen by 10% in Japan while in Hungary it has doubled, which raises the possibility of significant talent shortage. Whereas in Japan which tops the list 83% of the employers face these difficulties the proportions in Peru is 68%, Brazil 64%. In the European region the leading group of countries are Romania (73%), Greece (62%) and Hungary (60%). Romania, which is at the top of the list in Europe, has been continuously above the average since 2008 when it comes to job filling difficulties. This suggests that the country's labour supply related problems are not new and are extremely high on a European level. During the measured period (between 2008 and 2016) it has been over the Hungarian job filling difficulty level with the exception of 2014. Our country with its 60 % has reached the "noble" 9th place among the 43 countries ranked in the survey. But this position in the leading group is not something to be proud of since the results, considering the size of the compared countries, mean a significant shortage in our country, which is further confirmed by the latest Manpower survey (2016) which shows that the lack of talented labour has doubled since 2010. Based on this we can state that there has been a significant demand growth recently in connection with

the existence of the right or in another term talented labour. Further analysis of the data provides the opportunity to get to know that among the measured countries proportionately in how many of them more than half of the employers indicated job filling difficulties (Figure 2.) as well as what proportion of these countries are European or non-European.

Frequencies

Statistics

		Location	Job filling difficulties
N	Valid	43	43
	Missing	0	0

Frequency Table

Location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	European	23	53.5	53.5	53.5
	Not european	20	46.5	46.5	100.0
	Total	43	100.0	100.0	

Job filling difficulties

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Over 50 percent	12	27.9	27.9	27.9
	Below 50 percent	31	72.1	72.1	100.0
	Total	43	100.0	100.0	

Figure 2. The extent of job filling difficulties according to employers in a percentage spread
Source: Manpower 2016/2017 talent shortage survey, own editing based on these data (2017)

Based on the result of the analysis we can ascertain that in 72% of the sample that is 31 countries less than half of the employers face job filling difficulties while in 12 countries (among others in Hungary) which is 28% of the sample we can recognize a higher shortage which shows a more than 50 % job filling difficulties. Furthermore we can see that 53.5% of the countries belong to Europe and a little less than half of them are not situated on the European continent. Out of the countries showing a

more than 50% value only four form a part of Europe (Hungary included) the remaining 8 countries do not belong to this region.
To sum it up, whereas most of the countries measured are situated in Europe the higher extent of talent shortage can be observed in non-European regions still our country is among the leading European countries concerning the lack of talented labour.
In an international survey Workforce (2014) gathered the potential challenges which the employers have to face due to the labour market processes (Figure 3.).

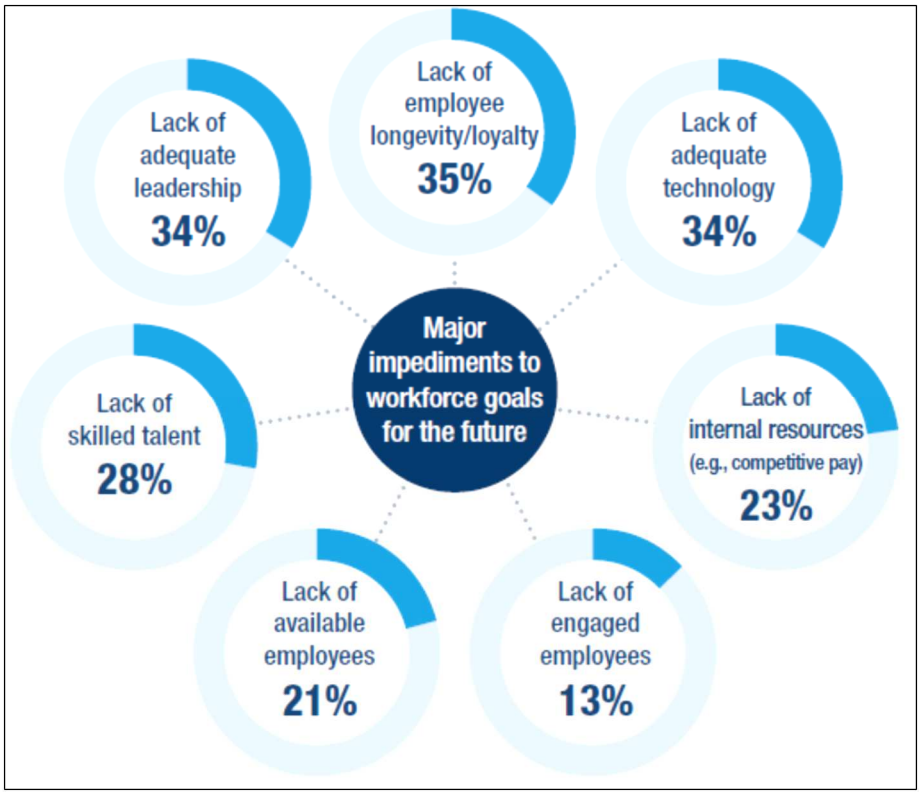

Figure 3. The expected most significant challenges of organizations concerning workforce
Source: Workforce (2014)

The created "impediment categories" were defined as a shortage in the determinant factors and these could mean the main barriers in the future to reach organizational targets. Based on the survey we can include adequate leadership, employee loyalty, adequate technology, internal resources (e.g. competitive pay), engaged employees, available employees and talented employees.

4. Labour and talent shortage in Hungary

The problem of labour shortage as it is obvious from the data can be considered a world phenomenon though it is important to point out that it can shake Hungarian

employers even more than the global average. This shortage can be interpreted as extensive and related to the whole labour market from which even the civilian organisations are no exceptions since typically even in this area there is a limited workforce available (Pierog-Szabados, 2015). This can be traced back to the fact that they must fight for the outstanding experts not just with the Hungarian competitors but also with the Western-European and multinational companies. But in this pursuit the bottle-neck is the low wages that are offered by Hungarian employers. The potential pay rise in many cases can put the organisations' competitiveness at risk which all employers try to avoid however, chronic labour shortage also leads here (Dalányi, 2016).

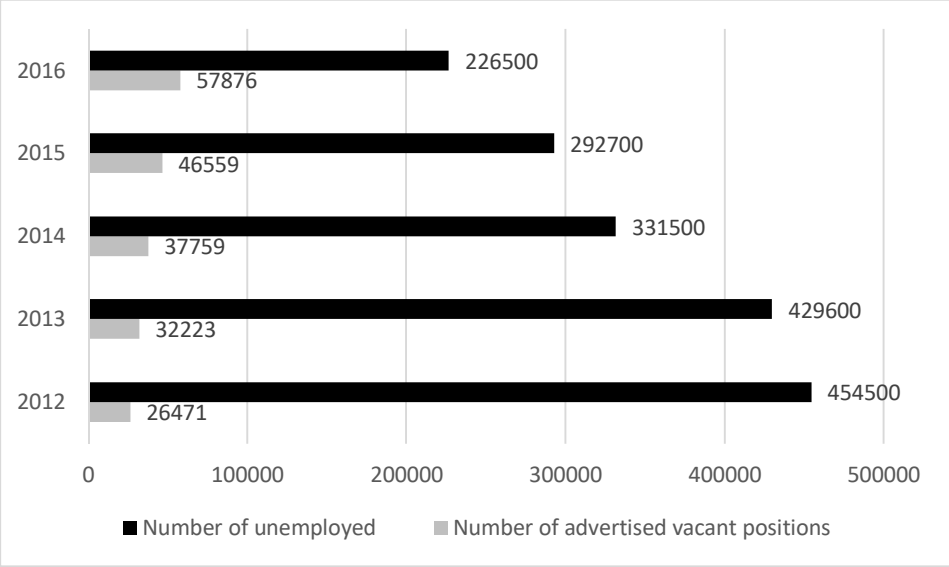

Figure 4. The changing rate of the number of unemployed and the advertised vacant positions comparison based on data between 2012-2016 Q3
Source: KSH (Central Statistical Agency) (a) (2017), KSH (b) (2017) own editing

One of the most generally applied index to measure the extent of labour and talent shortage according to the Manpower surveys is the ratio of job filling difficulties. On a national level examining the situation of job filling difficulties can be analysed based on KSH (Central Statistical Authority) databases. We can see that the number of vacant positions have grown continuously in the last 5 years while simultaneously the number of unemployed show a decreasing tendency (Figure 4.). Starting from the relation of the two factors it is predictable that there is an inverse ratio between the two. So the more we raise the number of vacant positions the more unemployment decreases – so there is a very close connection between them which can be considered significant. It is a fact though that during the recent measured years there have been significant difference between the two values though following the tendencies within the next few years the disputed numbers can be in close proximity. Though the question is, if we can totally eliminate unemployment only by increasing the continuously growing vacant positions. Considering the statistics we can say that it is only a question of time and the total elimination of unemployment

will happen (though simultaneously a huge, disproportionately big job filling difficulty occurs on the employer's side) if the ratio continues to develop similarly. In reality though we cannot handle this question so one-sidedly since there is only a small percentage of qualified workforce among jobseekers which is most needed on the labour market (Virovácz, 2016).
The solution could stem from the change of unemployment base multitude structure (qualification, literacy, skill, ability etc.) since in its current state the labour demand on the market required by employers does not match the openly available labour supply. By improving the qualities and knowledge of employees on the open labour market the number of talented employees needed for the organisations can be increased. This could lead to significant economic equalization since in the expected future period "consumer need" (from the employers' side) would grow constantly for the "quality material" which appears in the form of talented workforce (Manpower 2015 (b)).
Due to the fact that at some areas the lack of employees is especially high in certain professions job filling difficulty emerges. Based on Manpower's latest survey we can establish a national and international list of the top 10 occupations where it is the most difficult to find employees for, which we can see in Table 1. in a descending order.

Table 1. The most difficult positions to be filled in Hungary in 2015/2016

The most difficult positions to be filled in Hungary in 2015/2016	The most difficult positions to be filled globally in 2015/2016
1. Skilled workers (electrician, joiner, welder etc.)	1. Skilled workers (electrician, joiner, welder etc.)
2.Drivers	2.IT professionals
3.Engineers (technical, electrical, building)	3.Sales managers
4.Workers in the catering industry	4.Engineers
5.Doctors and other health workers	5.Technicians
6.IT professionals	6.Drivers
7.Group leaders	7.Accountancy and financial professionals
8.Accountancy and financial professionals	8.Group leaders
9.Nurses	9.Machine operators
10.Semi-skilled workers, machine operators	10.Office assistant

Source: Based on Manpower talent shortage survey 2016/2017 own editing

Supplying IT professionals stands at sixth on a national level in the difficulty ranking. For European countries it could mean significant difficulties that in the coming period there could be a considerable shortage of properly qualified IT professionals. The lack of professionals needed can dampen the area's economic growth and decrease its competitiveness. In three years there would be another half a million IT workers less than needed – Financial Times citing the prediction of IDC market Research Company from 2010. The accuracy of the theory is proven by Márk's (2016) result that is there are more than 20,000 IT professionals missing from the national market.

In addition, we can state that globally it is the same professions where labour shortage is the most significant as a result of which we can easily predict that a well-qualified skilled worker or IT professional can find a job abroad easily as well, the only difference is that one would get multiple times the salary of what one gets for the same job here.
Besides analyzing the statistical data the opinions of the affected were also examined. Based on 750 Hungarian company executives and HR professionals we can summarize the most often emerging difficulties which are caused by the barriers of finding the ideal employees (Figure 5.). The extent of the effects of certain factors can be examined in a three-year period which helps to observe the tendencies.

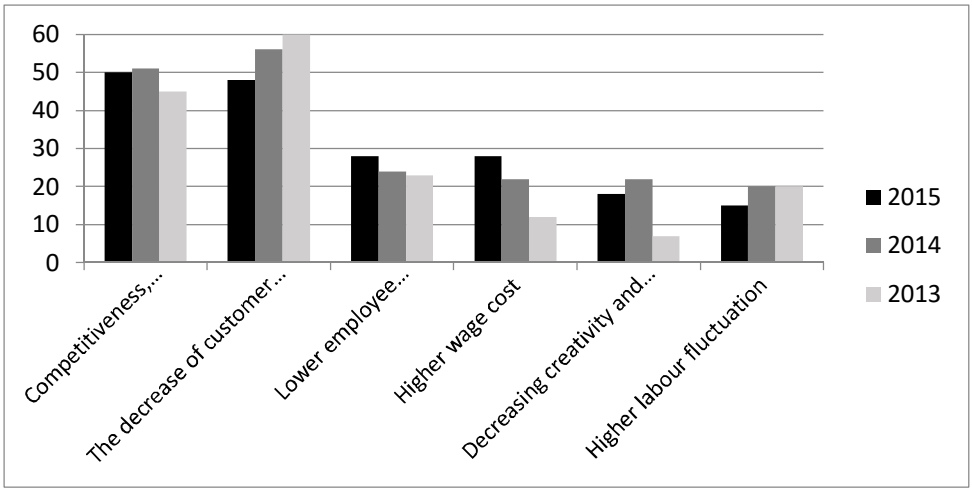

Figure 5. The most general organizational difficulties caused by labour and talent shortage according to Hungarian employers (values are given in percent)
Source: Karácsony 2015

Based on the results of the last three years' data the biggest problem is caused by the lack of talented employees leading to the decrease in the companies' competitiveness and productivity and also customer service deteriorates. In the long run all of these factors can lead to the expense of organizational judgement which can lead to a spiral-like popularity deterioration. At the same time the problem of increasing wage cost have spectacularly strengthened according to employers simultaneously the decreasing creativity and innovation ability have caused greater problems which threaten the organisations' self-supporting ability.
A further question that can emerge is what causes the significant dissatisfaction of filling vacancies according to employers. According to 32% of the Hungarian employers coping with labour shortage taking part in Manpower's (2016) survey believe that the high rate of vacant positions is mostly caused by the lack of applicants for the advertised position, another large group of employers (31%) traces the problem back to the inadequate qualifications of the applicants. Another reason is the high wage demand – 12% of employers said that and the lack of adequate and necessary competencies and the lack of professional experience were both considered the most urgent problems by 7% of the employers.

Having identified the problem of job filling difficulties unequivocally it is important to define a targeted action plan. However, based on the Manpower surveys of 2015 (a) and 2016 we can say that 43% of the organisations have no specific strategies which means close to half of the people responded. Of course there are organisations that tackle the problem consciously and plan on that level in the long-term, which make specific efforts to find a solution to the problem. The most often applied efforts are trainings, pay rise, offering different fringe benefits, alternative recruitment tools, more seldom outsourcing and internal reorganisation. But according to Oladapo's (2014) research in the long run the introduction of talent management systems can be the solution for companies. Consequently the management of talented employees can be done within an organized framework with the support of HR professionals – since besides getting the necessary employee staff employers should aim at keeping them as well – but for this a professional leadership is essential. Nevertheless Manpower (2015 (c)) has formulated four strategic proposals how to handle the organizational talent shortage, which are the following:

1. Forming own talent supply – the organisations should connect to educational institutes with their needs and they should shape and develop future employees along these
2. Discovering new ways to access talents – introducing innovative communication tools, defining new target groups (women, people with disabilities), involving experienced "veteran colleagues"
3. Making decisions in connection with the target – do I want to shape the talented employees for myself or do I want to find them?
4. Decrease the need for talents – a more conscious management of internal staff, their development and the exploration of their talents

5. Summary

One of the central issues of the current labour market situation is how to handle the labour related difficulties. While from the employee's side it is unemployment, from the employer's side it is labour shortage that needs to be solved. Labour shortage as a general problem is manifested at several levels nowadays from which one of the latest concepts is identified with talent shortage. The lack of talented employees can be found only moderately in Hungarian literature and the available related explanations in many cases even if they are related have a different approach. In the majority of cases the lack of talented employees is identified with the lack of quality, good, professionally qualified employees, lack of knowledge or in an extreme perception with labour shortage itself. The precise definition of the notion is essential though for the workers in this area since for the targeted solution a precise interpretation of the problem is needed. Based on our research the talented employee is a colleague who regarding the job design can be successful not only in one area but by virtue of the individual skills is continuously able to renew which appears as a priceless value on an organizational level in an ever changing environment. So talent shortage is applied to the thin layer of employees who, through their personal abilities (talents) can deliver competitive advantage for their employers, this way their market value is inversely proportional with their estimated quantities.

As far as the issues of labour shortage and talent shortage are concerned we can say that this is not a problem exclusively related to Hungary but we are facing a

situation that needs to be tackled globally. It is proven by the fact that the positions causing the most general difficulties on a national and global level can be put into perfect parallels so it means that almost the same jobs have the most vacant positions in our country and in the majority of foreign countries. However, besides indicating that the measured areas have the same need it is also proven that getting a job abroad has become easier for a well-qualified professional, the leaving of whom would weaken the given country's competitiveness and increase the extent of migration. Manpower, an international company dealing with temporary employment and human resources, has made several surveys since the year 2000 among the world's countries to find solution to labour related questions. In their latest research (Manpower 2016/2017 talent shortage survey) they included 43 countries (among others Hungary and Romania as well) in which they measured the employees' experiences in connection with among others the job filling difficulties of the given area, which is summarized in the survey with the notion of talent shortage. It is important to point out though that at the notion of talent shortage in the Manpower surveys they do not differentiate between the talent and knowledge demand in their reports so they handle these areas as the same topic. Among the countries measured we can find European and non-European regions as well which slightly makes it harder to compare them however, it is totally suitable to illustrate the holistic feature of the problem and can form a benchmark to evaluate Hungarian labour market processes through other countries' results. Based on the survey's results we can sum it up that in 72% of the sample (31 countries) less than 50% of the employers struggle with job filling difficulties that is the problem of talent shortage, which can be considered significant. The number of countries where more than half of the employers perceive the problem can be put at 12 among which Hungary is included. Among all countries measured Hungary stands at position 9 based on the opinion of the employers questioned. So out of 43 countries we are ninth in the order where it is the most difficult for employers to find the proper employees for themselves. The seriousness of the situation is further underlined by the fact that on a European level (out of 23 countries) we are third in having the most difficulties in finding the proper employees. It is also important to point out that in terms of European countries Romania tops the group which claims a podium position also on an international level with its third place in terms of job filling difficulties ahead of such huge countries as Hong Kong or Turkey. The reason for this considerable advantage can be that Romania similarly to Hungary have to tackle those difficulties that they have to serve not only national companies on an employee level but the settled enterprises with foreign parent companies also enter into a competition with each other in order to recruit workforce. In this unbalanced fight a further limiting factor is the growing number of migration which complicates the situation further.

One of the most general ways to manage the handling of the general labour and talent shortage is to increase average skill level and to increase the number of qualified, civilized people through the education system according to targeted needs of the organisations parallel with decreasing the scale of migration. Within the organizational framework for the successful management of talents we need to introduce a talent management system where within an organized framework the organizational level management of talents can be realized with professional support.

On the basis of all these it can be stated that we are facing highly topical labour market issues which without exaggerating it has been established as one of the most

vital economic problems. The importance of the topic is further proven by Hungary's leading position on an international level which has to prompt clear actions from experts. Its first step could be a nationwide survey marking the starting point where the focus would be exclusively on the specific examinations of the Hungarian processes and might as well be based on the Manpower methodology.

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GAMES OF ANTONYMIC PAIRS IN THE LANGUAGE OF FINANCE AND ACCOUNTING

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Abstract: *A primary objective of teaching Business English is students' familiarization with specific terminology and acquisition of lexical structures and elements of vocabulary that shall then be needed by them in order to properly function in the field of their specialization, to communicate, understand discourse and authentic texts and produce correct communication in their turn. Thus, one of the language teachers' concern in this respect is to provide sufficient didactic support so as to assure a high level of assimilation of linguistic material. To appeal to mnemotechnics is only common in vocabulary teaching. Association of words on diverse criteria - semantic, lexical, linguistic or of other nature -, discussion of words in contrastive comparisons, visual aids given by various classification methods or by simply arranging terms on the page, in tables, boxes etc. or writing them in a distinct manner, using a different style, font, character a.s.o., work on and with the terms in game type activities - are all such means of vocabulary reinforcement. This article exemplifies how terminology of the economic fields of finance and accounting can be used in some quite appealing activities implying refreshment and use of knowledge from several linguistic areas - from vowels and consonants to semantic pairs of contextual antonyms. Such activities involve and make use of related aspects - from the fields of linguistics and semantics - but have as final goal reinforcement of the vocabulary units that makes the very base of the material prepared for the activities (the drills proper). These represent a mere model of how teachers and instructors of language can themselves play with the words and create interesting activities to bring more attractive material to the class so as to stimulate participation and improve an otherwise mundane approach that is generally supposed with the introduction of and dealing with business terminology.*

Keywords: *teaching Business English; finance and accounting terminology; antonyms; vocabulary games.*

JEL classification: *Y80; Z00; M53; A29.*

1. Preliminaries

Students' familiarization with the specific terminology and their acquisition of vocabulary units and lexical structures useful in the field is a main target when teaching Business English. Comprehension of authentic texts and subsequent production of accurate communication in the domain rely on this primary objective. The learners' assimilation of the linguistic material and their ability to further make good use of it have been permanent concerns of the language instructors. Up to date didactic support and learning/ teaching techniques that comprise diverse mnemotechnical aids are in the modern class supplemented with various word games and interactive activities meant to reinforce the vocabulary. Such are: word

associations, classifications, comparisons, arrangements, highlighting, emphasis, construction, transformation, derivation and others which have become quite common aids in vocabulary teaching.

2. Spelling and lexical games in vocabulary teaching

While the contextual approach is the one promoted by the classic method of vocabulary introduction in teaching a foreign language (Richards &Rodgers, 1996; Walters, 2006), the modern practice is more and more influenced by the ludic spirit and the contextual approach loses terrain to the interactive and thus more entertaining activities that involve working with words by: filling, forming, grouping, categorizing, arranging them a.s.o.

2.1. "Work" with letters, vowels, and consonants

Varying from individual, pair or group work activities of the type of filling in the missing letters in words by completing with vowels or/ and consonants, by inserting one, two or more vowels or/ and consonants, named or not, indicated, hinted at or to be identified by diverse instructions or clues, to Hangman games ("I Love Learning", 2017) or "Wheel of fortune" type games ("Wheel", 2017), going through variations of word-search games, Scrabble games ("Scrabble", 2017), or word-puzzles based on letter (re)arrangement or filling in, and ending with activities that require to unjumble scrambled letters in order to get diverse words, the play with letters, vowels and consonants is almost unlimited. Used as the core, the central task, of a seemingly more complex games such as the identification of opposites or of antonymic pairs - which will constitute in fact an easier task or a collateral one, even aiding for the first -, the abovementioned activities are prone to be more effective in attention triggering or adrenaline raising and thus constitute the catchy part of the process of finding the solutions required. Employing such activities can only be beneficial to the class, enriching the overall activity, conferring pulp to an otherwise drier or duller endeavour.

2.2. Antonyms as basis of entertaining activities

The mastering of antonyms and synonyms is quite an important acquisition in learning a language. Practising vocabulary by discussing synonyms and finding antonyms will develop in general a much sharper intuition on word choice in various circumstances, an improved vocabulary, a higher ability to find one's words when speaking, due to a better overview of the language, as seen by several researchers in the field: "The study of antonyms will not only help you choose the most appropriate word as you write; it will also sharpen your overall sense of language." (McLean, 2016) as "Antonyms are a fun and lively way to teach your students new vocabulary and improve their English language skills." (Zakhareuski, 2016)

Games based on antonyms matching will be felt as a welcomed change in teaching, reinforcing, practising or even testing vocabulary, as noted by other researchers as well "Though these games may seem like more fun than learning, in fact your students will accomplish both while they advance their English language skills and develop their vocabularies." (Zakhareuski, 2016)

3. Word games of matching

Having multiple usages such as a reinforcement tool, a vocabulary introduction technique, or even a means of testing lexical acquisition, the matching activities such as those described below are proper word games, as effective for each of the aims assumed as appealing they are. Applicable as drills in vocabulary teaching, as comprehension or reinforcement exercises along the lessons or in revision classes, or as a nonconformist method of assessing knowledge of words at the end of a series of lessons, such games prove to be, for both teacher and students, a pleasant way to deal with the tasks required and implied by each particular situation abovementioned.

The three examples of activities of guided matching can be used separate or together and others can be added, the limits lying only in the teacher's creativity and the time allotted.

It is obvious that such exercises, exemplified here mostly with words from the economic field of finance and accounting can be produced and used for any type of lexical elements and conceptual categories, in any domain or branch.

4. Model activity

Here is the model suggested for a reinforcement lesson at the end of three chapters dealing with finance, accounting and international trade, when the students were given handouts as seen in subtitle 4.1 and could work as described in subtitle 4.2 so as to get to the solutions shown is 4.3:

4.1. Handouts

The contents of the handouts distributed are as follows:

Match each word in column A with its antonymic pair in column B:

I. filling in the missing vowels in each word (Table 1)

Table 1: Missing vowels

	A		B
1.	D _ M _ ND	a.	L _ _ B _ L _ T_ _ S
2.	_ SS _ TS	b.	R _ C _ SS _ _ N
3.	D _ F _ C _ T	c.	L _ SS
4.	R _ V _ N _ _ S	d.	S _ PPLY
5.	_ MPL _ Y	e.	D _ SM _ _ SS
6.	B _ _ M	f.	CH _ LL _ NG _ R
7.	_ NV _ ST	g.	SP _ ND _ NGS
8.	L _ _ D _ R	h.	S _ RPL _ S
9.	PR _ F _ T	i.	W _ THDR _ W

Source: own concept and design

II. Inserting the missing consonants (the same in each pair - the number of consonants to insert increasing for each pair) (Table 2)

Table 2: Missing consonants

	A		B
i.	e a r	a)	c r e i
ii.	e b i	b)	e x o
iii.	i m o	c)	u l l

Source: own concept and design

III. Unjumbling the letters in the words (Table 3)

Table 3: Jumbled letters

	A		B
1.	CKOSST	a.	AEHLTW
2.	BOORRW	b.	BDNOS
3.	ICHR	c.	ABEKNNOTS
4.	AFFIRTS	d.	EDLN
5.	EOPRTVY	e.	AOQSTU
6.	CIONS	f.	OOPR

Source: own concept and design

4.2. Actual progress of activity

After the handout are distributed the students can be asked to work separately, in pairs or in small groups - according to various factors from general level of class to the number of students participant in the class, from number of copies of the handouts available to particularities of the room (desks arrangement and position).
While not too relevant and rather at teachers' choice and decision as for what number of students should work together, how they can proceed will become of pertinence in each case.
Thus, in individual work, the student will be asked to silently follow the instructions and announce when they finish one exercise, the checking of the answers given being done together with the whole class after each exercise - the teacher nominating one student to read each pair and indicate (spell) the vowels put in the word (in the first exercise) indicate the consonants and spell the entire word (for the second exercise) and spell the word (at the third exercise).
With pairs and groups, the students will have to communicate to reach agreement with respect to the solutions and competitions can be organised, the winning group (first to solve correctly - all exercises or each one at a time) being awarded a prize such as an extra point for the final mark for its members. In such approach the checking of the solution brought by the group is done by the teacher silently and the activity can end either when the first correct solution is found or when the first two or three groups bring their correct solutions and have them checked by the teacher. Only then the answers are checked with the entire class in a similar way as for individual activity.

4.3. Solutions

The solutions of the three exercises on the handout presented in 4.1 can be seen in the three corresponding columns in Table 4.

Table 4: Solutions

	I	II	III
1	demand and supply	bear and bull	stocks and bonds
2	assets and liabilities	debit and credit	borrow and lend
3	deficit and surplus	import and export	rich and poor
4	revenues and spendings		tariffs and quotas
5	employ and dismiss		poverty and wealth
6	boom and recess		coins and banknotes
7	invest and withdraw		
8	leader and challenger		
9	profit and loss		

Source: own concept and design

5. Conclusion

This paper merely brings a model of how financial and accounting terms can be reinforced by being employed as the base material on which attractive interactive activities are created. It puts forward exercises that can be produced, as imagined and prepared by language instructors, for implementation in class. They will elicit use of linguistics in activities involving work with vowels and consonants and will imply knowledge of semantics in tasks concerning the pairs of contextual antonyms. Making use of related aspects of linguistics and semantics, such activities aim at reinforcing the lexical elements, the vocabulary units found at the core of the material proper (the very drills prepared for the activities).

Language instructors can indeed play with words, creating appealing activities so as to present the class with catchier and more attractive materials meant to incentivise and ensure participation of learners. They shall thus colour, invigorate and ultimately better the rather mundane traditional approaches of introducing and teaching the blank terminology of Business English.

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REASONS FOR FAILURE OR SUCCESS OF EDUCATIONAL REFORMS IMPLEMENTED IN ISRAEL

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Abstract: *In recent years, many a factor has contributed to raising the issue of changes and reforms in education. The declared goal of reforms in the educational system is to raise the achievement level of an ever-increasing number of students, and to enable them to integrate better in the society. Just as reforms often being a necessity for survival of organizations, and a way in which systems can remain in the center of public interest, they as well constitute an incentive for constant innovation and express a desire to change the face of education (Adler, 2000). The educational system is dynamic and that changes take place from time to time in schools. Whether these changes are minor or profound, reforms do take place over time (Ranson, 2008). Reform acts as a process for change in a democratic society. It involves changes to routines, undermining of what is already in place, identification of needs, opportunity for public discussion of values, examination of alternatives, building of agreements on priorities, involvement of stakeholders, need to cope with opposition, development of action strategies and more. On the other hand, there certainly are opposing forces: open and covert resistance on the part of various stakeholders, political struggles for power and influence, weakness of a reform from the point of view of those who have most need of it, clashing interest groups, socio-political mechanisms and structures, failures in execution, etc. (Oplatka, 2010). However, reforms in education take place too frequently (Oplatka, 2010). This survey gives a historical review of these reforms, it defines the central reasons for failure of reforms (organizational structure, setting of short-term targets, long-term policy, and involvement of stakeholders) and proposes more effective ways to implement reforms in the educational system in the future. Attention to stakeholders, determining qualitative and quantitative measures and long-term policy supporting the reform are keystones of success.*

Keywords: *change; stakeholders; structure; goals; reforms; education; obstacles to reforms; success of reforms.*

JEL classification: *I21.*

1. Introduction

In recent years, many a factor has contributed to raising the issue of changes and reforms in education. In literature on education administration, it is now possible to find lots of information on subjects studied at school. New subjects were introduced to curricula, new learning theories were developed, psychological and sociological theories of a pupil's language were carried out, changes were made to organizational structure of schools under inspection and management science models were used to understand the dynamics between principals and teachers.

All these factors show that the educational system is dynamic and that changes take place from time to time in schools. Whether these changes are minor or profound,

reforms do take place over time (Ranson, 2008). In Israel, many reforms have been introduced and implemented over the years. On one hand, there is some doubt regarding the effectiveness of these changes in the educational system and capacity for assimilation of these changes over time (Silins, Mulford & Zarnis, 2002), however, on the other hand, evidence exists of successful assimilation of reforms building a step-by-step system to guide the leaders of change in implementation of a reform (Bryk et al., 2010; Ranson, 2008).
So what are the reforms, and what is the basis for their success or failure? Current paper surveys the central reforms in the educational system in Israel and proposes ways to make the implementation of future reforms more effective.

2. Reforms

The declared goal of reforms in education is to raise the achievements of an increasing number of students (and to enable them to integrate better into society). In addition to the reforms often being a necessity for survival of organizations and also a way to keep the subject at the center of public interest, they also act as an incentive to constant innovation and reflect a desire to change the face of education (Adler, 2000).
Reform acts as a process for change in a democratic society. It involves changes to routines, undermining of what is already in place, identification of needs, opportunity for public discussion of values, examination of alternatives, building of agreements on priorities, involvement of stakeholders, need to cope with opposition, development of action strategies and more. On the other hand, there certainly are opposing forces: open and covert resistance on the part of various stakeholders, political struggles for power and influence, weakness of a reform from the point of view of those who have most need of it, clashing interest groups, socio-political mechanisms and structures, failures in execution, etc. (Oplatka, 2010).
Grimmett and Wideen (1997) define reform in the field of education as a planned process of change aimed at achievement of praiseworthy objectives from the viewpoint of its initiators. Reform in education is, therefore, a change usually motivated from top to bottom, i.e. from policy-makers to the executive level, upon which pressure is being exerted to execute changes in the system and to adapt it to expectation of those in charge and to the environment.
In Israel, we can see that reforms in the educational system have observed three principles in recent years. In order to understand the reasons for success I will first survey the essence of main reforms which were carried out in the system.

3. Background of Educational Reforms in Israel

Education began in Israel prior to foundation of the State, and was shaped by a process which has continued for many years. From time to time layers were added and steps were taken to match the system's structure to new needs, as in Israel, compulsory education was introduced at the time of foundation of the State in 1948, and this continues constituting the basis for education. It provides free education for ages spanning from 5 to 14, for both the Jewish sector and the Arab sector. The norm was established of children requiring to study and for a school to provide Elementary education.

The first reform was in the year 1968, when following recommendations of Rimlet Committee it was decided to found separate Junior-High schools for ages 13 to 15. These junior high schools were supposed to create “an educational integration” by absorbing students from a number of feeding Elementary schools, distinguished from one another by social composition of their students’ population. It was decided to reinforce the law of compulsory education up to the age of 15.

Implementation of this reform was rapidly accepted and with no vigorous opposition. However, during the deployment, the Ministry of Education encountered elements of ambivalence, due to either a background of conservatism or identification with opposition from Teachers’ Association. Despite these delaying factors, the Junior-High school reform registered successes (Adler, 2000). Most of the public cooperated with the re-organization of education into integrated Junior-High schools until the 1980s, and the rate of pupils gaining a matriculation certificate was rising.

The second reform was the self-managing reform of 1992. In order to change the level of responsibility of schools, a committee was appointed by Minister of Education, Shulamit Aloni, to encourage transition of schools to self-managing. The transition to self-managing was designed, primarily, to define the school itself as bearing central responsibility for results. This re-definition took the authority for execution from those who had held it and delegated it to the educational institution. The basic assumption was that a person closest to evaluating the needs of pupils is the one to take the decision as to how to supply him or her with educational services. As teachers have the closest contact with pupils, one should transfer the authority to them to make decisions on subjects which were entrusted until that time unto the inspector, head of education department, or education personnel or organization that was not part of the school itself. In light of this move, schools were required to implement orderly work schedules by means of a school curriculum (Vidislavsky, 2004) which is guided by values based on, and aimed at targets. In order to support this change, professional materials were distributed to inspectors, principals and school officials.

Another reform, which was accepted in 2002, was in teaching of reading. In October 2000, the Shapira Committee was established to examine the topic of reading. Recommendations of the committee led to a reform which included change in methods of teaching of reading in Israel, from Elementary to High school age (Zohar, 2013).

In 2003, additional reform was proposed by the Ministry of Education following the Shoshani Committee report: the reform for equality in education. The committee was set to examine the allocation of resources as applied to Elementary school education in Israel, following a ruling by the Supreme Court of Justice relating to education, in order to respond to complaints of unreasonable differences in standards. This being related to allocation of resources to recognized schools not being registered, as opposed to “exempt” institutions. The reformed standard method was based on a principle of equality, on a social commitment to reduce differences in Elementary education and to resolve educational and social differences, whilst recognising the capability of each child.

This step necessitated a just and honest distribution of resources which would enable every boy and girl in Israel to reach their optimal level of achievement, deal with the socio-economic gap which they are found in and enable them to develop according to their abilities. The reform was designed to create an opportunity to construct a partnership between the school and the community around mutual

values of equality and social solidarity, to mobilize a different, more egalitarian, distribution of material and spiritual resources: knowledge, capacity, commitment, trust in pupils and in their capacity and a new observation of position of social values, that guide educators in both teaching and learning (Vidislavsky, 2003).
The New Horizon reform, and the so-called OZ reform for teachers, were accepted in Israel in 2008. These reforms were systemic and budgeted. They have relevance to a wide variety of organization frames for learners (a class, an individual teacher, pupil-teaching, and a small group with a teacher) in order to achieve educational and teaching goals. The reform recognizes the complexity of the teaching profession and a need for constant professional development. At the center of the New Horizon reform lies advancement of teaching-learning and development of the socio-ethical and emotional aspect by means of these main principles: (1) teaching-learning focused on an individual by means of "individual hours"; (2) strengthening the professionalism and quality of teaching by means of assessment of work of teachers, professional development along lines of career and allocation of time to teachers ("hours of stay") to carry out different tasks at school in addition to teaching in class; (3) reinforcement of management and the quality thereof. These reforms generate changes which encourage a school to re-examine its organizational culture, while emphasizing the advancement of every pupil in their mental (cognitive) aspects, their motion (motor) aspects and their intrapersonal and interpersonal skills. The changes increase as well the number of opportunities at the disposal of teachers to bring every pupil up to the required standards (Adler, 2000).
Meaningful learning reform was adopted by the Ministry of Education in 2014. The program's target is to change methodology of classroom studies. Instead of memorizing material, there should be a combination of more creative methods and positive experiences of learning, for example, by encouraging profound teaching and learning processes involving both a teacher and a learner and increasing interest and desire for learning – which the Ministry of Education hopes will result, over time, in higher achievements. A big part of realization of the program for meaningful learning depends on schools, that is, on principals and on teachers. The Ministry of Education allows for a relatively wide freedom of action of principals and teaching staff as well, in shaping "meaningful learning" in every school – even in development of study contents. In order to enable principals to implement the program, the Ministry gives them greater independence than before, both in managing and in allocation of the Ministry's budgets.

4. Obstacles and Reasons for Failure of Reforms in Education

Above survey of background of the reforms shows that they are frequent, which might indicate that a new reform reflects failure of a previous reform. However, one should judge each reform against its goals, while taking into account the by-products of the reform, both positive and negative, as indexes for success.
Researchers Gaziel (2007) and Oplatka (2010) identify four factors constituting obstacles to reform in an educational system which can result in failure.
The first reason depends on character, structure and leadership of a school. Character of a school as a social institution and the character of teaching, are insufficiently grounded in school structure for it to be possible to describe a school as an immune system (Eisner, 2010) and it follows for the fact that it is very difficult for a reform to be accepted throughout a school.

The second reason is content of a reform. Reforms invent simple and limited solutions to complex problems which require investment of resources of time and professional knowledge. Even the goals of a reform are often vague, which make its execution difficult (Gaziel, 2007). As a result, it is occasionally difficult to create understanding of how to execute the reform (Oplatka, 2010)

The third reason is political considerations that determine policy. Meaningful reform requires ongoing support and commitment of all political parties. When governments frequently change, as they often do in Israel, Ministers of Education tend to cancel or to feel lack of identification with the planned reform and consequently lack of commitment. Allocation of resources decreases and Ministers look for a new solution. In Israel, any systemic change inevitably takes longer than the average term of a Minister of Education (between the years 1990 and 2006 Ministers of Education served, on average, for one and a half years). Frequent changes of leadership of the Ministry of Education, usually at least the positions of Minister, Director General and chairman of the secretariat, result in changes in priorities and in new policy decisions which replace those of their predecessors. Even if the new policy is more preferable than its preceding policy, the frequent change inevitably causes huge damage.

The last reason is stakeholders in the educational system, teachers and principals, inspectors, institutions for teacher training and additionally, parents often do not reach agreement regarding the proposed reform and constitute an obstacle to its execution. For example, education personnel oppose change from fear of additional burdens upon the system, from undermining of recognized routines and from lack of moral commitment to the reform (Oplatka, 2010). Inspectors often oppose reforms due to fear of losing their power and status and parents might oppose change due to lack of understanding of the contribution to be made by the reform on a professional level.

5. Is it Possible to Create Successful reforms in an Educational System?

The question to be asked is what should, and can, be done differently. As a background to search for an answer to this question, several characteristics of the process of educational change, will be delineated, focusing on teaching and learning. Change over time: a central component in every process of change is a process of learning. All adults involved, need to undergo a learning process that combines theoretical and practical knowledge, pedagogic tools, a change of attitudes and conceptions about the essence of teaching and learning, and as well emotional aspects (Strauss & Shiloni, 1994). A complex and profound developmental process, which can be done gradually and only over time, is involved.

Systemic implementation of the change requires work on attitudes of parents, on study materials, on development of innovative assessment methods and on training of educators in several organizational levels: inspectors, principals, instructors, teacher trainers, authors of study and examination materials and, naturally, tens of thousands of teachers. In processes of professional training, such as these, no shortcuts are possible. Development of new study and assessment materials is a long-term exercise, demanding several cycles of implementation, filed tests, formative assessment and correction. Work is as well required on private design and planning of details of the process of change, both on general systemic levels and within multiple specific contexts (such as school, class or a specific lesson). Each

process of educational change focusing on teaching and learning cannot be a speedy process yielding results within just a single year, or even two or three years, but rather has to continue for several years. This does not stem from negligence or inefficiency of those doing the work, but rather from the essence of the process and its complexity, and particularly from developmental dimensions of human processes of learning – which by their very nature are unlikely to offer shortcuts (Zohar, 2013).
Creating conditions for a long term and stable policy: the previous paragraph argues for importance of a long-term policy and a stable governmental and managerial mechanism which will be able to support the policy continually for many years. It seems unlikely that the frantic nature of political reality in Israel is going to change in the coming years. The sole hope of bringing success to processes of change lies therefore, in the foundation of an apolitical governmental entity which can and will outline a long-term educational policy which implementation is immune to frequent political change.
Measurement of reform is by quantitative and qualitative measures simultaneously. Change of focus on teaching and learning is a qualitative process of change which can be measured only by complex indexes. There are processes of change in the Israeli educational system. For example, one should test the proportion of students studying in 7th to 9th grades in Junior High schools in the chosen years. We saw that in the years 2001-2002, 70% of the pupils studied in the relevant age groups in the Junior High schools, whereas 30% studied in eight-year Elementary schools (1st-8th). In other words, the percentage of pupils who studied in Junior High schools is a dichotomous variable measurable by a single quantitative index. However, other processes of change are significantly different from this example – and it is incorrect to describe them in terms of “all or nothing” (Zohar, 2013). If we consider the role of education is in thinking and understanding, two distinct approaches are involved. There are few teachers in whose class educational interactions never take place for advancing pupils’ understanding and thinking. On the other hand, there are no teachers whose classes deal solely with profound understanding and thinking and it is logical that this is the case. A need to formulate the goals of change just by comprehensive, measurable steps can only damage the process of change itself. Hence, it is clear that assessment of a program dealing with processes of change in quality of teaching and learning is necessarily complicated. It must indeed include quantitative indexes, however, qualitative indexes as well that are capable of reflecting profundity of processes and the quality thereof. These may include work files, using special programs to document and analyze processes of change taking place in schools, or processes of professional development, or projects involving groups of teachers.
Integration of stakeholders: It is essential to deal with each group of stakeholders and to encourage their involvement and participation both as a group and as individuals as well. It is advised to put pressure for their involvement from the outset, starting from design stages of the reform, definition of targets and method of implementation. It is particularly important to assure the commitment of teaching personnel and one should place at their disposal the required professional tools, as, in practice, they are the bearers of main burden of execution of every significant reform (Oplatka, 2010). Not a less important group is pupils. A school must be a relevant and meaningful place for pupils so that they will be able to develop educational and social self-sufficiency, a sense of self-realization and belonging, be challenged, etc. Their involvement in shaping the school is essential. A further group

is pupils' parents. Support of parents and their involvement enables a school to focus on the tasks it faces and releases it from wasting resources involved in dealing with parental opposition.

6. Conclusions

This survey of educational reforms in Israel defines the central reasons for failure of reforms (organizational structure, setting of short-term targets, long-term policy, and involvement of stakeholders) and proposes more effective ways to implement reforms in the educational system in the future. Attention to stakeholders, determining qualitative and quantitative measures and long-term policy supporting the reform are keystones of success. Determining the conditions required for success as they are presented in current paper would enable successful implementation of an updated reform of "meaningful learning" by the Israeli Ministry of Education and pave the way for subsequent reforms.

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GLOBAL PROBLEM OF EDUCATIONAL FAILURE, IS THERE A PROBABLE REFORM FOR DEALING WITH THE CRITICAL ISSUE?

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Abstract: *Current paper examines reforms in educational systems around the world. Two main paradigms explain the growth of reforms in education systems: the balance paradigm and the conflict paradigm. By examining these paradigms, current paper describes the central reasons of reform failure. In parallel, the paper attempts supplying three principles for development of a successful reform in education systems. Over past hundred years, educational systems have constituted an integral part of the social services countries provide their citizens with. In addition, education is perceived as a critical variable to development of a modern economy and as a tool that promotes democratic values. This conception defines the role of a state as a protagonist that supplies a guiding hand in all matters of education. The rapid development of science and social changes challenges the system to reinvent itself in order to cope with the pace of various demands imposed on it. The question is: why are there so many attempts at educational reform and why do they fail? Reform depends on two basic organizational structures in modern society. The first is democracy, as reform is decided by people's elected representatives, the politicians, who follow a political agenda. The second is bureaucracy, those professionals who are specialists in the field and public administrators who are responsible for execution of the reform and implementation thereof. The combination of these two structures – which pursue different agendas and interests – is a basic difficulty facing reform (Gaziel, 1997). It might be possible to execute reforms in the educational system should three principles be followed: long-term policy, clear ways of measuring success, and integration of stakeholders. The sole hope of implementing a successful educational reform, therefore, lies in establishing an administrative or political body that would deal with outlining a long-term educational policy which implementation would be immune to frequent political changes (Zohar, 2013).*

Keywords: *educational policy; reform; change; balance paradigm; conflict paradigm.*

***JEL classification**: I21.*

1. Introduction

Over past hundred years, educational systems have constituted an integral part of the social services countries provide their citizens with. In addition, education is perceived as a critical variable to development of a modern economy and as a tool that promotes democratic values. This conception defines the role of a state as a protagonist that supplies a guiding hand in all matters of education. The rapid development of science and social changes challenges the system to reinvent itself in order to cope with the pace of various demands imposed on it.

Grimmett and Wideen (1997) define reform in the field of education as a planned process of change aimed at achievement of praiseworthy objectives from the

viewpoint of its initiators. Reform in education is, therefore, a change motivated usually from top to bottom – that is, from policy-makers to the executive echelon, upon which pressure is exerted to execute changes in the system and to adapt it to expectations of the policy-makers and the society at large. Accordingly, schools in Israeli educational system and those in rest of the world are subjected to comprehensive organizational reforms and changes on a regular basis. Big sums of money and effort are invested in these changes and they are similar in essence, to processes of change in other big organizations around the world (Abdullah & Kassim, 2011).

2. Theoretical Background of Growth of Reforms in Educational Systems Around the World

Organizational changes reflect organizational reactions to changes in conditions of external or internal environment of an organization. Changes occur whenever significant gaps are created between a desired functioning of an organization and its actual functioning (Piderit, 2000). In the literature, we identify two paradigms taken from the field of sociology that explain the growth of educational reform: the balance paradigm and the conflict paradigm.

The balance paradigm claims that an education system is entrusted with protecting a balance of forces in society. When these balances are broken and a social (economic, demographic or other) need arises that is not satisfied, an imbalance is created between various parts of society. Usually, an expectation arises that the education system should be mobilized to return society to a more stable condition. The more societies modernize and their needs change, thus expectation increases that the education system should change in a similar direction. When the education system does not successfully respond to a gap between expectations and existing situation, pressure for a new reform emerges, one to succeed where the previous one did not. A cycle of repeated changes is created.

The conflict paradigm assumes that reform in education derives not from a natural process of protection of social balance, but rather from a constant conflict existing between various parts of society over targets, ideology, resources and power. A reform occurs when a conflict intensifies. The question then is how can a state resolve conflicting ideological commitments – for example, between commitment to effectiveness in a liberal capitalist society and commitment to creation of equality of opportunities and closure of social gaps. In order break through the impasse and gain political profit, policy-makers declare a reform that would remedy sickness of the education system. Afterwards, it limits the reform's implementation while as well minimizing damage (as educational reform costs a great deal of money and results are perceived only in the long term) (Gaziel, 1997).

3. Failures of Reforms in Education

The question is: why are there so many attempts at educational reform and why do they fail? Reform depends on two basic organizational structures in modern society. The first is democracy, as reform is decided by people's elected representatives, the politicians, who follow a political agenda. The second is bureaucracy, those professionals who are specialists in the field and public administrators who are responsible for execution of the reform and implementation thereof. The combination

of these two structures – which pursue different agendas and interests – is a basic difficulty facing reform (Gaziel, 1997). These and other factors provide the reasons for failure in implementing educational reforms. It is possible to sum up the reasons for such failure by observing attempts at reforms in various countries.

First reason – political instability following frequent changes of government (in Africa and South America) or frequent changes of Minister of Education (in France and Israel). Every Minister of Education arrives with an agenda of their own, and they typically seek to leave their imprint on the system by proposing a reform. Even Ministers of Education from same political party, with similar ideologies, promote different reforms in order to be remembered by history – in France, for example, every reform is recorded by name of a Minister who proposed it. There is a similar situation in Israel: "the reform" is associated with the Minister of Education of the time, Zalman Aran; the foundation of regional colleges with Minister of Education Amnon Rubinstein; the Dovrat Committee with Minister of Education Limor Livnat; and "meaningful learning" with Minister of Education Shai Piron. The result is that no reform succeeds in achieving the targets that were set for it.

Second reason - Results now. The desire to do everything, fast and at once, is premised on the idea that this is the best way to resolve social and educational distresses. People expect the educational system to solve everything – it will bring about economic prosperity, close gaps, increase social mobility, encourage cultural integration, etc.

Third reason – bureaucracy. The educational system is a bureaucratic system and it holds within it the failures typical to these kind of system – not less, protection of vested interests. Each attempt at a reform is perceived as a threat to those with vested interest. So, for example, in 1980s, inspectors torpedoed attempts at making schools more autonomous. Alongside "bureaucratic inertia", one should include the difficulty of freeing teachers of habits they feel providing them with security at work. There are organizational codes in schools helping a teacher to maintain a safe routine: discipline, keeping a timetable, structure of lessons, examination timetables, ceremonies, etc.

Fourth reason – importation of economic models and attempt to integrate them into the education system out of a belief that educational problems will thereby be resolved (Robertson & Woock, 1994). An example is a model that parents should choose the schools of their children. Supporters claim parents' choice will bring about an improvement in educational achievements. It is known that the idea of parental choice is based on the principle of a market mechanism: schools would have to become more efficient in order to attract students and parents would then choose the best school for their child. But it is unclear how the model of parental choice solves the question of students' achievements and prevention of their dropout from schools – two problems that are pedagogical in essence (Murillo, 1999).

Fifth reason - Reform in a complex system requires high budgetary investment. A complex system such as education requires big investment to carry out a reform. An investment of this scale often does not gain a wide public support. Additionally, the benefit of reform is seen only many years later. In absence of wide public support and a suitable budget, implementation of a proposed reform is partial or slow.

Sixth reason - attitudes towards teachers. Regular reforms have become a fact of life for teachers and in most cases reform is imposed from the top without their involvement in the process. The expectation is that they will change patterns of behavior and even their values and basic assumptions as part of the reform (Fullan,

2006; 2011). In terms of their role, teachers are required to adapt themselves to constant changes in society, to development of knowledge and to a growing accessibility of knowledge. They are perceived as responsible for welfare, education for citizenship and progress and achievements of their students (Day & Smethem, 2009). When teachers are perceived by policy-makers as solely responsible for implementing reforms, the implementation is likely to be superficial and to be characterized by passivity, by reduction in autonomy and by a limited motivation to effect improvement (Luttenberg, Carpay & Veugelers, 2013).

Seventh reason - ignoring stakeholders. "Any attempt at a reform is perceived as a threat to those with a vested interest" (Gaziel, 1997). The education system has many stakeholders and the main ones are: teachers and principals, who in practice are usually ordered to implement the reform, to operate a new curriculum and to change their teaching methods; inspectors, who are required to oversee the reform; teacher training and management institutions, which are entrusted with training teaching personnel and with providing knowledge and tools for work in a dynamic and changing system; and students and parents, who are consumers of the system. Reasons teaching personnel might oppose change include: misunderstanding of the sought-for change and ways to execute it; fear of failure; additional burden at work; questions about worthwhileness of change; undermining of familiar routines; lack of moral commitment to the required reform; and a feeling that it is being imposed from the top. Reasons consumers of the educational system might oppose reform include: misunderstanding of its possible contribution to them; exaggerated expectations; and desire to see results within a short period of time. Reasons inspectors might become an opposing party include: fear that the reform would weaken their status; and lack of practical knowledge about how to integrate the change.

4. Is it Possible to Create a Successful Reform in Education?

Is reform in the educational system a passive and unrealized goal? As concluded by several researchers (Clabaugh & Rozycki, 1989; Oplatka, 2010; Zohar, 2013), it might be possible to execute reforms in the educational system should three principles be followed: long-term policy, clear ways of measuring success, and integration of stakeholders.

Creating conditions for a long-term and stable policy: previous paragraph highlights the importance of a long-term policy and stable governmental and administrative mechanisms that would support policy consistently over many years. From its political and electoral make-up, it seems that a divisive and frantic political reality in Israel will not change in years to come. The sole hope of implementing a successful educational reform, therefore, lies in establishing an administrative or political body that would deal with outlining a long-term educational policy which implementation would be immune to frequent political changes (Zohar, 2013).

Measurement of reforms by quantitative and qualitative measures simultaneously: change focusing on teaching and learning is a process of qualitative change that is measurable only by complex indexes: these are educational processes of change which output is describable in dichotomous terms and by quantitative measures only. For example, in order to grasp the success of a reform concerning Junior-High schools in the Israeli educational system, one can check the proportion of students studying in 7th-9th grades in Junior-High schools in selected years. One could see that in the years 2001-2002, 70% of pupils in relevant age groups studied in Junior-

High schools, whereas 30% studied in eight-year Elementary schools (1st-8th). In other words, the variable of percentage of pupils who have gone through education in Junior-High schools is a dichotomous variable that can be measured by a single quantitative index.

However, pedagogical processes of change are significantly different from this example, as it is not appropriate to describe them in terms of "all or nothing" (Zohar, 2013). If one considers the example of education in thinking and comprehension, a dichotomous transition between two poles is not relevant. There are almost no teachers in classes of which educational interactions never take place in order to promote students' understanding and thinking. On the other hand, there are no teachers in classes of which all of the time is spent on deep understanding and thinking – and rightly so. The need to formulate the goals of change solely with comprehensive quantitative measurable criteria can only damage the process of change itself. Hence, it follows that an assessment of a program dealing with processes of change in quality of teaching and learning has to be a complex assessment. It must include quantitative indexes, however additionally it must also include a string of qualitative indexes: that would be capable of containing the depth of discussed processes and the quality thereof, such as work files; and that would present special programs and would also document and analyze processes of change taking place in schools or in processes of professional development or in projects of a group of teachers.

Integration of stakeholders: Every group of stakeholders must be assured of their involvement and participation, both as a group and as individuals. It is important to act for recruiting them at the initial stages of a reform's design, as targets are being defined and methods of implementation considered. It is especially important to ensure commitment of teaching personnel and one should place at their disposal the necessary professional tools as they are going to bear the main burden of execution of every significant pedagogic reform (Oplatka, 2010). A no-less important group is the pupils. A school must be relevant and meaningful place for pupils so that they would be able to develop educational and social self-sufficiency, to develop self-realization and a sense of belonging, and to be challenged. Their involvement in shaping the school is necessary. An additional group is pupils' parents. Support of parents and their involvement enable a school to focus on the tasks ahead of it and free it from wasting efforts in dealing with parents' opposition.

5. Conclusions

Current paper examined the reasons for failure of educational reforms around the world. There is no doubt that a problem exists in implementation of reforms in the educational system in all the countries. The clash between democracy (changes of Ministers) and bureaucracy (implementation of organizational change) are the central reasons for their failure (Gaziel, 1997). Despite that, additional researchers (Clabaugh & Rozycki, 1989; Oplatka, 2010; Zohar, 2013) remain optimistic about success of a future reform. Such reforms – should they take place in conditions of governmental stability, integration of stakeholders and existence of relevant measuring systems – can help the educational system to successfully implement reforms.

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THE SHARED SERVICE CENTRE (SSC) – A NEW BUSINESS CONCEPT

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Abstract: *In this paper I am going to write about shared service centres. It is a big challenge for all types of companies anywhere in the world to "survive" in our globalized and accelerated world. Their primary objective is to stay competitive, keep or even enlarge their market share while keeping their costs at minimum level. Nowadays they can only be competitive if they "reinvent" themselves: use new forms of business, form alliances to cut costs and enlarge their customer base. In our world everything changes so fast that for companies it is really essential to be flexible and adapt to new challenges. It has also become typical that these corporations cross borders and operate on a multinational level. In order to do that successfully they need flexible workforce: people who have intercultural competences and can help their corporations achieve their aim of profit maximizing. In the late 1990s a new organizational change approach appeared the shared service concept. Since that it has become popular in many parts of the world as it has a number of advantages: cost reduction, deploying new technology and a customer- oriented way of conducting business. Many researchers agree that the performance of companies can improve using the shared service format because they can concentrate on their core business within the company. A shared service centre can perform various functions in the company: finance, human resources (HR), legal, and information technology (IT), communications and public relations. This business model also has some drawbacks: there can be high transition costs when establishing a shared service centre and sometimes it is difficult to determine the accountabilities and the priorities within the shared service centres. Shared service centres need well-educated and well- motivated global workforce and it is a real challenge to find these people and keep them in the long run. It is true that technological advances are very important but so are the people.*

Keywords: *shared service centre; organizational change; strategic alliances; outsourcing; intercultural competences.*

JEL classification: *L22; M12; M14.*

1. The Definition of the "shared service" model

The model was launched in the USA at the beginning of the 80's when the NASA created similar centralised organizations. Later private firms took over the model expecting that functions will be cheaper but this was not always necessarily the case. They realized that: "…within the company the profit-making is not the first goal for shared service centres on the contrary with outsourcing providers and in some multinational companies the level of several internal services are world-class and have the volume enough as well." (Marciniák, 2013: 218) In the case of a shared service centre the performance management is a key issue.

Performance measurement has to prove that cost-saving and efficiency are achieved and they need continuous justification for the existence. "It is very hard to

be objective at measuring when a service centre performs well, but the aim is clear, do services quicker, better and more effective. It is a harder question how to plan, measure, report and communicate them." (Marciniák, 2013: 219)
"More than 75% of Fortune 500 companies have established models of shared services with the aim of gaining superior performance by cost savings and service enhancements." (Richter and Brühl, 2017: 1)
In 1999 L. I. Forst wrote in an article about the shared- internal services approach. In this article he wrote: "The basis for shared internal services (SIS) is that common business practices can be successfully applied by a staff unit- which is entirely focused on delivering needed services at the highest value and at the lowest cost to internal customers. This creates accountability within the company, which is more effective than having multiple points of responsibility and varied management practices." (Forst, 1999: 58)
Schulman et al. (1999: 9) came up with another definition for shared services as: "bundling of supporting processes and non-strategic activities" into an independent organisation which then runs these activities as its core business.
In 2001 Goold, Pettifer and Young wrote an article about the corporate centre transformation. They wrote about shared services that: "Shared services are activities carried out centrally on behalf of the divisions or business units of a company. The services may be standard, process-driven transactional activities, such as payroll or payments processing, or they may be more complex, professionally- driven expert services, such as applications software development or business intelligence. The divisions or businesses, which would have to carry out or buy in the services themselves if they were not provided by the centre, normally have some control over the work done." (Goold, Pettifer and Young, 2001: 88)
About the management they wrote that independent units provide the shared services, independently from other functional or departmental activities, and often run by a general manager. "The strong definition implies something very different from a traditional corporate centre service function, with a much more dedicated, customer-responsive and performance-driven approach." (Goold, Pettifer and Young, 2001: 88)
Bergeron (2002: 1) wrote in his book that: "In the current global economic environment, which is characterized by downsizing, mergers, acquisitions, and uncertainty, managers are grasping for ways to simultaneously improve the bottom line while increasing competitiveness."
He also wrote that the most outstanding alternative model is the shared services model, which is a "hybridization" of the traditional business models. According to his definition: "Shared service is a collaborative strategy in which a subset of existing business functions are concentrated into a new, semi- autonomous business unit that has a management structure designed to promote efficiency, value generation, cost savings, and improved service for the internal customers of the parent corporation, like a business competing in the open market." (Bergeron, 2002: 3)
The main aim of this model is to optimize resources: people, time and capital within the organization. A new business unit is created by the parent corporation to provide various types of services, which can include back office work and other business activities. This is advantageous for the parent organization because of its location and expertise. This new business unit is semi- autonomous, which means that it is linked to the parent organization. However, the executives of these units have a certain degree of independence in decision making, for example in hiring. As for the

market structure of the shared service business units we can say that they compete in the open market similarly to most other companies.
Gottfredson et al. (2005: 132) wrote in their article that as globalization changes the basis of competition, sourcing is becoming a strategic opportunity, critical functions like engineering, manufacturing, and marketing are moved outside.
The shared service model always operates within a Shared Service Centre (SSC).
M. Janssen in 2005 wrote about the main function of SSC: "By unbundling and centralizing activities, the basic premise for a SSC seems to be that services provided by one local department can be provided to others with relatively few efforts. With centralization and decentralization respectively we denote the (de)centralization of the broad spectrum of information systems resources including human resources, computing hardware, applications, storage and network services, web hosting, application hosting and information resources." (Janssen, 2005: 247)
Janssen and Joha (2006: 104) wrote in their article that: "The popularity of SSCs seems to originate from a combination of advantages, including efficiency gains and an increase in service levels without giving up the control of the organizational and technical arrangements and expertise."
Ulbrich (2006) gave the following definition for SSCs: "shared services gather a selection of common and well-defined services to provide these services to an organization's units, acting independently. This is somewhat similar to outsourcing, where the provider of such services is contracted. Usually, an independent third party without direct connection to the outsourcing organization takes over support processes. The shared service alternative, however, is built on the idea of taking advantage of the existing knowledge of an organization and its culture. Therefore, services are located within the corporation, often in independent business unit." (Ulbrich, 2006: 197) He also wrote in this article that the concept originated in the USA and spread to the other parts of the world in some years.
In 2007 an article appeared about the governance for shared service organizations in the public service written by G. Grant, S. McKnight, A. Uruthirapathy and A. Brown. The governance structure describes the levels of committees, their roles, accountabilities and responsibilities. There are different structures to manage shared services organizations. In their research they examined models from Canada, Australia, the UK, US. In general, the governance structures were similar but they found differences in the number of layers. They found two recommended structures: a governing board and a shared services implementation office (Grant et al. 2007: 525).
On the operational levels, they wrote about three structures: a Shared Services Implementation Board, a Shared Services Organization Governing Board, and a Shared Services Organization Governing Board. They also studied the literature about the governance elements and considerations and they found some common points in it: the head should be an experienced person who managed a similar organization before and the objective of this organization is to provide their clients with better service (Grant et al. 2007: 526).
"The main difference between the private sector and public sector implementations of shared services organizations is the inclusion of external or third party provided services to achieve cost efficiency." (Grant et al. 2007: 528)
When establishing the SSC, it is suggested to set up the office in a new physical location. Other important areas for consideration are language or service rights. As for the organizational culture the authors suggest that: "As the organizational culture

changes during the maturing process of the SSO, leadership styles of the varying boards may be revisited as the type of leader necessary to champion change may differ from that of the steady state organization. As such, methods such as codifying rotating board members or fixed tenure lengths may be tools that help in this regard." (Grant et al. 2007: 531) In the initial phase of the establishment they need to transfer skilled people from the existing organizations. The transition to a fully operating shared service organization can be lengthy. The time phases that describe activities during transition to a shared service organization are listed below (Grant et al. 2007: 532-533):

6–18 months: SSO created, Strong emphasis is set on communication to clients.
18–36 months: Relocation and system changes.
Roles and responsibilities are defined.
36–72 months: Integrated risk management, automation, SSO is self- funded.

According to Oshri, Kotlarsky and Willcocks (2011: 27) the shared service centre is: "An operational approach of centralizing administrative and business processes that were once carried out in separate divisions or locations- for example finance, procurement, human resources, and IT."
In 2011 McIvor, McCracken and McHugh wrote an article about the outsourced shared services arrangements in the public sector. They said that shared services centres can reduce costs through process standardisation, and economies of scale. A shared services centre can to provide better service levels to users in the organisation. In their research they used a case study approach.
On the basis of their findings they draw some important lessons for managers creating outsourced shared services arrangements (McIvor, McCracken and McHugh, 2011: 457-459): employ a structured project management approach, engage with vendors to develop potential sourcing options, leverage external expertise during contracting, build relationships with key internal stakeholders, plan and implement a process improvement strategy, employ relational and formal contracting as complements, plan and implement a change management strategy.
"The research findings have the highlighted the importance of strong governance to drive standardisation and performance improvement, and relationship building both internally with the staff affected by the changes and externally with vendors. It is important to build relationships with staff at both senior and lower levels that are impacted by the changes." (McIvor, McCracken and McHugh, 2011: 459)
Rothwell et al. (2011) conducted research in order to examine the shared service centres from a professional employability's point of view. They defined the SSC (Figure 1) as follows: "the shared service centre model (SSC), in which professional support functions such as finance, HR, purchasing, IT and legal services, previously located within business units or head office are aggregated into a new central unit, reporting outside of the divisional line hierarchy. This encourages the SSC to operate in quasi-market manner that is positioned as a hybrid governance model between line management control and the open market. The primary driver is to reduce costs through scale benefits and what is called wage/location arbitrage. Other motivations might include service improvement, access to better expertise, economies of scale, and leveraging competitive advantage through information and communications technology." (Rothwell et al. 2011: 241)

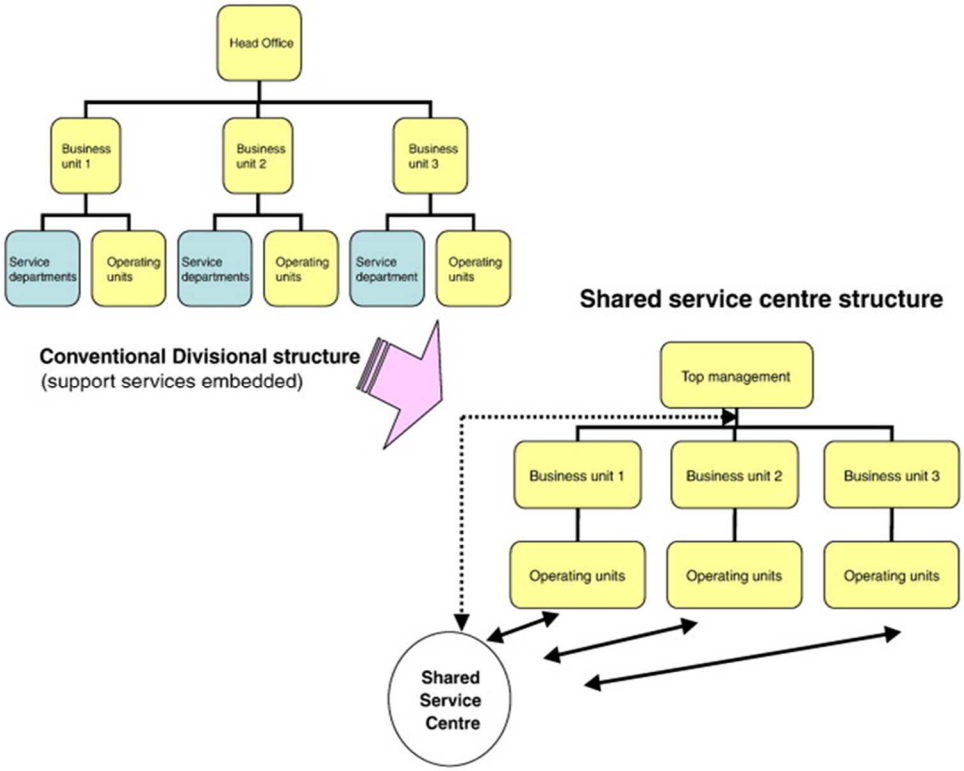

Figure 1: Moving to a shared service model
Source: Rothwell et al. 2011: 241

In their study they used the term "Martini workers" to describe the flexible mode of employment that a SSC can mean (Figure 2). They used this phrase after the Martini advertising slogan of the 1970's: 'any time, any place, anywhere'. One of the conclusions of their research was that: "the SSC model can provide for economies of scale and scope, together with arbitrage opportunities in respect of labour and infrastructure costs, that is wherever the physical location of work is not critical. In practice, this often means the substitution of relatively expensive workers in developed countries by lower waged workers in developing countries. (…) this geographical flexibility also frees organizations from the constraints of time zones." (Rothwell et al. 2011: 243)
Workers employed by a SSC can have both positive and negative implications. For some workers the greater choice and freedom is perceived favourably, while others may perceive them as a greater sense of competition for employment. For individual professionals in developed countries the sense of security of employment has become ill-founded with the appearance of SSCs: "The off-shoring of a significant volume of professional work could further reduce career opportunities in developed countries and mean workers taking lower pay, working longer hours to compete, or even having no job at all. Professional workers may now have to compete individually and collectively across time and space to remain employed." (Rothwell et al. 2011: 250)

Some workers may have to continuously renegotiate their employment relationship from a zero base, and the ability to keep the job may become more pressing, and the workers in SSCs present a serious threat to the professionals in first-world countries.
In their article the authors suggest that: “there is a significant need for a more sophisticated conception of sustainable professional employment and professional careers to encompass flexible, global 21st century developments.” (Rothwell et al. 2011: 251)

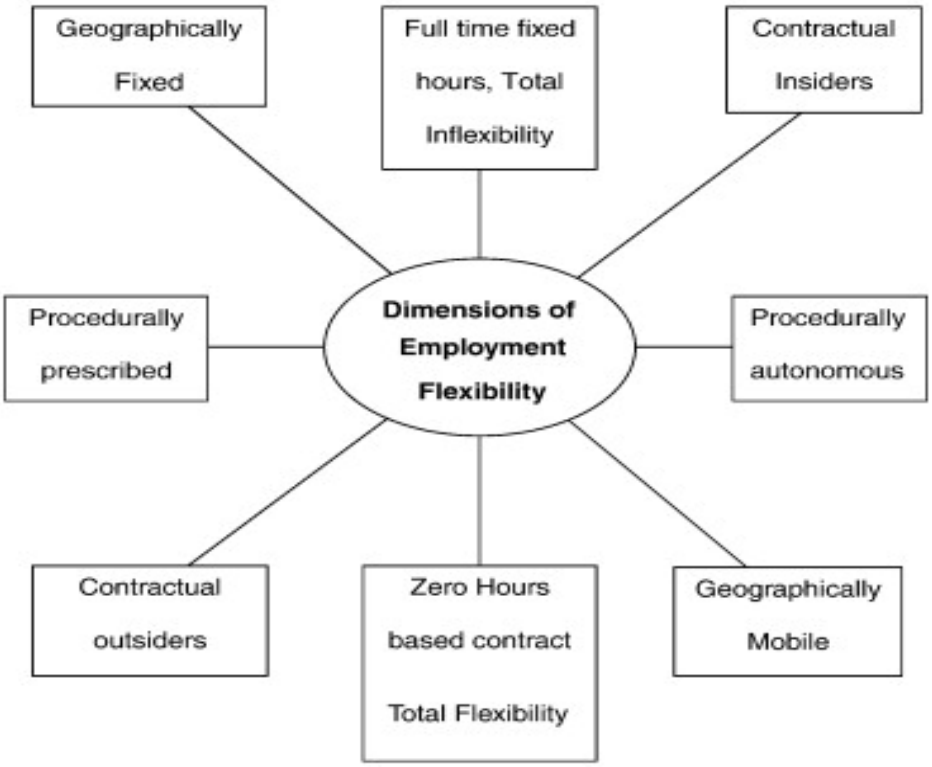

Figure 2: The Martini workers, dimensions of employment flexibility
Source: Rothwell et al. 2011: 243

Leastwise, Bene and Salamon (2016) underline the importance of investing in internal CSR (Corporate Social Responsibility) activities at retention the talented, successful employees.
I. P. Herbert and W. B. Seal in 2012 in an article noted some implications about shared service organizations for management accounting (Figure 3). “By concentrating service activities in a specialist business unit located at a carefully chosen site, possibly offshore, it has been claimed that the SSO can substantially reduce the cost of support service provision.” (Herbert and Seal, 2012: 83)

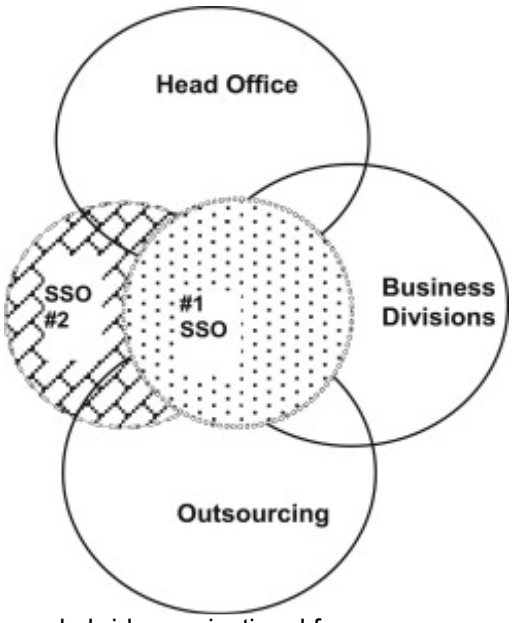

Figure 3: The SSO as a hybrid organisational form
Source: Herbert and Seal, 2012: 94

In 2014 Knol, Janssen and Sol in their research provided a systematic overview of challenges that organisations can encounter when developing shared services arrangements. Their paper provides an explanation of the four theoretical perspectives including corresponding SSC development challenges derived from the literature review and the case studies. They identified the following SSC challenges from literature: a power struggle in acquiring and maintaining resources maximise efficiency by minimising transaction/production costs, long-term survival, and knowledge integration. They also gave an overview of the four perspectives in organisational theory (Knol et al. 2014: 94):

- Resource dependence: Maximise power by acquiring and maintaining resources;
- Efficiency: Maximise efficiency in internal and external transactions;
- Population: Long-term survival in organisational environment;
- Knowledge: Knowledge integration for the production of goods/services.

"Based on RDT (resource dependency theory) a struggle for resources and resistance from individual organisation units can be expected due to a loss of power when establishing SSCs. With the establishment of a SSC individual organisation units operating within the domain are forced to share resources. Consequently they cannot acquire and maintain resources individually, thereby diminishing their ability to maximise their power and minimise the power of others. The SSC establishment distorts the power maximisation efforts of the individual organisation units which can be a significant cause for resistance." (Knol et al. 2014: 95)

The authors suggest that efficiency perspective is derived from economics and accordingly there are many theories and costing approaches related to this perspective. First they mention the *transaction cost theory* of Williamson (1981), which suggests that organisations aim to minimise their transaction costs as well as

production costs, which forms the basis for sourcing decisions. Secondly they mention the *agency theory* of Eisenhardt (1989). They wrote that agency theory focuses on contractual arrangements between agents (the SSC) and principals (individual organisation units in the SSC domain). “Based on the efficiency perspective a number of SSC development challenges related to maximising efficiency by minimising transaction and production costs can be expected.” (Knol et al. 2014: 95)
They explained the population perspective as one that is rooted in biology and views organisations as populations aiming for long-term survival.
The knowledge perspective relates to *knowledge management* and sharing of best and worst practices in organisations: “The main focus of the knowledge-perspective is on the production of goods and services in organisations through coordination of integrated knowledge. Hence, organisational success in the knowledge perspective is defined as optimal coordination of knowledge integration for the production of goods and services.” (Knol et al. 2014: 97)

2. The Benefits of a Shared Service Model

By creating a shared service centre companies would like to improve efficiency, competitiveness and customer satisfaction. A shared service centre can eliminate redundant activities by consolidating them into a shared operation.
Bergeron (2002: 6-7) wrote that the model has numerous benefits, which are: reduced costs (meaning cost- effective products and services), improved service (meaning better services to internal customers), fewer distractions from core competency activities (meaning that the parent company can focus on its core competencies as the back office activities are moved from it), a potential for creating an externally focused profit centre, increased efficiencies: from the perspective of the shared business unit, decreased personnel requirements (meaning that fewer employees are needed), improved economies of scale (meaning that the concentration of business activities allows for increased economies of scale).
Ulbrich (2006: 197-198) collected the common goals of shared services on the basis of the relevant literature: cost reduction by economies of scale, an accumulation of intellectual and capital assets, standardization process and easier access to cutting-edge technologies.
In 2010 Maatman, Bondarouk and Looise conducted a research on the capabilities and value creation of HRM shared service models. ”Selected HRM activities are concentrated, or bundled, into a new semi-autonomous business unit that performs HRM activities for the business by providing services that are shared by various organisational entities and matched to different end user groups. Common examples of such shared services are the use of a call centre to support employees, line managers and decentralised HRM staff, and a centre for the processing of HRM-related transactions in an information system.” (Maatman et al. 2010: 327)
In their article Maatman et al. 2010: 329) the authors distinguished four categories of motives for establishing an HR SSM: strategic and organisational motives, technical motives, political motives, and economic motives.
They gave the definition for HR Shared Service Model as: “a collection of HRM Shared Services whose characteristics are determined by the customers, and provided within an intra-organisational HRM arrangement to a specific set of end-

users by a (semi-) autonomous business unit on the basis of agreed conditions." (Maatman et al. 2010: 337)

Marciniák (2013: 217) wrote an article about measuring service satisfaction in Shared Service Organizations: "Each organization needs a good performance measurement system but in a shared service organization it is vital issue. This organization has to fulfil the demand of internal customers and sometimes external customers and convince the executives about the success of existence. If it is not successful and could not compete in quality and price with the outsourcing service providers then executives will look for a better solution."

Companies want to rationalize their operational costs by moving some of their services over the country's border thus creating a shared service organization.

Originally the main aim of such organizations was cost-cutting but now there are many other drivers (Marciniák, 2013: 218): improved services and reduced costs; standardized services and processes; diminished administration costs; supporting corporate strategy; grouping similar tasks and demolishing redundant processes; favouring progress; facilitating introduction of new technologies; improving working capital.

The need for providers to define requirements with their customers created the Service Level Agreement (SLA). This is a written agreement for both outsourcing and shared service model and instrument of coordination and operational control between the parties.

It should cover different areas (Marciniák, 2013: 220): the client's expectation, the supplier's supply or delivery, the quality standard, the client's obligations, what happens in case of failures, a description of the services to be provided, skills that the supplier must possess, pricing and charges for services provided, method, service standards, including deadlines, timescales.

He wrote that he had found four keys to successfully maintaining true customer satisfaction over the course of a long-term Shared Services contract (Marciniák, 2013: 221):

- a Service Level Agreement (SLA) is not just a legal agreement to provide service that is signed and forgotten;
- dedication to Marketing & Awareness;
- be there for the Customer/Take Ownership;
- commit to the Continuous Improvement Cycle.

"The aim of transferring supported functions to shared service centres is the parent company could operate effectively and efficiently. But company could check fulfilment of this aim only if continuously monitors the performance of concerned processes. Effective performance measurement is based on client satisfaction that is one of the success factors in shared service centres." (Marciniák, 2013: 223)

In their research in 2014 Risse and Loitz examined whether moving tax compliance processes from head office to a shared service centre can relieve the burden for a tax department. In their article they wrote that: "The tasks and processes performed in an SSC can only be a useful measure, if the following are taken as given in such an organisation, for example economies of scale, increased service standardisation or highly repetitive processes as a service. The value added to a process is based on cost savings, which have to be considered in the general conditions, such as the avoidance of tax penalties and interest on arrears, the lowest possible tax rate and the greatest efficiency of the processes. The analysis of organisational form must highlight the characteristics and include necessary success factors of the individual

tax processes based on the approach of an internal expense centre combined with an SSC." (Risse and Loitz, 2014: 42)
Buus (2015) presented a paper in which he suggested a formula that assures that shared service centre costs are charged fairly and provide incentive for the shared services centre counterparts to optimize timing and size of their requirements towards shared services centre and minimize the total cost of handling them.
He wrote about the SSC's cost classification: "SSC incurs generally two types of costs, which have to be reimbursed by its clients. Since peaks and bottoms of SSC capacity utilization emerge, and the sufficient capacity has to be maintained in order to prevent from larger losses by e.g. production disruption or customer dissatisfaction, the existence of SSC's capacity to handle its customers' requirements generates costs. Alongside, the other costs are generated by the utilization of the created capacity." (Buus, 2015: 345) He also wrote that there are some practical issues that SSC needs to address: the information system, which provides the necessary information is very important, just as the ability of SSC to communicate the inflow or outflow schedule with its counterparts. If customers of SSC have available information about the schedule of deliveries from the SSC and to the SSC they can optimize their delivery requirements accordingly.

3. In conclusion

In the past few decades globalization has affected our lives in many ways and one of them is definitely the global economy and through this the business world. Companies need to come up with new ideas continuously in order to stay competitive. As there have been unimaginable technical advances recently which have helped corporations to overcome geographical distances and cultural differences to cut their costs and improve the efficiency in most areas.
Companies have had to adapt to the new challenges so new forms of businesses have appeared and one of them was the shared service model. With the advent of this new model companies could focus on their core activities and outsource their other activities to shared service centres. As we can see from the relevant literature this model has a lot of advantages but we have to admit that it has some drawbacks as well. But if people involved have the intercultural competences to tackle the problems it can be really advantageous.

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Bio-note

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LIABILITY OF THE CARRIER IN THE TRANSPORT CONTRACT

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Abstract: *The development of modern society is inconceivable without the activity of transporters, which has increased greatly in recent years. It was even said that there was the notion or even the phenomenon of mega transporter, which was determined by the "globalization of production and the internationalization of trade (Botea, 2013, p.10)." The French lawyer Louis Josserand stated even in 1926 that transport is an indispensable element of life, offering the opportunity to know and perceive, to assimilate as much as possible from what human civilization provides us. The liability of the carrier for damages caused by his deed or the deed of other persons is based on a result obligation originating on the contract. Damage, alteration, degradation of goods by destruction, theft, fires, road accidents, delay of transport attract the carrier's liability and obligation to repair the damage. In addition, the liability is also borne in the case of non-performance of the transport, in which case the principle of the full reparation of the damage, that is, the loss suffered and the unfulfilled benefit is applicable. It is also possible to include in the transport contract a criminal clause establishing a conventional compensation that will be higher than the real value of the goods. In general, analysis of the carrier's liability is made in the light of the provisions of the Civil Code, the common law in the matter and the specific legislation of each type of transport. In addition, in the road transport, the provisions of the Geneva Convention on the International Carriage of Goods by Road were analyzed. With regard to the applicable law, in the provisions of the law on the implementation of the Civil Code, in this case art. 141 states that "the liability of the carrier is governed by the law in force at the time of the occurrence of the event which caused the damage, even if it was known by the passenger, the consignor or the consignee, as the case may be, after the entry into force of the Civil Code". There may also be limitations on carrier liability or exemptions from liability, which are stipulated in the Civil Code, yet the clauses that remove or reduce the liability established by law in the burden of the carrier are considered unwritten. The carrier's liability analysis is based on the provisions of the Civil Code, the common law in the field, and the Geneva Convention on the International Carriage of Goods by Road.*

Keywords: *liability; damage; alteration; deterioration; delay of transport; compensation.*

JEL classification: *K12; K15; K33.*

1. Introduction

Legal liability has a sanction or remedy purpose. In the contract of transport, the violation of obligations entails contractual, patrimonial liability. Tort liability is also not excluded. Tort liability may result from the breach of general obligations based on the professional status of the carrier (Stanciu, 2015, p. 88). For example, the carrier

has the obligation to accept any transport request because it is in a standing offer position to contract to the public. Art. 1958 par. 3 Civil Code: "The carrier providing his services to the public must transport any person requesting his services and any goods the transport of which is requested, unless he has a valid reason for refusal." Reasons for refusal would be: the transport of dangerous goods, no means of loading, and no seals on the loaded goods (Căpăţână, Stancu, 2002, pp. 201-202). The accidents committed by the carrier or his / her agents in carrying out the transport activity, which cause damage to third parties, are also related to the tort liability (Piperea, 2013, p. 45).

The provisions of the Civil Code on liability in general and the liability of the carrier, in particular, shall be supplemented by those of the special regulations of each type of transport (for example, the carrier's liability for domestic road freight transport is governed by the Civil Code by G.O. 27/2011 on Road Transport and the Convention on the Contract for the International Carriage of Goods by Road - CMR Convention. The international documents ratified by our country in the field of transport have priority over the provisions of the Civil Code).

Contractual liability occurs when a transport contract is concluded between the parties. The general terms of the carrier's contractual liability are: the illicit deed causing damages (action, omission), the degree of guilt (regardless of fault, wilful misconduct, negligence, the injured party will respond), the damage (material or moral), the causal link (the damage is the result of the unlawful deed). Contractual liability penalizes the harm to a contractual partner's claim, that is, the non-performance by the carrier of the obligation to which it is bound or the act of delaying the fulfilment of the result obligation, assumed upon the conclusion of the contract (Afrăsinie, comment on art. 1984, 2012, p. 348).

The liability of the carrier will arise for non-compliance with contractual obligations such as: he use of an improper means of transport, refused by the consignor (the sender), the omission of weighing when it is mandatory (e.g. in air transport), the non-insurance of the goods against the risk of evasion, the issue of the transport document to the consignor, observance of the order of dispatches, crossing of the pre-established route, preservation of the goods during transport, execution of the transport in due time, identification, approval of the consignee, release of the cargo and, where appropriate, unloading the goods (Piperea, 2013, pp. 31-34).

Art. 1984 of Civil Code provides that *"the carrier shall be liable for the damage caused by the total or partial loss of the goods, by alteration or deterioration, occurring during their transport, subject to the provisions of Art. 1959, as well as late delivery of goods."*

With regard to *total or partial loss, alteration or damage of goods,* liability arises because of the breach of the carrier's duty of care in respect of the goods transported (*the debtor of a determined individual asset is released by its surrender in the state in which it was at the time of the obligation - art. 1482 of Civil Code*). Liability will be involved during the execution of the shipment that is between the handover of the goods for carriage and the takeover by the consignee (the quantitative determination of the transported goods is made according to the same rules both for loading and unloading. If the seal was broken at the moment of arrival at the destination, the liability for the lack of quantity is attributed to the carrier) (C.A. Ploiești, sec. com. and cont. adm., dec. 481/2000, in R.D.C. no 5/2003, p. 210, Afrăsinie, comment on art. 1984, 2012, p. 351)

♦ Art. 1985 establishes that the damage is remedied by covering the actual value of lost property or lost parts of the goods carried. Consideration is given to the value of the goods at the place and time of handover. In practice, derogation from the principle of full reparation of the loss, i.e. the actual loss and the unrealized benefit, is introduced. The carrier will also reimburse the price of the transport or ancillary services and the transport costs, in proportion to the value of the lost goods (the value of the damage caused to the consignor due to the fault of the carrier is given by the actual amount of the lost product, as it would have been received from the sale of the product. However, it cannot include the excise duty on lost goods, not being possible to be claimed for a product that has not been sold, C.S.J. s. com., decision no 3232/2002, in R.R.D.A no 5/2003, pp. 107-108).
The parties may set in the carriage contract another value of the asset, in which case the indemnity shall be calculated in relation to it. As a penalty, if the real value of the item at the place and time of delivery is lower, the compensation is calculated in relation to that latter value. It is a civil sanction because the false declaration of value is not the offense of false statements, it may be considered as a crime of deception (Afrăsinie, comment on art. 1987, 2012, p. 352).
The alteration or deterioration of the goods entails liability of the carrier who will repair the damage also by reference to the real value of the goods. As in the case above, the carrier will also reimburse the cost of the carriage or ancillary services and the transport costs in proportion to the value of the lost goods.
The provisions of the CMR (Convention on the Contract for the International Carriage of Goods by Road - *Convention relative au contract de transport international de merchandises par route,* signed at Geneva on 19 May 1956, to which Romania has adhered by Decree 451 of 1972, available online: https://www.untrr.ro) are applied to road transports according to Art. 77 from G.O. 27/2011 on road transport (Official Gazette no 625 of 2 September 2011). The carrier shall be liable for the total or partial loss or damage resulting from the moment of receipt of the goods and the release as well as for the delay in release (Article 17 paragraph 1). When the carrier is charged with the compensation for the total or partial loss of the cargo, it is calculated by the value of the goods at the place and time of their receipt for transport. The value of the commodity is determined on the basis of the stock exchange rate, or in the absence of it on the basis of the current market price, or in the absence of both on the basis of the usual value of goods of the same kind and of the same quality. However, it is shown in art. 23 of the Convention, the compensation may not exceed 8,33 units of account per kilogram of gross weight missing (The unit of account refers to SDR, Special Drawing Rights, an International Monetary Fund currency, a monetary instrument with role of account and reserve, which is calculated on the basis of a currency basket consisting of the main currencies: US dollar, Japanese yen, British pound and Euro).
Both, the transport charge and the customs duty, as well as the other costs incurred shall be refunded, in full, in the case of total loss and, proportionate, in the case of partial loss. No other damages will be due.
The liability of the carrier may be aggravated when, in accordance with Article 26 of the CMR, it can, in return for a price supplement, set the amount due in the event of loss, damage or delay.
In the event of an accident, under the CMR Convention, the carrier pays the value of the cargo depreciation, but the compensation must not exceed the amount that would have been payable in the event of total loss, if the total execution was impaired

by the damage or the amount that should have been paid in the case of loss of the impaired part, if only a part of the expedition was damaged by damage.
Interest may also be claimed in the event of damage (Article 27 of the CMR). Their value is set at 5% per annum and flows from the day of the written complaint addressed to the carrier (or from the day of legal action if there is no claim).
It has been argued that if only a part of the cargo is damaged but there is a link between it and the rest of the cargo (for example damage to essential parts of an installation), the whole load is considered to be impaired. Compensation will be equal to the one that would be due to total expedition loss (Crauciuc, Manolache, 1990, p. 68).
It is ideal to determine what is the depreciated part of the commodity that is the subject of the shipment and whether the goods can be divided so that the affected part can be separated (Tănasă, available online: https://www.juridice.ro).
♦ *The delay in the delivery* of the goods refers to the arrival of the goods to the recipient after the term stipulated in the contract or the one stipulated in the special law. If they do not exist, reference is made to the practices of the parties and the applicable practices (Cotuțiu, 2014, p. 119.). These rules are found in the provisions of art. 1969 of Civil Code. Liability is committed objectively without the need for proof of the person's fault (Cotuțiu, 2016, p. 38). The carrier will be liable within the limits and conditions set by the special law.
The late arrival of goods to the consignee does not extinguish the right to compensation by deduction. The penalty of deferral applies only to shipments with qualitative deficiencies or degradation of goods (Piperea, 2013, p. 57).
Art. 23 point (5) of the CMR provides that "in the event of delay, if the person entitled shows that the delay results in damage, the carrier is liable to pay damages, which may not exceed the price of the carriage". Higher compensation may be claimed in the event of the declaration of the value of the goods or of a particular interest at handover. Thus, the consignor may state in the consignment note (it is the transport document issued by the consignor accompanying the cargo and proves the conclusion of the transport contract) against payment of a price supplement agreed by the parties of the contract of carriage, a value of the goods exceeding the limit of 8,33 units of account per kilogram.
According to art. 1992, "the carrier is also liable for the damage caused by the failure to carry out the transport or by exceeding the transport term". In practice, this is the legal basis on which a carrier who has not been present at upload cannot be required to pay the price difference which the recipient of the transport service would have to pay to another carrier for the provision of that transport service (Iacob-Anca, online, legeaz.net/noul-cod-civil/art-1990-agravarea-raspunderii-contractul-de-transport-de-bunuri-contractul-de-transport). Thus, the doctrine speaks outside of the liability causes showed above and the failure to transport. It is considered that the damage caused by the non-performance of the transport, being qualified as a result obligation, imputes the responsibility of the transporter, regardless of his fault (Baias, Chelaru, Constantinovici, Macovei, 2014, p. 1489, Cotuțiu, 2014, p. 120.). In this case, the principle of full reparation of the damage, that is the loss suffered and the unrealized benefit, would be applicable. If the carrier has collected the price of the carriage or its accessories, it will have to return them.
If the person entitled receives the goods without reservation, no further claims may be made against the carrier as a result of the partial loss, alteration or deterioration of the goods or for failure to observe the transport term. Moreover, the same

regulation stipulated by art. 1994 par. 2 states that "if the partial loss or alteration or deterioration could not be discovered upon receipt of the good, the entitled party may claim damages to the carrier even if the goods were unconditionally received. The damages may be claimed only if the person entitled has brought to the knowledge of the carrier the loss or alteration or deterioration as soon as it has been discovered, but not later than 5 days after receiving the goods, and for perishable goods or livestock, not later than 6 hours after their receipt." This deferral term applies to partial loss, alteration or deterioration, not applying as we have shown in the case of damage incurred due to delay.

♦Most authors agree with the possibility of inserting in a transport contract a criminal clause that would establish a conventional compensation, which will have a higher value than the real value of the goods. It is shown (Cotuțiu, 2014, p. 124.) that in this case there is no need to prove the extent of the damage and, moreover, will receive a compensation greater than the real value of the goods (Article 1541 of the Civil Code establishes the cases where the amount of the penalty may be reduced when the main obligation was partially enforced and that execution was profitable to the creditor or where the penalty is manifestly excessive in relation to the damage that could have been foreseen by the parties at the conclusion of the contract).

♦A special situation concerns the carrier's ability to refuse to transport documents, money, securities, jewellery or other valuable goods (this is a ground for refusal regulated by law, given the general presumption that the carrier providing its services to the public can only refuse the shipment for reasons of reasonable denial). "If, however, this type of transport is accepted, in the event of loss, deterioration or alteration, the carrier will only cover the declared value. If the goods have been declared differently or have a higher value, the carrier is relieved of any liability" (Article 1988 Civil Code). In practice, the right to compensation is lost if the consignor attempts to take advantage of the carrier's fault. In addition, it specifies that the compensation provided for by the special law cannot be exceeded under any circumstances. The benefit of the law given to the carrier will not apply if he acts with intent or gross negligence, regardless of the bad faith of the consignor (As well as remarked by Prof. Cotuţiu, 2016, p. 43, the legislature benefits the carrier in good faith in relation to the good faith consignor but prefers the bad faith consignor to the bad faith carrier).

By contrast, the CMR also states that the carrier is not entitled to prevail from the established limitations of compensation if the loss or damage has been caused by wilful misconduct or fault which is ascribable to him or his agents or to any person whose services he uses for the execution of the transport.

♦By reference to the mandate contract, the Civil Code (Article 1993) regulates the liability of the carrier for the collection of the repayments (the reimbursement is the delivery system for a commodity, according to which the consignee is obliged to pay the consignor the equivalent of the goods or the transport tax) with which the consignor has struck transport and for carrying out the customs operations (The commercial invoice, the transport documents according to the means of transport, the documents of the carriers and any additional documents requested shall be presented at the customs control of the documents.)

The carrier may be required to collect, in addition to the transport price and the equivalent of the incidental services and customs duties of import, export, transit or other charges that are necessary for the fulfilment of the principal obligation (Cotuțiu, 2016, p. 44). In the same sense, art. 1983 establishes the liability of the carrier to

the consignor and the previous carriers in the event of handing over the goods to the consignee without receiving the sums owed to him, to the previous carriers or to the consignor. “The carrier may also require the consignee to pay the sum the latter owed, recording the difference claimed by the carrier to a credit institution” (Article 1980, paragraph 2). If he fails to fulfil these obligations, the carrier shall also lose the right of regression. However, the carrier will still have the right to take action against the consignee, even if the latter has taken the goods carried.

♦The analysis of carrier liability also involves the case under Art. 1961 par. 3, relating to the transport document. “The carrier shall be liable to third parties for damages caused by the defects of the property, any omission, inadequacy or inaccuracy of the particulars in the transport document or additional documents”. In fact, in these cases there is a contractual liability of the consignor to the carrier, but to third parties the liability is assumed by the carrier (liability for the deed of another, which in fact benefits the third party who will directly incur the carrier, not having to make efforts to discover the consignor to take action against it). However, the latter has a right of recourse against the consignor.

The carrier is liable as a commissioner for the consequences of the missing or inaccurate use of the documents mentioned in the consignment note (delivered or accompanying). In this case, he will be liable for damages that will not exceed the amount in case of loss of goods (Article 11 of the CMR). Moreover, similar to the provisions of the Civil Code, art. 10 CMR establishes the consignor's responsibility towards the carrier for damage to persons, material or other goods as well as the expenses due to the defective packaging. However, the carrier is liable in this case if the defects were apparent or he knew them and did not make any reservations about it.

The carrier will also be liable if he does not execute the instructions regarding the dispatcher's disposal right (stopping the shipment, changing the consignee). Liability is against the person entitled to claim the damage caused by that fact.

2. Limitation of carrier liability. Exonerating Causes of Liability.

The carrier cannot exclude or limit his liability except in the cases stipulated by law, according to art. 1959 par. 1 Civil Code. The clause which removes or limits the liability established by law to the carrier is considered unwritten (the unwritten clauses are invalid).

However, *"the carrier shall not be liable if the total or partial loss or, as the case may be, the alteration or deterioration occurred due to:*

a) *any facts relating to the loading or unloading of the property if that operation was carried out by the consignor or the consignee;*
b) *lack or defect of the packaging, if, considering the external aspect, it could not be observed after receiving the goods for transportation;*
c) *dispatch under inappropriate, inaccurate or incomplete name of goods excluded from transport or admitted to transport only under certain conditions, as well as the failure of the consignor to observe the safety measures provided for the latter;*
d) *facts related to the loading or unloading of the property, if this operation was done by the consignor or the consignee;*

e) natural events inherent in transport in open vehicles if, according to the provisions of the special law or the contract, the goods have to be transported in such way;

f) the nature of the goods being transported, if they expose them to loss or damage by crushing, breaking, rusting, spontaneous interior alteration and the like;

g) weight loss, whatever the distance travelled, if and to the extent that the goods carried are those which, by their very nature, suffer from such a loss;

h) the inherent danger of the transport of livestock;

i) the fact that the consignor's agent, who accompanies the goods during the transport, has not taken the necessary measures to ensure the preservation of the good;

j) any other circumstance stipulated by the special law".

Changes in property due to, for example, depreciation related to their nature, death of animals during transportation, damage to perishable goods, damage to property due to packaging, exceed the carrier's duty of preservation, therefore the latter is exonerated from liability (if, due to the lack or defect of the package, the goods are wholly or partly lost or damaged, the carrier may be relieved of liability under the conditions of art. 1991 and 1995 Civil Code, Afrăsinie, 2012, comment on art.1966, p. 336).

The carrier is relieved of liability if it proves that the total or partial loss or alteration, the damage occurred due to an intentional or deliberate act by the consignor or the consignee, the instructions given by them, the force majeure or the deed of a third party for whom the carrier is not held liable (the "on my own risk" clause inserted by the shipper into the contract of carriage does not exempt the carrier from liability for the loss or destruction of the goods entrusted, since it is found that the loss or destruction in fact stemmed from the negligence of the carrier's agents, Cas, dec. 944/1927, M. Afrăsinie, comment on art. 1995, p. 355). With regard to the transport of dangerous goods, the carrier is relieved of liability in the event of damage caused by the carrier if the consignor gave them without informing the carrier of their nature (the transport of a dangerous cargo - ammonium nitrate, without notification to the driver and the provision of a specialized escort, is the fault of both the shipping and the producing company (the consignor) C.A. Galați, decision no 130/2008, online, www.portal.just.ro).

The act of a third party can lead to exoneration if it meets the characters of force majeure (e.g. theft of goods during transport does not relieve the carrier of liability because it is considered not to have taken all measures to prevent this event - the theft of goods does not relieve the responsible carrier, ICCJ, decision no 3197/10.11.2013, online, http://legeaz.net/spete-civil-iccj-2013/decizia-3197-2013).

If we bring into question the manufacturing defects of the means of transport used, even if they are not related to the carrier, he cannot invoke the defect because he has the obligation to check the technical parameters of operation at all times (Piperea, p. 56). Hidden defects relieve him of liability.

There is also exoneration of liability for the transport of valuables, jewellery, money, unless the carrier is informed of the nature and value of the goods.

The state of necessity removes the unlawful character of the act, but does not remove the liability of the carrier in its entirety, and it must cover the damage (Piperea, p. 49).

The transport activity may be prohibited or suspended by law (e.g. embargo), in which case the carrier is not liable.
Exceeding the term of delivery or unloading entails the obligation of the transport beneficiary to pay the immobilization duties (for example, to comply with customs formalities), even if it is not caused by his fault (Rusu, 2007, p. 149 - C.S.J, decision no 648/2000, Dreptul 7/2001, p. 16.).
In the chapter on carrier liability, the CMR determines that the carrier is relieved of liability if the loss, damage, delay has been caused by the fault of the person entitled to the cargo, an order of his own, a defect in the goods or circumstances that the carrier could not avoid and whose consequences could not prevent them.
However, the carrier cannot rely on his liability exoneration to release him or her, the failure of the vehicle or the fault of the person who rented the vehicle.
In addition, CMR stipulates in Art. 29 that the carrier cannot prevail on the provisions which relieve it or limit its liability if the damage is the result of the wilful misconduct or fault attributable to the carrier or its agents.
♦ In the case of *successive or combined shipments*, the action for damages may be directed, according to art. 1999 Civil Code, against the carrier who signed the contract of carriage or the last carrier (the successive shipment is performed by at least two successive carriers using the same mode of transport and in the combined transport a carrier or several successive carriers use different modes of transport). The liability can be interpreted as a joint liability. If, for example, the cargo damage can be accurately located on the route and the successive carriers are independent, the liability can be divisible (Piperea, p. 57).
Also in multimodal freight transport the liability is joint, but each carrier is liable according to the type of transport performed. Compensation will be paid in proportion to the due part of the contract of carriage. In the event that one of the carriers acts intentionally or gross negligence resulting in damage, it will bear all compensation.
Article 36 of CMR states that, in the case of transport by successive carriers under the same contract, the liability of road carriers shall be assumed for the entire carriage performed. The action for loss, damage or delay shall be brought against the first carrier, the last carrier or the carrier on whose route the damage incurred. The liable for the damage has a regression action against the other carriers (plus interest or expense incurred).
In the event of a carrier being prevented, the carrier may ask the consignor for instructions. If he does not receive any response, he can carry the goods to the consignee, even by modifying the itinerary. If the deed is not imputable to it, it is entitled to the consideration of the transportation according to art. 1971 par. 1 Civil Code. The consignor must be informed without delay of the transport. When dealing with the obstacle to transport, the Code no longer mentions the fortuitous case or force majeure. However, this could only be due to natural disasters, floods, snowfalls, seizures of merchandise, derailment, strikes and other such events that subsume the idea of fortuitous and force majeure as defined by art. 1351 Civil Code. (Afrăsinie, comment on art.1971 p. 340).

3. Aggravating the liability of the carrier's

The liability of the carrier may also be *aggravated* if he has acted with intentional intent or gross negligence. He will owe the damages, so that exemptions and limitations of liability will no longer apply. According to art. 1355 of the Civil Code, "it

is not possible to exclude or limit by unilateral conventions or acts the liability for the material damage caused to another by an act committed intentionally or by gross negligence".
At the litigation level, the carrier's fault is presumed. In the event of non-delivery or non-performance of the transport, the carrier is the one who has to be relieved of liability. However, the claiming creditor is required to provide evidence of his claims for the carrier's liability.
CMR also stipulates that the carrier has the burden of proof when it wants to prove that the damage occurred due to the fault of a person who has the right to dispose of the goods, a defect in the goods or other circumstances that he could not avoid or prevent.
♦ In passenger transport, the carrier liability is of a contractual nature. The duration of liability is limited by the moments when the passenger gets in the means of transport and leaves it. Like the transport of goods, the assumed obligation is one of the results. The passenger must be transported safely and undamaged to the destination. Thus, the carrier shall respond, unless it proves to be force majeure, the deed of a third party or the fault of the victim.
"The carrier is responsible for the death or injury of the bodily integrity or the health of the traveller" (Article 2004 Civil Code). When the injury is due to the fault of the carrier, the damages include the costs of treatment and transport plus the sums needed to compensate for the damage caused, for example for incapacity to work. In case of death, the carrier will cover the costs of funeral, transport of the body. He is also liable for the delay or damage caused by faulty transport. It is responsible for damages caused by its or its employees' health or the damage caused by the means of transport.
It is exonerated from liability if the damage is due even to the traveller who acted intentionally or with gross negligence. No liability will arise even when the damage is due to the traveller's state of health, the deed of a third party for which he is not held responsible or of the major force.
In this case either the clauses that remove or limit the liability of the carrier cannot be legally accepted.
The Romanian courts have, in recent times, paid compensation for the non-patrimonial damages suffered during the transport, on the grounds that the carrier has not fulfilled its obligation to guarantee the protection of passengers (Afrăsinie, comment on art. 2004, p. 359).
As regarding the luggage of travellers (suitcases, baby carriages, musical instruments, skis, caged animals, etc.), the liability of the carrier will be incurred unless the damage was caused by their defect, the fault of the traveller or the force majeure. The hand baggage has another regime with regard to the liability of the carrier, which will be engaged only if its intention or fault is proven.
The amount of the compensation is limited to the declared value or to the nature, their usual content and other such elements, according to the circumstances, if their value has not been declared.
The passenger or luggage carrier of successive or combined transport is liable for the death, injury of the passenger's bodily integrity or health, for the loss or damage of luggage or other property. The person liable is the carrier on whose route the death occurred.
Liability for the delay or interruption of the carriage shall only occur if the delay persists until the end of the entire shipment (Article 2006 paragraph 3 of the Civil

Code). The provisions of the Article 199 paragraph 3, mentioned above, also apply to this type of transport.

4. Conclusions

The liability of the carrier has a complex regulation, both at the level of our legislation and the international conventions to which Romania is a party.

The carrier, as the debtor of his contractual obligations, is protected by the Civil Code, as long as he has good faith. As we have seen, the legislation contains inclusive exonerating clauses or clauses limiting the carrier liability. The analysis of carrier liability must be made taking into account either both combined or multimodal transports, which can generally be qualified as joint liability. In passenger and luggage transport as well as in freight, the liability of the carrier is both contractual and tortuous.

In each type of transport, whether we are talking about road, air, sea, the Civil Code provisions, common law in the field, is supplemented with the provisions of the special laws.

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ECONOMIC CRISES REFLECTED IN FILMS

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Abstract: *The way in which economic crises are represented in media plays a very important role in determining their significance and the reform opportunities that they create. This paper analyses the representation of two financial crises in films: the Great Depression of 1929 and the financial crisis of 2007-2008. The movies chosen are either documentaries depicting harshly and realistically the causes and the events that led to one of the most devastating crashes for the American economy – the financial crisis of 2007 - or movies adapted from famous novels such as John Steinbeck's "Grapes of Wrath". The paper starts with the analysis of the way in which the films present aspects of the 21st economic crisis and the major players, from stockbrokers, bankers, businessmen to the very powerful CEOs of the most important companies in the world. Then, we continued with the category depicting the Great Depression which affected not only how class aspects were presented in films, but also the way in which the industry was making films. Making this list has been a sensible exercise that has led us to an unfortunate yet inescapable truth: if the silver screen is any guide, financial professionals, particularly those working on Wall Street, have had a serious public relations problem since long before the global financial crisis of 2008. Some might say that Hollywood has contributed to the creation of this negative image, given that media, especially films, are reflections of public opinion. The conclusion of our analysis is rather surprising: there are very few films, especially among the documentaries, depicting the financial crises suggesting solutions for the industry and the financial system. Nonetheless, the films are enjoyable to watch and often quite informative, offering a perspective from the inside on everything from phrases such as options and futures trading to leveraged buyouts.*

Keywords: *economic crises; finance; Wall Street; films; culture.*

JEL classification: *Y8; Y9.*

1. Introduction. The Role of Media in Depicting Reality

There are a lot of studies debating the significance of media in agenda-setting and creating images of society (Altheide and Snow, 1979; DeFleur and Ball-Rokeach, 1989), being "key arbiters of public opinion, determining which activities, organizations, and people are valued and which are distrusted," as the *Harvard Business Review* has pointed out. (https://blogs.cfainstitute.org/investor/2013/09/20/20-finance-films-for-entertainment-and-education/) According to Shaw (1979), the role of the media "in a nation's political, economic, social, and intellectual life and their influence on a person's cultural and religious values, sexual and leisure norms, work and play

behavior may be far greater than the agenda setting theory...defines it."(Shaw, 1979:101)
Movies are important ways of communication for storytelling, advertising, business, journalism, and research of cultures and societies across the world. The relationship between movies and culture involves a complicated dynamic. Movies influence the mass culture that consumes them and are also an integral part of that culture. They are a product of that culture, a reflection of the people's concerns, attitudes, and beliefs. Metaphorically speaking, movies could be characterized as storytellers of a particular culture, of a particular nation. Not only do they reflect certain common attitudes and beliefs about what it means to be part of a certain culture, but they also present contemporary trends, issues, and events, serving as records of the times in which they were produced. Probably, more than any other medium, movies reflect the society that creates them. Some movies offer a striking political message; others reflect changes in society. Yet, all movies need an audience to succeed and, more importantly, movies need an audience to inform, entertain, challenge, and inspire.

2. The Financial Crises. The Great Depression. The 2007-2008 Financial Crisis

In an article in the Economist, the author was asking rhetorically: "What is mankind's greatest invention?" And they continued in their familiarly sarcastic manner to ask people this question, suggesting that the latter are likely to pick familiar technologies such as printing or electricity. According to the author of the article, they are unlikely to suggest an innovation that is just as significant: the financial contract. Basically, again according to the same article, finance "does just two simple things. It can act as an economic time machine, helping savers transport today's surplus income into the future, or giving borrowers access to future earnings now. It can also act as a safety net, insuring against floods, fires or illness. By providing these two kinds of service, a well-tuned financial system smoothest away life's sharpest ups and downs, making an uncertain world more predictable. In addition, as investors seek out people and companies with the best ideas, finance acts as an engine of growth. Yet finance can also terrorize. When bubbles burst and markets crash, plans paved years into the future can be destroyed." (http://www.economist.com/news/essays/21600451-finance-not-merely-prone-crises-it-shaped-them-five-historical-crises-show-how-aspects-today-s-fina)
Historically speaking, there were six devastating financial crises, starting with the first crash in America, in 1792, and ending with the latest financial crisis of 2008. All of them point to two big trends in financial evolution. The first is that central banks, deposit insurance and stock exchanges are not the products of careful design in calm times, but "are cobbled together at the bottom of financial cliffs. Often what starts out as a post-crisis sticking plaster becomes a permanent feature of the system." (Idem, ibidem)
The second trend refers to the response to a crisis which follows a similar, common pattern. The blame falls on everything new on the financial market: a new type of bank, investor or asset is blamed and is then banned or regulated out of existence.
Yet, what is a financial crisis? A financial crisis is a situation in which the value of financial institutions or assets drops rapidly. It is often associated with a panic or a run on the banks, in which investors sell off assets or withdraw money from savings accounts with the expectation that the value of those assets will drop if they remain

at a financial institution. (Apud http://www.investopedia.com/terms/f/financial-crisis.asp)

2.1. The Great Depression

The Great Depression was the worst financial and economic disaster of the 20th century. Many believe that the cause that triggered the Great Depression was the Wall Street crash of 1929 and then, later, exacerbated by the poor policy decisions made by the American government. The Depression lasted almost 10 years and resulted in massive loss of income, record unemployment rates, and output loss, especially in industrialized nations.

The years after World War I were called the “Roaring Twenties”. It was a time of rebuilding after a terrible war. Many European countries did not have enough money and also had to pay a lot back to the USA because the Americans helped to win the war. At the same time industries started producing many goods. People bought new inventions, like cars, radios and other household goods, but the average worker still did not have enough money. Consumers had to take out loans to be able to buy the things that they needed, yet they could not afford. Many people also bought stocks. For a few years the value of stocks went up quickly. This made people invest even more money because they thought they would become rich very quickly. However, in September 1929 stock prices began to fall and on October 29, 1929 they completely collapsed. This day is known as Black Tuesday, the day the stock market crashed. After this collapse, stocks value decreased sharply, sometimes being worthy nothing at all, therefore many Americans lost all their money. This led to the collapse of banks because people who had borrowed money were not able to pay it back. People could not buy goods anymore so that factories and companies had to close up. By 1932 about 13 million Americans were unemployed. Those who were lucky enough to still have a job had to work for little pay. The crisis in the USA also affected other countries around the world which traded with America. In order to protect their own economy, they put taxes on imports which made foreign goods more expensive so the people would buy the goods that their own country produced. In 1932, the Americans had a new president, Franklin D. Roosevelt who promised to create federal government programs to end the Great Depression. Within 100 days, he signed the New deal into law which created 42 new agencies. These agencies were designed to create jobs, allow unionization and provide unemployment insurance. Many of these programs still exist. They include Social Security, the Securities and Exchange Commission, and the Deposit Insurance Corporation. These programs help safeguard the economy and prevent another depression. (https://www.thebalance.com/the-great-depression-of-1929-3306033) Yet, in spite of these assumptions, there are voices saying that it was actually World War II that ended the Depression.

2.2. The 2007-2008 Financial Crisis

The 2008 financial crisis has been the worst economic disaster since the Great Depression of 1929. It was the result of a sequence of events that led to the banking system on the verge of collapse. It has been argued that the origin of the crisis lies in the 1970s Community Development Act, which forced banks to loosen their credit requirements for lower-income minorities, creating a market for subprime mortgages (a type of mortgage that is normally issued by a lending institution to borrowers with low credit ratings - http://www.investopedia.com/terms/s/subprime_mortgage.asp).

It began with the boom of US housing in 2004, after a long period in which the house prices steadily increased. Then, more families were able to take out mortgages than before. Lenders had started engaging in a practice called 'subprime lending' - lending to 'risky' borrowers who would not normally be qualified for a mortgage to buy a home. The subprime mortgages typically came with a low interest for the first few years, and then the interest drastically increased. The risks were usually not fully explained to the borrowers, and the latter were told they could easily refinance the mortgage in a few years to keep their interest rate low. In spite of the economists warning of the dangers, the most parties ignored them. The reason was simple: everyone was making money: construction companies, realtors, banks and materials firms. The borrowers were home owners for the first time in their lives. But in 2005-2006 the interest rates on the subprime mortgages increased dramatically. Many new home owners were unable to pay or refinance. The crisis should have been confined to US homeowners. Yet, the banks and lenders making these loans had sold the debt to investors. The debt assets had been diced up and sold to other investors and banks around the world, in complicated financial packages that few people seemed to fully understand. During 2007, nearly 1.3 million US housing properties were foreclosed, and the figure increased up to 79% in 2006. Nobody seemed to have any ideas who owned these 'worthless' debts, spread out throughout the whole worldwide financial system. Suddenly banks were not willing to lend to each other any longer, resulting in a 'credit crunch,' a period where there is little liquidity (or money) in the system because nobody is lending. The losses started to roll in. By July 2008, major banks and financial institutions around the world reported losses of approximately $435 billion. (http://www.cafebabel.co.uk/politics/article/the-2008-economic-crisis-explained.html)

The 2008 global financial crisis had an extremely serious impact on the American economy and the rest of the world. The stock markets all over the world crashed, homeowners found themselves out on the streets, long-time employees found themselves unexpectedly unemployed. The effects of the crisis were felt for years after, forever changing the lives of many people.

3. Films Depicting the Economic Crises

The effects of the economic crises have been so serious and life changing that it was inevitable that film would attempt to depict all the aspects. Yet, the question that arises is how to illustrate the instantaneous yet systemic, rational yet exuberant, virtual yet highly consequential functionality of contemporary finance capitalism? This question has been particularly troublesome for filmmakers and journalists who have been trying to make the crisis sensible in audio-visual terms. Oliver Stone, the director of one of the best received films on the financial crisis, *Wall Street"*, admitted the challenge of raised by the representation of financial crisis by stating, 'I don't know how you show a credit default swap on screen'. (Kinkle&Toscano, 2011:47)The films presenting the financial crisis tried to explain, dramatize, and criticize the behaviour of the individuals who contributed to the inflation and collapse of the housing market between 2004 and 2008. In the same time, these films have also attempted to humanize and sympathize with the situation of the victims of the crash, those who lost homes, jobs, or personal savings and not because of their

fault. (http://www.tasteofcinema.com/2016/the-10-best-movies-about-the-financial-crisis/)

3.1. Capitalism. A Love Story

Capitalism. A Love Story is a film directed by the Academy Award-winning documentarian, and liberal, Michael Moore. Released in 2009, the film did not receive quite as much critical acclaim as other Moore films (*Bowling for Columbine*, *Fahrenheit 9/11*, or *Sicko*), with some critics complaining that the movie at times over-simplified aspects of the American financial system and the market collapse to better serve the purpose of entertainment. Despite of that, the movie collected more than $17 million in global box office receipts therefore it must have been reasonably entertaining as an important figure considering the fact that is a political documentary. The film presents the disastrous impact of corporate dominance on the everyday lives of Americans and, subsequently, the rest of the world. With both humour and outrage, Michael Moore's *Capitalism: A Love Story* explores a taboo question: What is the price that America pays for its love of capitalism? (http://topdocumentaryfilms.com/capitalism-love-story/) Nowadays, however, the American dream is looking more like a nightmare as families pay the price with their jobs, their homes and their savings. Moore enters the homes of ordinary people whose lives have been completely changed; and he goes looking for explanations in Washington, DC and elsewhere. What the director finds are the all-too-familiar symptoms of a love affair ended badly: lies, abuse, and betrayal - 14,000 jobs being lost every day. *Capitalism: A Love Story* is both a culmination of Moore's previous works and a look into what a more hopeful future could look like.

3.2. Inside Job

Inside Job is a 2010 documentary which is considered to be as one of the first to tackle the delicate subject of the 2008 financial collapse and transforming it into something easily digested. With sober narration by Matt Damon, this documentary film was the first established American film to engage directly with the financial crisis, presenting the viewers with topics such as the development of extreme consolidated power on Wall Street and the evolution of questionable banking practices that helped create the housing bubble, all leading up to federal regulators' $700 billion bailout that helped keep most big banks afloat. *Inside Job* is a severely critical accusation of the U.S. financial industry, bringing director Charles Ferguson an Academy Award for the best documentary. In his acceptance speech Ferguson complained that no financial executives had gone to jail in the wake of the financial crisis. The film attempts to help the audience make sense of the complicated layers of players and financial products that caused the economic collapse, with visually rich descriptions of collateralized debt obligations and credit default swaps. In addition, Ferguson's film draws on many experts who saw the crash coming, or speak to a culture on Wall Street that created the recklessness that led to the devastation. In a particularly striking example of his argument, Ferguson begins the film with a direct analysis of the effects of the deregulation of banks in Iceland, serving as a microcosm of the financial crisis, in which the same kinds of behavior (excessive borrowing by banks, inflationary price increases in the housing market, and ballooning executive compensation) wrecked Iceland's economy. Though the complexity of the crisis is given close attention in Ferguson's film, but ultimately, he succeeds in making it a story about a simple thing – human greed. (http://www.tasteofcinema.com/2016/the-10-best-movies-about-the-financial-crisis/)

Ian Hart, a former Wall Street derivatives trader said that "*Inside Job* clearly catches some of the anti-banker mood, and the public is quite right to be outraged at how banks refinanced at the taxpayers' expense are paying outsized bonuses. Staff at banks such as RBS should be retained by longer-term incentive schemes such as the one being introduced at Barclays. But, as a free marketer, I believe banks that have not taken public money should be able to do as they please within the law." (https://www.theguardian.com/film/2011/feb/17/inside-job-financial-crisis-bankers-verdicts) A bank director stated: "This was a well-researched film that clearly explained the complexities of the crisis and the greed of bankers. It laid the blame squarely where it belongs – at the feet of bankers, of ratings agencies, of regulators – and it interviewed a lot of heavyweight people, such as Dominique Strauss-Kahn, Eliot Spitzer, Raghuram Rajan and Glenn Hubbard. It will doubtless make many people – especially those who lost their jobs and savings – angry at not only what the banks did, but that many of the people responsible are still in their jobs, and that no one's gone to prison. The film shows that people who had bought a house they couldn't afford are now living in a tent, whereas bankers have still got their jobs. Consumers enjoyed buying houses that ultimately they couldn't afford, but mortgages were shoved down their throats without any care on the part of the bankers. In the old days, the bank would say: "We don't think you can afford that mortgage, so we won't lend you money." The film showed how this kind of advice was thrown out of the window." (Idem, ibidem)

3.3. Margin Call

A "margin call" is "a broker's demand on an investor using margin to deposit additional money or securities so that the margin account is brought up to the minimum maintenance margin.(http://www.investopedia.com/terms/m/margincall.asp) Margin calls occur when the account value depresses to a value calculated by the broker's particular formula." (Pop, *Business Buzzwords and Political Correctness*, Lambert Academic Publishing, 2013, p.53). Michael Lewis, in his excellent chronicle of the financial crisis, called *The Big Short* wrote: "There's a difference between an old-fashioned financial panic and what happened on Wall Street in 2008. […] In an old-fashioned panic, perception creates its own reality: Someone shouts 'Fire!' in a crowded theatre and the audience crushes each other to death in its race for the exits. On Wall Street in 2008 the reality finally overwhelmed perceptions: A crowded theatre burned down with a lot of people still in their seats…. The problem wasn't that Lehman Brothers had been allowed to fail. The problem was that Lehman Brothers had been allowed to succeed." (https://www.theatlantic.com/entertainment/archive/2011/10/margin-call-a-financial-crisis-film-thats-on-the-money/247116/)

Margin Call, directed by J.C. Chandor, is an embroiling thriller involving the key players at an investment firm during one dangerous 24-hour period in the early stages of the 2008 financial crisis. When an entry-level analyst unlocks information that could prove to be the downfall of the firm, a roller-coaster ride ensues as decisions both financial and moral catapult the lives of all involved to the brink of disaster. Loosely based on Lehman Brothers, one of the banks to suffer the heaviest consequences in the crash, the film covers one twenty-four hour period at the firm as the wheels start to come off of the world's economic engine. The casting of the film includes Zachary Quinto, playing a young desk jockey riding a Bloomberg terminal, Demi Moore as a token female executive who has learned to thicken her

own skin, and Jeremy Irons as John Tuld (a stand-in for Lehman Brothers CEO Dick Fuld), the CEO who cannot quite believe the gravity of his situation. *Margin Call* is an extraordinary film with sharp dialogue. Chandor's script is highly engaging, managing to explain the complexity of its characters' environment in a way that feels organic and real. Just speak to me in English," Spacey tells his analysts at one point; "Speak as you might to a young child, or a golden retriever," requests Irons at another. And though this is a story of people wedded to their jobs, the lone female executive (Demi Moore) is the only one for whom that marriage appears to be exclusive, and the consolations of family an unaffordable luxury.

3.4. The Big Short

Michael Lewis, the best-selling author of several books about Wall Street, explains the financial crisis in a book entitled *The Big Short*:*Inside the Doomsday Machine. The New York Times* calls it "one of the best business books of the past two decades." (Kakutani, Michiko, "Investors Who Foresaw the Meltdown" in *The New York Times*, March 14, 2010, http://www.nytimes.com/2010/03/15/books/15book.html?_r=0) In finance, "to short" an investment means to bet that it will go down in value. There is a person on the other side of the trade who bets that the investment will go up in value. *"The Big Short"* tells the story of four outsiders in the world of high finance who predict the credit and housing bubble collapse before anyone else does. They "short" the securities involved in the bubble and end up making a great fortune.

The film, adapted from the book, is about the events leading up to the US subprime mortgage crisis and the implosion of the global economy in 2008. It was directed by Adam McKay and it features outstanding performances by Academy Award-winning actors Christian Bale, Brad Pitt, Melissa Leo and Marisa Tomei. The director is dealing with material that many American economists and bankers themselves failed fully to understand. The film is full of references to credit default swaps and collateral debt. McKay helps the audience understand such esoteric matters by taking a jaunty, tongue-in-cheek approach. Every time there is an especially complicated piece of information or financial jargon, he will throw in an interlude in which a celebrity (Selena Gomez or the chef Anthony Bourdain; or, one the of stars of *The Wolf of Wall Street*, Margot Robbie) will talk direct to camera to explain it. As the film points out, the language of high finance is deliberately unintelligible. The public is not supposed to understand it. The irony is that, for a lot of the time, the bankers clearly did not, either. The "heroes" of the film are the outsiders who take the time do the maths. The paradox here is that most of them are motivated by the same basic instinct, namely extreme avarice, as the bankers who made such a mess of the American economy. They see an opportunity of cashing in when the housing bubble bursts. There are references to foreclosures as well as a threatening shot in which the viewers can see an alligator in a condominium swimming pool but this is not a film that pays much attention to the suffering of "ordinary" Americans. To focus too closely on that would be to risk undermining the comedy.

3.5. Too Big To Fail

Based on the Andrew Ross Sorkin book of the same name, *Too Big to fail* expresses the close-call urgency of the 2008 economic crisis and the powerful men and women (mostly men) who worked to limit its destructiveness. At one point the head of PR for the Treasury (played by Cynthia Nixon) asks "What should I tell the press?" providing

a perfect opportunity for a primer on how the mortgage meltdown dominated into the crisis at hand. Covering the brief but terrifying period from the collapse of Lehman Brothers to the passage of TARP (The *Troubled Asset Relief Program* is a program of the United States government to purchase toxic assets and equity from financial institutions to strengthen its financial sector) - mid-to-late September 2008, roughly - director Curtis Hanson (*L.A. Confidential*, *Wonder Boys*) and screenwriter Peter Gould attach themselves to Bush-appointed Treasury Secretary Hank Paulson and reveal the developments through his perspective. It details how major financial players - from Hank Paulson to Warren Buffett, Tim Geithner to Jamie Dimon, among many others - responded to the multiple crises that led to the near-economic collapse and bank bailouts of 2008. What prevents *Too Big to Fail* from being the absolute definitive account of what went wrong in 2008 (as compared to the documentary *Inside Job*) lies in the difficulty of breaking down the complexities of the collapse and its ramifications for "Main Street" in language that most people can understand. (https://www.commonsensemedia.org/movie-reviews/too-big-to-fail) A crash course explanation is attempted during one of the meetings in Paulson's office, and Paulson tries to explain what a total collapse of Wall Street would mean in ordinary terms (frozen credit lines = no milk in the store), but in the chaos of the story unfolding, there are too many instances when the dialogues simply cannot express the simplified specifics of the jargon.

3.6. The Grapes of Wrath

The Grapes of Wrath, published 70 years ago, can be seen as a prophetic novel – originating in the tragedies of the Great Depression, but speaking directly to the harsh realities of 2009, writes Steinbeck scholar Robert DeMott. (http://news.bbc.co.uk/2/hi/7992942.stm) Steinbeck's epic novel, which traces the torturing exodus of Tom Joad and his family from Depression-ravaged Oklahoma (where they are evicted from their farm), across the rough American south-west via Highway 66, and on to what they mistakenly hope will be a more promising future in California, is considered by many readers to be the quintessential Depression-era story. *The Grapes of Wrath* treats as a national epidemic the wave of widespread foreclosure, up rootedness, migration and homelessness caused by the cataclysmic environmental and economic disasters. The title of the film was taken from the *Battle Hymn of the Republic*, by Julia Ward Howe ("Mine eyes have seen the glory of the coming of the Lord, He is trampling out the vintage where *the grapes of wrath* are stored, He has loosed the fateful lightning of His terrible swift sword, His truth is marching on" - https://www.poets.org/poetsorg/poem/battle-hymn-republic). On the screen, the film honestly and realistically recreates the socio-economic impact of the Great Depression and a mid-30s drought upon one representative family - the Joads. Its theme of an oppressed people's epic move to a new home parallels the Biblical story of Exodus. Their family name, Joad, also evokes the Biblical character of Job. There were a total of seven Academy Award nominations for the film. Filmed in journalistic, documentary-style black and white textures with some low-key lighting and chiaroscuro (often provided by a candle or low light source), the picture records with astute realism rural America in the 30s. Also, the film optimistically and sentimentally transmits the strength and human dignity of the individual spirit.

3.7. They Shoot Horses, Don't They?

They Shoot Horses, Don't They? by Horace McCoy stands next to *The Grapes of Wrath* as one of the most convincing and heart-breaking fictional portraits of America during the Great Depression. It was also made into a classic film starring Jane Fonda and directed by Sydney Pollack. In McCoy's great portrait of poverty and powerlessness during the Great Depression, two struggling young actors risk everything to participate in a dance contest as their last effort at survival in Hollywood. The film is an important reminder that poverty is everywhere and ruins many lives. It centers on one of the winner-take-all Depression-era dance marathons in which poor people danced until their feet bled in the hopes of winning a big cash prize. In this case, the prize is $1,500 to the last couple standing, and the dancing goes on uninterrupted (save for short breaks every two hours) for more than a month. The contestants include aimless drifter Michael Sarrazin, wannabe actress Susannah York, old trooper Red Buttons, dull peasant Bruce Dern, and a pregnant housewife Bonnie Bedelia. The centrepiece role belongs to Jane Fonda, a beautiful, illusion-free young woman who knows all too well the contest is a sham, but who competes anyway, because what else is she to do? *They Shoot Horses, Don't They?* Is a courageous story of how far people are driven by poverty. And how others are willing to exploit this poverty for fun and entertainment. Only one couple can win the 1000$, the others hardly get anything. But nobody is really interested in the winners, people want to see the other couples fail. The more spectacular the failure, the better.

4. Conclusion, limits and further research

Historical documents, eyewitnesses' accounts, and archaeological objects all claim a direct connection to events or situations that historians evaluate and interpret. Film, however, offers a unique ability to reflect and resemble historical figures and events. This is perhaps film's greatest attraction and challenge: by capturing images in time, it seems not simply to represent things but to make them present. From 2007 until today a complicated set of events has been disturbing the global financial markets. These incidents have been given different names, varying between a general rhetoric of economic downturn ('crash', 'crunch', 'meltdown', 'hangover') and more descriptive terminologies such as: 'US subprime mortgage crisis', 'European sovereign-debt crisis', and 'late 2000s financial crisis'. From the very beginning, the media played a very important role in communicating and interpreting these market developments. These documentaries and not only provide powerful insights about how America and Americans have ended in debt, and how that affects the global economy. Analyzing the films, we can conclude that they suggest ways in which the situation can be improved by changing spending patterns and habits. Also, the films depict interesting characters. The villains in these films are usually corrupt bankers, businessmen or politicians. The protagonists often lack confidence in themselves and the American Dream. The films displaying the Great Depression period in American history questioned the viability of capitalism and began dealing with the economic crisis of the nation in more realistic terms.

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ANALYSIS REGARDING THE INSTRUMENTS FOR IMPACT EVALUATION OF EUROPEAN FUNDS ACROSS PRACTITIONERS

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Abstract: *The programming period 2007-2013 has come to an end in all EU Member States, the date of 31st March 2017 representing the deadline for sending the final balance of payments on European Structural and Cohesion Funds. Beginning with 2015, the European Commission has launched several reports on impact evaluation of the cohesion policy and its objectives (convergence, regional development and employment, European territorial cooperation); the evaluation instruments are diversifying and there is observed quite a contradiction between different approaches of European Commission's general directorates (DGs): some use macroeconomic models, like Hermin, Quest III or Rhomolo, some use the counterfactual evaluation and some use the econometric methods. Consequently, several authors and practitioners have written interesting articles in standing for an evaluation method or another; the results of their simulations being also contradictory, but the magnitude of conducting impact evaluations at local, regional or national level denotes the difficulty of assessing the efficiency of Structural and Cohesion Funds. The paper proposes an analysis of the official results of the European Commission in relation to the main categories of impact evaluation instruments and some considerations on the private initiatives in this field of interest. It can be affirmed that most of these studies are seeking answers to the basic questions of any evaluation design: besides the "traditional causal question", there are other 4 impact evaluation questions: "to what extent can a specific net impact be attributed to the intervention?; did the intervention make a difference?; how has the intervention made a difference?; will the intervention work elsewhere?" (Department for International Development, 2012: 36-48).There is also needed to make a difference between micro and macro approaches regarding impact evaluation: the micro studies have an informal structure, a high level of disaggregation, a weak use of theories, a judgemental model calibration, an implicit policy impact and an ignored treatment of externalities; on the opposite side, the macro studies have a formal structure, a low level of disaggregation, a strong use of theories, a scientific model calibration, an explicit policy impact and an explicit treatment of externalities (Bradley et al, 2005:7). In the modern practice of evaluation, there can be observed 3 philosophies, according to Tavistock Institute (2003: 21-22): positivism (accepts objective knowledge), constructivism (rejects objective knowledge) and realism (concentrates on interconnections).*

Keywords: *Structural; Cohesion; Funds; impact; evaluation; methods.*

JEL classification: *C18; E17; O41.*

1. Introduction

The system of public transfers based on collective contributions (Becker et al, 2016:2) is sought to increase economic growth, employment rates and investments in underdeveloped zones or regions. The Member States of the European Union (EU) are part of such system, by annually contributing with approximately 1% of national GDP to the common budget. These contributions are redirected by the EU to finance investments in infrastructure, agriculture, education and other major sectors, in order to provide an equalization (Becker et al 2016:2) of economic performance among all Member States. Critics say that such an intermediary body does not provide sufficient guarantees for such ambitious convergence objectives and in contrast to other federal systems, there are neglected several concepts of development, with unclear results on real per-capita income, employment, etc.

A large literature has been developed in the last years, throughout which many simulations of the Structural and Cohesion Funds impact have been carried out in order to demonstrate the positive or negative effects of the cohesion policy: if all of the positive remarks are to be ignored for a moment, there can be observed 3 main criticisms, according to the European Commission (2015:2): the first one states that the cohesion policy is unnecessary and even distortive (by its means, the free market and competition would have been enough, without appealing to regional aid); the second one states that the cohesion policy is inefficient (it alters the optimal allocation of resources across EU); the third one states that the cohesion policy is not effective (not achieving its objectives).

The effects of Structural and Cohesion Funds are different by country, region and time. The relationship between EU transfers and their impact is not known and impact evaluation methods only capture local average effects: variables like the stage of development, the quality and quantity of social capital, the potential demand are not described well enough in order to capture the lower return on investments and per capita income growth effects in the Member States.

It has been acknowledged by Becker et al (2016:3) that the effects are stronger when analyzing more programming periods together, in comparison with studies which approach only the most recent programming period.

According to the Centre for European Policy Studies (2014:3), the economic impact of EU transfers is estimated to be a multiple of the size of EU GDP. Furthermore, the same author suggests that 0.5% of the EU GDP generated another 1% GDP net impact, during the 2007-2013 programming period; in addition, the Cohesion Policy (equivalent to 0.4% of EU GDP) generated another 1% GDP net impact.

If limited absorbing capacities are to be taken into account, then the above shares are quite positive, as some regions use EU transfers increasingly inefficiently as they receive more transfers (European Commission, 2016a).

There may also be the nature of the „depressed state" of EU Member States economies (European Commission, 2016d:22), which could have molded the EU funding as a source for development expenditure: however, fiscal consolidation measures have restricted the assurance of mandatory co-funding for the public sector and have limited the demand for funding for the private sector. Related to the above shares, the outcomes are quite negative, because of the delays in spending and the misallocation of funds to areas and projects where it could be spent more quickly. Indeed, as Becker et al (2016:2) point out, there have been induced positive

average effects, but more expenses did not generally induce proportionately larger effects.

2. Econometric analysis methods

Usually, the method of econometric analysis reveals a reduced impact of Structural and Cohesion Funds on GDP growth (a lower impact than counterfactual evaluations or macroeconomic models).

Three important issues are discussed by the practitioners of econometric analysis, the first is the relevance of the theoretical framework (the "old" neoclassical growth model versus the "new" economic geography approach); the second is the separation of Cohesion Policy transfers from the impact of the other factors of economic growth (European Commission, 2015:4). Thirdly, econometric analysis do not always use real data about the amounts of absorbed Structural and Cohesion Funds and do not provide consistent data series on EU Member States.

Another problematic aspect is given by the fact that regression models use independent variables from the other dependent variables, but since this type of econometric method assesses implicitly the correlation between initial GDP level and Structural and Cohesion Funds, obviously, there is a higher degree of Cohesion Policy transfers to poorer regions.

3. Counterfactual impact evaluation methods

There are several methods for counterfactual impact evaluation and among research studies, many of them use randomization, propensity score matching, difference in differences, regression adjustment techniques, regression discontinuity design and instrumental variables (Centre for Research on Impact Evaluation, 2014:10). Several authors indicate that the best methods out of the above mentioned ones are those which require the least restrictive assumptions.

The European Commission (2016c) used propensity score matching and regression discontinuity design for assessing the macro-economic effects of cohesion policy during 1994-1999, 2000-2006 and 2007-2013 programming periods. The propensity score matching method has revealed that the impact of Structural and Cohesion Funds on EU Member States consisted in an annual growth of per-capita GDP ranging from 0.5% to 0.7%, and about 0.1% annual growth for employment rates. The regression discontinuity design method has led to similar results, but a lower annual growth of per-capita GDP, of only 0.4%.

4. Macroeconomic modelling methods

Macroeconomic models have a larger use in the impact evaluation methodology and are usually implemented for extended periods of estimations, because they provide solid short term and long term impacts of cohesion policy, taking into account direct and indirect effects. Another advantage is that macroeconomic models include spill-over effects and externalities, being used for large sets of country panels.

With regards to the economic and financial impact of fiscal transfers, the cohesion policy is assessed on general EU level by QUEST III model and on each individual Member State by HERMIN model. The International Monetary Fund has also

evaluated the impact of cohesion policy by its GIMF model. These models were explained in a previous paper of the authors (Popescu et al, 2016).
From QUEST III simulations it can be deducted that 1 Euro invested in the EU Member States during 2007-2013 (extended by n+2, n+3 rule) is equal to 0.78 Euro in GDP by 2015 (short term) and to 2.74 Euro by 2023 (long term) (European Commission, 2016b: 23).

Figure 1: Impact of cohesion and rural development policy on GDP (QUEST III))
Source: European Commission, 2016b: 18

Taking into consideration the increased impact on GDP (Figure 1), QUEST III simulations suggest that by 2015 the GDP of EU-12 (Member States which joined EU after 2004) grew by 4,1%, because of the extended per capita allocations: Hungary (+5.3%), Latvia (+5.1%), Poland (+4.3%). As can be seen in Figure 1, EU-15 (Member States which joined EU before 2004) provide a modest but substantial impact: Greece (+2.2%), Portugal (+1.8%), Spain (+0.7%).

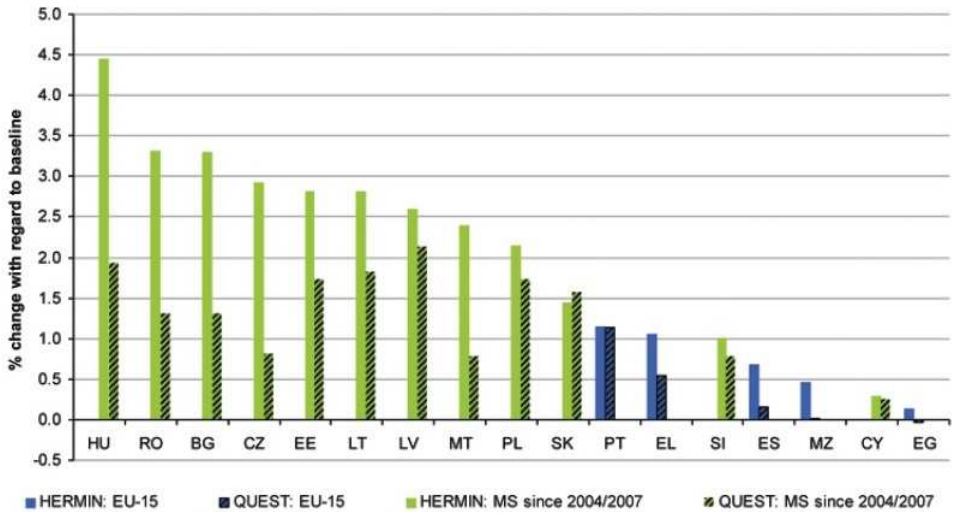

Figure 2: Average annual impact on GDP 2007-2016
Source: European Commission, 2012:8

Figure 2 show the annual impact of cohesion policy on both EU-12 and EU-15, simulated by QUEST III and HERMIN macroeconomic models. The difference is obvious, HERMIN model having a more overestimated impact on GDP, as we have stated before, in our previous paper (Popescu et al, 2016).
There is another model used by the European Commission, called RHOMOLO, a computer-based model which emulates region-specific expenditures into a simulation of each region's GDP growth. The estimated growth is higher for less developed regions (between 1% and 6% of GDP) and lower for transition regions, respectively for more developed regions (between 0.1% and 1% of GDP) (https://ec.europa.eu/jrc/en/rhomolo, accessed 14.04.2017). The model was built on the same basis like QUEST III, being used for policy impact assessment on human capital, transport infrastructure, research and development, innovation.

5. Conclusions

It is very difficult, in reality, to assess the economic impact of cohesion or rural development policies of the EU: first of all, because monitoring data cannot provide information on net impacts, at most they can illustrate the output / outcome of the interventions; second of all, analytical instruments are required (econometric methods, counterfactual methods, macroeconomic models) which use a very technical language and are not accessible to the wide public.
Further on, a differentiation must be made between the short term (demand) effects and long term (supply-side) effects, when analyzing the behavior of macroeconomic variables (European Commission, 2016b): short-term effects are relevant during the implementation period, creating the paradox that people and firms, by earning more, they also consume more (the multiplier effects); the long-term effects appear after increased productivity (feedback effects).
A current mistake in the approaches of impact evaluations is that GDP is targeted as the main variable and the effects on GDP are sought to remove development disparities across European regions; there are also targeted variables which may always give positive results on a funding intervention: employment rate or social inequalities (European Commission, 2016a).
As we mentioned in our previous paper (Popescu et al, 2016), it is worth taking into consideration the "with funding scenario" and the "without funding scenario", because the allocation of Structural and Cohesion Funds coincides with a wide spectrum of internal policy actions and external policy developments aimed at the national economies of the Member States (European Commission, 2016b).

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THE GENDER DIFFERENCES OF IMMIGRATION IN OECD COUNTRIES

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Abstract: *Immigration has become a very significant topic in recent years. Over the centuries, millions of people have migrated, despite the accompanying physical, cultural and economic obstacles, to other lands in search of better lives for themselves and their children. Currently, the number of people living outside their country of birth is estimated to be over 180 million or 3 percent of the world's population. Consequently, in the last few years the growing awareness of migration flows has focused on the gender perspective. Gender, in this case, refers to the norms, behaviours and expectations associated with being a female or a male immigrant. The aim of this study is to find out what gender differences there are in immigration in the OECD countries studied. According to our results, in the labour force women migrants are fewer than men. Thus, female migrants are more inactive and less employed than males. Moreover, the male migrants' educational level is higher than that of women. Our conclusions also allow policy makers to identify potential needs for reforms, in relation to specific features of migration policies, and provides some evidence about which groups of migrants are in need of supplementary supports in other social and economic contexts, as well.*

Keywords: *Immigration; labour market; education.*

JEL classification: *I23; J61; J31.*

1. Introduction

The economic, political and social changes which have occurred globally in recent years have influenced international migration in some countries (Özgür and Deniz, 2014). Hence, over 175 million people - accountıng for 3% of the world's populatıon - live permanently outside their home country. People migrate from their own countries, mainly from rural to urban areas, as well as across borders. The main reason for choosing to be a mıgrant is to seek a better life by finding a better job. Also, the driving forces of migration in today's world are wages, human security and work opportunities. For these reasons the number of ımmıgrants is constantly increasing year on year. Hence, immigration has become a significant research topic in recent years and a global issue for all countries.

Almost all countries at present are affected by migrants. As a result, international migration has become a recognized feature of contemporary social and economic life globally. It has both positive and negative features and opportunities for the countries and individuals involved (Piper, 2005). According to the UN (United Nations) Population Division, there has been a steady growth in migration with an estimated 175 million migrants today. 60% of these migrants live in more developed, and 40% in less developed regions. In contrast, nearly one in every 70 persons in developing countries is a migrant (Kawar, 2004). Moreover, with globalization resulting in the increased movement of individuals around the world, immigration has

become a noteworthy political concern in most industrialized countries (Milner and Tingley, 2011).
Worldwide, migrants make up roughly 3.5 percent of the global population, about half of whom are women, despite the common misapprehension that it is men who migrate (Jolly, Reeves and Piper, 2005). The reason for this misconception is that many migrants are women who seem not to be socially considered as part of the 'workforce' because they tend to engage in care work, such as domestic work, child-rearing, or other forms of household activities that take place in the home or in hotels and hospitals. Thus, their jobs are often under-paid and valued.
Besides this gender perspective, we should mention that there is an increasing female share of immigration in OECD countries. The percentage of women in the migrant population (both permanent and temporary migrants) has been increasing in the post-war period, and now women make up the majority of international migrants. According to Zlotnik (1998), the number of female migrants in the world increased by 63% from 35 million to 57 million between 1965 and 1990, and increased 8% more than was the case with male migrants. In the United States, 53.5% of newly admitted immigrants were women in 1998 (Oishi, 2002).
These tendencies are defined in and by the social and cultural assemblies where people live. Meanwhile, migration is actually gender-structured, because men and women migrate for different reasons, and migration has different consequences for men and women in both sending and receiving communities (Dugbazah, 2009). Moreover, in recent times international migration flows by gender have developed in response to factors such as immigration legislation, and gender-selective demand for foreign labour with changing gender relations in countries of origin. Different factors have often worked together to increase the proportion of women in migration flows. As a result, the feminization of migration has been documented as a phenomena at the worldwide level (Castles and Miller, 2003).
Between 2000 and 2008, before the fiscal and economic crisis, migration streams to OECD countries increased significantly by more than 33%. This increase was observed in various OECD countries (i.e. Australia, Canada, New Zealand and the United States), but even more so in several European countries, remarkably in southern Europe and Ireland. In the five years previous to 2005/06, OECD countries received more than 16 million new migrants and the migrant population increased by more than 20% (Widmaier and Dumont, 2011). Furthermore, in almost all OECD countries the mainstream of new arrivals is due to family reconciliation, and the other main category of immigrants are those who come primarily to work. As regards the skill characteristics of the foreign population, educational attainment levels of immigrants have previously been below those of citizens in many OECD countries, conceivably also due to vigorous immigration policies aiming to attract low-skilled labour (Coppel, 2001).
The notion of gender was introduced to social science in order to emphasize the difference between socially and biologically defined sexes. It includes both men's and women's active characterisation in a society and their ideas about 'maleness' and 'femaleness'. Through these ideas, gender produces and then institutionalizes asymmetries on the basis of gender. In other words, gender relations are instantaneously produced and are reproduced by social repetition (Carling, 2005). More reliable evidence on migrants and migration tendencies are needed and are important in order to develop evidence-based policies, to inform public opinion, and to fight against widely held misconceptions (OECD, 2013).

What are immigrants' main characteristics? How do they contribute to their host and origin societies? How does the role of immigrants evolve over time? These and other main research questions should be answered to plan the future of migration, to influence the opportunities for migration, and to address its conflicts.
The aim of this study is to discover the gender differences of immigration in OECD countries. Furthermore, the study shows the proportion of men and women migrants by their labour status (employed, unemployed and inactive), and also aims to demonstrate differences in gender by educational attainment.

2. Theoretical Background

While migration regarding gender differences has for long been an invisible issue in policies, especially at the EU level, research projects have been common at the domestic, European and global levels (Bach, 2009). Furthermore, gender as a social construct that organizes families into males and females can provide outstanding explanations of the reasons, progression and influencing factors of the migration patterns of both genders. Moreover, the incorporation of a gender perception into improving policies and programs can contribute to their efficiency and sustainability (Omelaniuk, 2005). However, migration is sometimes perceived as a principally male movement, with women left behind, even though, in both intercontinental and internal migration, female migration has been almost as great as male migration overall. For more than 40 years, female migrants have been almost as numerous as their male counterparts. In 1960 there were 35 million female migrants and 40 million male migrants; by 2000, although the total number of migrants had more than doubled, the gap between females and males remained about the same: 85 million female migrants versus 90 million male migrants (Jolly, Bell, Narayanaswomy, 2003). Although there has always been some female component to migration flows, over the last 20 years the gender equilibrium of international migration flows has changed noticeably, in response to a number of factors, including gender-selective demand for foreign labour, economic development, and subsequent changes in gender relations both in countries of origin and countries of destination (Badkar, Callister, Krishan, Didham and Bedfor, 2007).
In practical terms, women's contribution to the labour market has been less than men's. Women and young people are often at a disadvantage in labour markets around the world (Oláh and Pakurár, 2013). While the gap has been reduced over the past few decades, considerable differences remain. This modification has noteworthy consequences for economic growth. For example, employment based immigration progressively favours those with advanced education, methodological or technical skills, or wealth (Fitzpatrick, 1997). Furthermore, three main factors lead to gender separation in terms of access to economic opportunities among agricultural workers, entrepreneurs, and wage workers: (1) gender differences in the use of time (primarily resulting from differences in care responsibilities), (2) gender differences in access to productive contributions (particularly land and credit), and (3) gender differences stemming from market and institutional failures (World Development Report, 2012).

2.1. Neo-Classic Migration Theory

Based on the neoclassical theory of the labour market, Lewis, Hicks, Haris and Todara set out the so-called neo-classical macroeconomic theory, which today is

undoubtedly the best known theory of international migration (Olejárová, 2007). The model puts special emphasis on the labour market measurement of migration, and essentially relates migration-induced population changes to the relative income (or wage) and employment situation found in the districts of origin and of destination (Mitze, 2012). Furthermore, current neo-classical economic theory can be used to explain international migration currents within the European Union, as these flows are also less encumbered by restrictions (Jennisen, 2006). In addition, labour migration has been the focus of much attention in economic geography and regional science. This is largely due to the fact that it has traditionally played an important role in regional development and in the spatial economy as a whole. While there are many attitudes to labour migration modelling, much of contemporary migration analysis is based upon neoclassical economic theory. Correctly, the nations of utility and resource distribution which are crucial to the neoclassical scheme are often key assumptions in the analysis of labour migration (Olligschlaeger, 1986).
As a result, the neoclassical discussion of immigration has generally focused on the performance of a single worker as he or she compares employment opportunities across regions and chooses the location that maximizes the present value of expected life-time earnings. Most migration decisions, however, are not made by single workers, but by families. Migration decisions, therefore, should not be based on whether a particular member of the household is better off at the destination than at the origin, but rather on whether the family as a whole (nuclear and even extended) will benefit (Kubirsi, 2006). The decision is taken by using the classical behavioural push-pull-model with intervening obstacles. Poverty, social exclusion, unemployment and an insufficient housing situation are examples of push-factors, while the prospects of higher income, getting a (better) job, better access to services and better housing are examples of pull-factors. Gender differences in migration relate to how men and women are affected by push- and pull-factors in the areas of origin and destination (Kocziszky et al., 2012). Moreover, neoclassical theory suggests that women earn less than men because they have lower levels of human capital - mainly education, training and on-the-job experience - and therefore lower labour productivity (Máté, 2014a). For example, because some women interrupt their employment to marry, and then bear and rear children, employers are said to be reluctant to invest in the training of women. Also, for parents and the women themselves there is said to be less incentive to invest in education and training. Periods of withdrawal from the labour force mean that women accumulate less work experience than men and that their skills tend to depreciate more (House, 1995).

2.2. Dual Labour Market Theory

According to the dual labour market theory the market consists of two segments. Workers belonging to the first segment receive relatively high wages and have stable jobs. Workers belonging to the second segment have relatively low wages, work at unstable jobs and change jobs more frequently (Launow, 2004). Moreover, a growing body of empirical research has documented persistent divisions among American workers: divisions by race, sex, educational credentials, industry grouping, and so forth. These groups seem to operate in different labour markets, with different working conditions, different promotional opportunities and wages, and different market institutions (Reich, Gordon and Edward, 1973). Thus, the dual labour market theory posits that international migration is the result of a permanent demand for foreign labour, which is inherent to the economic structure of developed countries.

In accordance with this theory, wages not only reflect conditions of supply and demand, but also confer status and prestige (Maresová, 1999).
The dual labour market theory maintains parts of the Doeringer Piare (1971) model, but expands its explanations as to why certain groups in society, such as women and ethnic minorities, are segmented into different labour markets (Rapino, 2008). However, no evidence of segmentation was found in the women's labour market using a pooled sample of men and women from 1976 to 1984 (Meyer and Mukerjee, 2007). In dual labour market theory women and men earn different amounts because they tend to work within different segments of the labour market. According to dual labour market theory, the market is organized into two different sectors, one the "primary market", the other the "secondary market". The primary market is comprised of top level executive and professional positions. The secondary market is comprised of working-class, clerical work, skilled and blue-collar work. The gender segregation of occupations within both the primary and secondary sectors has led some writers to suggest that gender also needs to be considered as one of the dimensions on which the labour market is segmented. The existence of two relatively separate labour markets for men and women is seen by some as an important determinant of the lower earnings of women. To the extent that women's occupational choices are restricted and there is an oversupply of candidates for women's jobs, women can be considered as 'crowded' into these occupations. According to such an 'overcrowding model', wages are lower for occupations which are highly feminised, since women must compete against each other for relatively few jobs in what is essentially an artificially restricted, overcrowded segment of the labour market. Similarly, women do not compete with men for a large number of jobs considered to be 'male' jobs, which helps maintain the higher wages of these jobs (House, 1995). Barron and Norris argue that whilst men are employed in both sectors, they are mainly employed in the primary sector. Women, on the other hand, are mainly employed in the secondary sector (with a number of important and significant exceptions mainly involving single or childless married women). There are a number of explanations for this 'gendering of the workplace' advanced by Barron and Norris.
As a result, dual labour market theory implies that in the primary market the turnover is lower and job stability is higher than in the secondary market. However, less educated workers, e.g. immigrants, tend to work in low skill-intensive industries (Máté, 2014b). Furthermore, in the secondary market human capital should not have a significant influence on turnover, whereas in the primary market the relationship between market turnover and human capital must be positive (Launow, 2004).

2.3. Human Capital

Approximations are based on the standard specification of an earnings occupation, extended by years of residence, which is a measure of host country specific human capital (HC) (Dustamann, 1999). Hence, it is frequently believed that the accumulation of human capital and access to physical and financial capital are among the main determinants of economic growth. It is also widely accepted that a lack of these resources (along with the inability to expand them) are potential reasons behind the delay of many poor countries in achieving development (Checci et al., 2007). Moreover, human capital is noteworthy in the process of immigration. Migrants often orient their human capital development strategy to obtain specific competencies to increase their prospects for recruitment abroad, focusing on skills

that are in demand in foreign labour markets, or preparing for specific overseas requirements (OECD, 2015).
According to human capital theory, one's incentive to invest in training is directly proportional to the time one expects to work over a lifetime. A spectacular rise in women's labour force contribution relative to men's implies that women's human capital investments should intensify compared to men's. In turn, rising female human capital investments relative to male investments suggest a narrowing in the gender wage gap. Thus, during the period 1890 to 2001, women's earnings should have grown relative to men; and indeed, women's relative earnings did grow during this period. From 1890 to the present, female incomes rose from just over 30% of male earnings in 1890 to close to 80% in 2001, just as the human capital model predicts (Polachek, 2004).
However, male and female workers still differ in their individual characteristics. In general, men have more labour market knowledge and seniority and less part-time employment. Men and women also tend to differ in their fields of study and in the selection of which college courses they can attend (Magnusson, 2010). As a result of differences in human capital men and women have different wages. Most of the time, men's wages are higher than women's wages. But in recent years women's wages in the labour market have also increased. Therefore, part of the unexplained gender wage gap could be the result of differences between men and women in their job search efforts, caused by differences in earnings (Reimer and Schröder, 2006).

3. Data and Methodology

This research uses data from the database on the OECD (OECD, 2017) website. For processing statistics, the SPPS (Statistical Package for the Social Sciences) was used. Cross-tabulation was created with the SPSS, to answer the question of whether there are any important gender differences for migrants in terms of labour force status and educational attainment in OECD countries. Additionally, cross-tabulation is used for explaining consequences.

4. Results

Changing labour markets have improved both opportunities and pressures for women and men to migrate globally in larger numbers. Their labour market positioning and skills must be examined in relation to gender separated labour markets in the countries of origin as well as countries of destination (Piper, 2005).
In addition, gender differences in terms of access to economic opportunities are often discussed in relation to gender differences in labour market influence**.** Moreover, men and women have different roles in the labour market. These differences are seen in the numbers of men and women in the labour force, as well as the types of professions they choose, and their comparative incomes or hourly wages. According to the literature, noticeable aspects that affect pay include education, job experience, hours of work and so on.
According to Table 1, the number of employed migrants is 86,990 (35.1 % of the total), while 69,381 (28%) are unemployed, and 91,550 (36.9%) inactive. The total number for female labour migrants is 35.7%, and the proportion of employed female migrants is also lower (35.1%). In accordance with this result males are more likely to be employed than females in OECD countries. In the total labour force, male

employment stands at 51.1%, and female employment at 48.9%. This result undoubtedly shows that male migrants are more likely to be employed than female migrants in the labour force in OECD countries. As we analyse unemployment, the results are the same as before, i.e. male migrants are more likely to be unemployed than females. In the total labour force, male unemployment stands at 50.5%, and female unemployment at 49.5%. Moreover, the number of inactive female migrants, at 50.8%, is higher than the number of inactive males, at 49.2%.

Table 1: Cross table of immigrants by labour force status by gender

			Labour Force Status (LFS)			
			Employed	**Unemployed**	**Inactive**	**Total**
Sex	Male	Count	44453	35005	45082	124540
		% within Sex	35.7%	28.1%	36.2%	100.0%
		% within LFS	51.1%	50.5%	49.2%	50.2%
	Female	Count	42537	34376	46468	123381
		% within Sex	34.5%	27.9%	37.7%	100.0%
		% within LFS	48.9%	49.5%	50.8%	49.8%
Total		Count	86990	69381	91550	247921
		% within Sex	35.1%	28.0%	36.9%	100.0%
		% within LFS	100.0%	100.0%	100.0%	100.0%

Source: Estimations based on OECD (2017).
Note: according to the Pearson Chi-Square tests (63.470 significant at 0.01 p-level), there is a significant association between the gender and the labour status of migrants.

Table 2: Cross table of immigrants by educational attainment and place of birth

			Educational Attainment (EA)				
			ISCED 0/1/2	**ISCED 3/4**	**ISCED 5a/5b**	**ISCED 6**	**Total**
Sex	male	Count	29719	30637	28881	19630	108867
		% within Sex	27.3%	28.1%	26.5%	18.0%	100.0%
		% within EA	50.1%	50.2%	50.1%	51.1%	50.3%
	female	Count	29601	30340	28711	18761	107413
		% within sex	27.6%	28.2%	26.7%	17.5%	100.0%
		% within EA	49.9%	49.8%	49.9%	48.9%	49.7%
Total		Count	59320	60977	57592	38391	216280
		% within Sex	27.4%	28.2%	26.6%	17.8%	100.0%
		% within EA	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Estimations based on OECD (2017).
Notes: 1 = ISCED 0/1/2 Pre-primary/Primary/Lower secondary education, 2 = ISCED 3 and 4 (Upper) secondary/Post-secondary non-tertiary education, 3 = ISCED 5A/5B First stage of tertiary education (Bachelor and Master), 4 = ISCED second stage of tertiary education (PhD). According to the Pearson Chi-Square tests (12.079 significant at 0.01 p-level), there is a significant association between the gender and the educational attainment of migrants.

Table 2 shows the educational attainment in terms of gender differences of immigration in OECD countries. According to this table, male migrants are less educated than female migrants. 27.3% of male migrants, and 27.6% of female migrants have pre-primary and lower secondary education (ISCED 0/1/2). With secondary education (ISCED 3 and 4), the proportions are 28.1% for males, and 28.2% for females. Of those migrants with a higher education qualification 26.5% of males and 26.7% of females have a bachelor or master level qualification, while for a PhD qualification, the figures are 18% for males and 17.5% for females. This table shows that at almost every level of educational attainment male migrants are more educated than female migrants.

5. Conclusion

Since the 1960s, international migration theory has certainly become more gender sensitive, moving from the predominant view of female migrants as simply the wives and children of migrants to incorporating explanations of the unique experiences of women migrants themselves. However, in an effort to correct the 'invisibility' of women in migration theory, there is a risk that researchers will begin to over-emphasize the migration experience of women.

The aim of this research is to show immigration gender differences in OECD countries. According to our results, males are more likely to be employed than females. Moreover, the number of inactive female migrants is higher than that of males. There are many reasons for these phenomena. Firstly, people generally migrate from rural areas to urban areas, and rural areas have a patriarchal structure. For this reason, in rural areas generally women do not work, or do less work, than males. Even when they move to another country women are expected to stay at home instead of working. Secondly, marital status, educational level, health status, age, and the number of children in the household aged 3 years or less can all have an effect on the phenomenon, as well.

Nevertheless, we found at almost every level of educational attainment that male migrants are more educated than female migrants. Consequently, the educational level of female migrants can be enhanced in destination countries. Authorities can encourage female migrants to improve their educational level and also upgrade their skills in the labour force. The most significant proposal concerns language. Most female migrants do not know how to speak the native language or the most commonly used second language, i.e. English. This also makes it hard to find a job in the labour market. Nevertheless, destination countries can open some language schools for both genders, which will support migrants in learning the destination countries' language. After solving this problem it will be easier for female migrants to seek jobs, and it may decrease the number of inactive members of the labour force, as well.

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ENGLISH FOR SPECIFIC PURPOSES COURSES FOR ENGINEERING SCIENCES, A NECESSARY REQUIREMENT

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Abstract: *The present paper intends to show the significance of ESP (English for Specific Purposes) courses offered to students at technical universities, namely the Faculty of Civil Engineering, Surveying and Architecture and Faculty of Environmental Protection from the University of Oradea. Second, it also tries to investigate to what extent these ESP courses have been successful in fulfilling the job requirements of the prospective engineers. We are all aware that globalization has a major influence upon every aspect of life, no need to mention how important it is for technical engineers. Competent English communication is essential for huge success and for having a successful career. Students need to understand the importance of general business English and English for Specific Purposes and need to be well motivated and stimulated to learn if they plan to work for an industry. The students need to familiarize themselves with engineering contents if they want to pursue their career as competitive global engineers with long term goals. Considering how important English is it is no wonder we see it taught in schools, institutes, community colleges and universities as a compulsory course. Integrating ESP, notably in engineering fields, should become mandatory. The students that come to the first year college in the Faculty of Civil Engineering, Surveying and Architecture and Faculty of Environmental Protection are 18-19 years of age. After eight years of primary education and higher secondary level they have had eight or even up to twelve years of English. It has been noticed that some students are better language learners than others even though they all are exposed to similar teaching, use the same learning material and have similar opportunities to practice English. However, it's a known fact that not all learners behave in exactly the same way. There are some students who are very active, get involved while others prefer to remain neutral, in the back of the class or even passive towards learning. There are some students who progress very fast, apparently with little effort, whereas others put a lot of work into learning and they obtain poor results. There are some shy students who do not wish to interact with the teachers or with the other students. There are also students who prefer to learn things by heart while others opt for learning through practice. Therefore, it stands to reason that the existence of learners with different capacities and abilities seems to be a fact well worth researching. Also worth discussing is the introduction of ESP courses for technical students from the first year of study.*

Keywords: *ESP; engineering sciences; syllabus plan; language learners; evaluation.*

JEL classification: *I21.*

1. Introduction

It is very important that the students have the same English level before they start and ESP course so it is the teacher's role to assess and evaluate the students' level before starting a course on specific purposes.

In any syllabus plan at the university level, both the students and the lecturers are individuals whose performances can be evaluated. Everybody would agree that the students are the most frequently evaluated individuals. However, that part of the labor force from a university not engaged in administrative duties, but in lecturing ones, is well aware that there are many different mechanisms to evaluate its performance which, by the way, affects careers not only from a professional point of view, but also from an economical one. But, who decides whether a student should or should not take the course a member of the teaching staff has designed or is about to design? In many programs, entrance is nearly an automatic process since no selection or entrance test is required. In other words, prerequisites of knowledge or skills are not necessarily connected to those needed in the learning process of the target language but to factors such as branch of engineering the student is enrolled in, number of credits necessary for completing his/her degree, and so on.

When planning a research study it should be taken into account the students' readiness for taking specialized ESP course, together with certain performance-related indicators. The term readiness is not used arbitrarily, but quite deliberately since it takes into account the extent to which the students are potentially ready to take the ESP courses offered within a particular institution.

2. Literature review

English for Specific Purposes has its basis in an investigation of the purposes of the learner and the sets of communicative needs arising from them. These needs will then act as a guide to the design course materials. The kind of English to be taught should be based on the interests and needs of the students. In any technical school such a technical course would be compulsory, meaning that from the first year of study it should be introduced in the course syllabus for the future engineers.

English for Specific Purposes is that kind of English teaching that builds upon what has been acquired earlier in EGP (English for General Purposes) with a more restricted focus. It aims at acquainting learners with the kind of language needed in a particular domain, vocation, or occupation. In other words, its main objective is to meet specific needs of the learners. This thing just indicates that there is no fixed methodology of ESP that can be applicable in all situations, but rather each situation and particular needs of learners belonging to a particular domain impose a certain methodology of teaching.

Since its arrival in the 1960s, ESP has been developing steadily, particularly as a consequence of the shift to "a contextualized notion of language" (Master and Brinton, 1998: 1). The field has been gaining ground ever since English emerged as THE language for international communication and linguistic studies turned to the consideration of social contexts to deal with language as communication. Early studies on special languages were based mainly on the notion of 'register' which expounded in a Firthian environment, and was useful to identify special functional

varieties according to lexical aspects as the means to differentiate them from everyday language; more recent studies, however, concluded that this was not enough, because differences not only operate at the lexical level but also involve morphosyntactic and organizational patterns at the textual and pragmatic levels. The different ESP specific subdivisions - for instance, English for Academic Purposes, General English for Specific Purposes, English for Business and Economics, English for Science and Technology, English for Legal Purposes, among others - have come to be analyzed within the social context in which they are embedded and according to the linguistic choices made in order to meet particular situational and functional demands. These choices involve "lexical density, the complexity and the length of clause structure, the degree of formality and the management of information, to name but a few" (Master & Brinton, 1998:1).

Thus, ESP is centred on the language appropriate to the activities of a given discipline. According to Hutchinson and Waters (1987:19), "ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning." In this connection, Dudley-Evans (1998) explains that ESP may not always focus on the language for one specific discipline or occupation, such as English for Law or English for Engineering. University instruction that introduces students to common features of academic discourse in the sciences or humanities, frequently called English for Academic Purposes (EAP), is equally ESP. The term ESP presupposes a stock of vocabulary items, grammatical forms, and functions which are common to the study of science and technology. On the other hand, secretaries have different language needs from scientists, technologists, physicians, nurses, mechanics, lawyers, etc. In general, we may find various approaches to course design based on the types of courses, the target situation, the target population, and the purpose of the course. However, there are three main approaches that have influenced ESP in some way: (a) the needs analysis approach, (b) the learner-centred approach, and (c) the learning-centred approach.

Curriculum specialists believe that the breakdown of curriculum into components and sub-processes is of vital importance since it simplifies and organizes a process as complex as curriculum design (Hutchinson, Waters, 1987, Nunan, 1985). The first component in such a procedure is the needs assessment that is, obtaining data, followed by needs analyses that are, assigning value to those data (Graves 1996). Therefore, the first issue to elaborate on is the needs of the students. If needs are clear, the learning aims can be expressed more easily and the language course can become motivating. If the learners' needs are not taken into account, the course will be based on unstable or irrelevant material, will disillusion the students with the value of instruction or their capacity to learn the language, and will lead to low motivation (Mackay, Mountfor, 1978). By using what the students know, the researcher can explain, illustrate, and conceptualize the knowledge to be conveyed (Swale, 1985).

To many people, needs analysis is limited to ESP, to the point that it becomes nearly synonymous with ESP. As a matter of fact, needs analysis is found outside ESP. In other words, any educational course should be based on needs analysis to guarantee success. Needs analysis is usually performed first; then data analysis is used to provide the particular language skills that students will use and the activities students will eventually complete.

3. Discussion

In is a known fact that engineers all around the world would find themselves use English for some aspect of their jobs. English language is used in most international organizations and publications in engineering field and most engineers whose native language is not English would find disadvantages in their professional terms. Besides the difficult task of developing expertise and skills in engineering, non-native speakers must master English through continued English education, which some have estimated takes anywhere from 4-10 years of training to reach an average level of proficiency. That fact would explain why teachers want engineering students to acquire English communication ability good enough to cooperate globally in their professional fields.

Engineering students in ESP courses are usually grouped according to factors according to the expected level of language ability, expected language learning aptitude that, at least in theory, should bring homogeneity to the groups, and this together with a more objective factor, that is, the branch of engineering the student is enrolled in. This combination of factors will not necessarily help lecturers predict future performances of these students. Brown et al. (1994) remind us that as providers of education it is important to step back and consider why teachers assess. Among the reasons why assessment is useful, the most frequently mentioned are "motivation", "creating learning activities", "feedback to the student (identifying strengths and weaknesses)", "feedback to the staff on how well the message is getting across", and "to judge performance (grade/degree classification)". However, "quality assurance (internal and external to the institution)" has been recently included in this set.

Another aspect would be confidence in the teacher, and s/he should create the best possible atmosphere and feeling in the classroom so that learners can overcome any unease they may feel since one learns best when s/he is relaxed. And this is not all, the student's involvement in the teaching and learning tasks is a basic ingredient for success in language learning.

The language background variable should also be taken into consideration to check not only the extent the groups of students differ from each other, but also to filter the motivation variable since the fact of taking voluntary English courses could be considered as connected to motivation.

If motivation exists, success in language learning is almost guaranteed (Ellis, 1985; Gardner, 1985). According to Gardner (1985), the different components of motivation are effort+setting and desire to achieve goals+attitudes. Effort is the first element in motivation and, according to Gardner, it may be triggered by several factors such as social pressures, a great achievement need, etc. Setting and desire to achieve goals is the component that serves to channel the effort. Finally, motivation will vary depending on the different attitudes individuals possess toward the learning of the language. Then, these two affective factors, attitude and motivation, should somehow be represented in this study since motivation plays a key role in SLA.

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. (Abrudan&Sturza, 2014)

4. Conclusion

This paper was written to show the ESP needs of the undergraduate and graduate students studying engineering sciences and to learn whether the present ESP courses match their needs. We should also keep in mind if there is no motivation, there would hardly be any results. So motivating students would be another subject for debate.

However, in order for an ESP program to be successful, it would not be sufficient to identify learners' needs, and create syllabuses and adopt methodologies that serve these needs; that is not the whole picture. One very important issue in the context of ESP is program assessment. Assessment involves an evaluation of the learners' ability to communicate effectively using the target language, as well as their ability to participate fully in the target discourse communities which have been initially defined as relevant to their needs. The formative purpose of such assessment is reflected in the possibility for the learners to use it as feedback on how they can improve their performance, and for the teacher on how s/he can adapt his/her teaching to better fit with the needs of the learners.

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TRANSFORMING A TRILEMMA INTO A DILEMMA. A POLITICAL ECONOMIC APPROACH TO THE RECENT CRISES IN EUROPE

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Abstract: *The European Union with its sophisticated institutional system is the most important regional integration on Earth. This tight form of economic integration converges to the level that Dani Rodrik calls hyper globalization in his model, the political trilemma of globalisation. In this model Rodrik assumes that from the three desired element of world politics: deep economic integration, the nation state, and democratic politics only two can be chosen. We can either choose deep integration and the nation state but then we have to abandon democracy; or we can choose deep integration and democracy, but then we have to forfeit the nation state; or we have to circumscribe globalisation to maintain democracy and the nation state. This paper argues, that this trilemma is applicable to the European Union, although with some modification. In our essay we will reduce this trilemma into a dilemma based on the integration theories of neofunctionalism and intergovernmentalism. The recent two crises that hit the European Project, the financial crisis and near collapse of the Eurozone, and the refugee crisis both represent this dilemma. The monetary union and the common labour market, with the Schengen Agreement created an integrated economic area, while in the same time political governing institutions have remained weak that could not respond well enough in times of external pressure. The argument is, that the EU is 'over integrated' from an economic perspective, and cannot function properly without a matching level of political integration. This can be achieved either using the neofunctionalist approach and the path of Europeanisation, or using the intergovernmentalista approach. Our main conclusion is that based on events of the last 8 years, it is more likely, and that the intergovernmentalista approach is going to be used. However, this scenario has many possible negative outcomes, out of which the most likely is a multispeed Europe.*

Keywords: *crisis; Economic and Monetary Union; European Union; intergoverenmentalism; neofunctionalism; Schengen Agreement.*

JEL Classification: *F50; F53; F55.*

1. Introduction

The European Union (EU) has been constantly in crisis since 2009. First came the Greek and the other sovereign debt crises, out of which the Greek one has not been solved yet, but it is rather like a never ending story, raising concerns over and over again. Then came, as the result of the Arab Spring in 2011 the migration crisis that put pressure on functioning of the Schengen Agreement and the Dublin Regulation, challenging the free flow of people and goods across the internal borders of the member countries.

Though it may seem, that these two issues are not connected, in reality they represent the same key fundamental problem: what we will call in this paper the 'over integration' of the European Union. Both crises are related to the creation of a highly

integrated common market, where the union not only eliminated traditional barriers on the free flow of goods, services, labor and capital, but also created additional policies to foster economic integration. A common point of these additional features is that is decreases the sovereignty of member states significantly, and that they require fine-tuned institutional-regulatory background to operate smoothly.
In the same time of these crises, the former unity behind the European Union has started to disappear, public support for the Union reached its lowest level. (European Commission, 2015) In March, 2017 the European Commission (2017) published a White Book about the future of the European Union. In that, probably because of realizing those problems mentioned above, the Commission proposes five different scenarios about the future of the union:

- Scenario 1: Carrying On: A European Union that will not change significantly in the near future.
- Scenario 2: Nothing but the Single Market: A European Union that is a single market only, probably giving up on achievements like the Schengen Agreement, and even probably the Eurozone.
- Scenario 3: Those Who Want More Do More: the scenario of a multi speed Europe
- Scenario 4: Doing Less More Efficiently: An integration that enhances integration in some selected areas, while giving up on integration on sensitive issues.
- Scenario 5: Doing Much More Together: A much tighter integration, member states giving up more sovereignty.

The aim of this paper to show, that out of these scenarios only two are likely to happen: scenario 3 and scenario 5.
If we accept that the European Union have become a deep economic integration, that should mean, that this should lead to a significant decrease of member states' sovereignty, while increasing and strengthening regional level governance. This is the consequence of Dani Rodrik's famous model on globalization that he first published in his article called "Feasible Globalizations". (Rodrik, 2002). The trilemma shows, that economic integration can happen only, if institutional differences are eliminated, that can be achieved either through market mechanisms, or through improving economic governance.
The paper will show that the trilemma of Rodrik can be simplified into a dilemma in case of the European Union. The question one can manage to introduce new forms and improve already existing forms of regional level governance within the European Union. The dilemma is, how this improvement will take place. We will argue that there are two possible approaches: one we will call the neofunctionalist approach of which outcome is scenario 5 of the European Commission's proposal; the other one is an intergovernmentalista approach, which might lead to scenario 2.

2. The need of a federal level governance – the neofunctionalist logic of integration

When talking about the European Union global governance means policy decisions made on the integration level. Concerning federal level governance in the EU we might say that there are two main functions of that. The first function of that what we might call operational decision making: using the given rules and competence. We might call that the executive branch. The second function is making new rules,

decision making procedures. We might call that the legislative branch. We think that the cause of crises in the EU is that the existing rules are not good enough. That is why we have to concentrate on the second function of governance.
The second function is basically equivalent to the decision about the deepening of the integration. Therefore we can discuss it using integration theories as these try to interpret the process mentioned above. There are two leading theories of regional integration concerning the European Union. The first one is neofunctionalism developed by Ernest Haas. (Haas, 1958)
The neofunctionalist theory basically suggest that the deepening of the integration is fostered by (1) intraintegrational institutions such as the European Commission or the European Parliament and (2) by business and other interest groups within the Union.
"He [Haas] also stressed the unintended consequences of previous integration efforts, which he called "spill over"; as groups realized that integration could serve their self-interest, there would automatically be spill over from one area of integration to another. In time, the process of spill over would lead to political cooperation and a transnational political community favouring more extensive and centralized regional or international governing mechanisms." (Gipin, 2001: 351) This means, that a decision about economic integration about common monetary policy will lead to other policy coordination, due to the fact, that a common monetary policy can be maintained only, if there is i.e. a coordination of fiscal policies. In case of the Eurozone neofunctionalism means that the whole process of monetary integration can be seen as a self-reinforcing mechanism (Dyson, 2002a: 9 – 10).
The idea of neofunctionalism suggests that traditional methods of international and transnational policy making, negotiations change. More and more functions of the nation state are put on the level of integration. In this interpretation neofunctionalism means that the short run political interests of states won't influence the decision making of the integration and the "legislative" functions. The integration is not a bargaining process among equal nation states but an automatic or semi-automatic process.
In case of the Eurozone crisis one can clearly see the neofunctionalist logic within the suggestions of economists to deal with the crisis. These suggestions that emerged before and during the early days of the crisis all would decrease the sovereignty of member states and enhance the federal level governance. These solutions would include the strengthening of supervision over member states' fiscal policies even by creating a federal level independent fiscal body (see Wyplosz, 2002 and 2005), creating a rule based bail-out mechanism by establishing a European IMF like institution (Mayer, 2009 and Gros and Mayer, 2010) (at the very end the now existing European Stability Mechanism is something similar), the introduction of common Eurobonds (De Grauwe and Moesen, 2009), and the joint supervision of the common financial market through the creation of a banking union. Some of these suggestions have been introduced since, some of them do exist only partially, some of them were denied by some of the member states. In case of those that do exists, however, it took a long time to implement them, i.e. the European Stability Mechanism was established in 2012, three years after the first suggestions of a European Monetary Fund.
The same neofunctionalist logic can be applied to the case of migration and Schengen, too. Niemann (2006) identifies four key aspects that lead to enhanced integration in case of migration related policies:

- Functional-endogenous pressures: in this case a policy decision can be successful only, if some additional policy decisions are made in the same time, too. This is the classical neofunctionalist “spill over” argument.
- Exogenous pressures: in this case some external shock leads to the necessity of making other policy decision in the direction of deeper integration. This loosely fits the initial neofunctionalist spill over logic, and also fits quite well to both the Eurozone and migration crisis.
- Socialisation, deliberation and learning processes among (mainly governmental) elites: this is very similar to Dyson’s argument regarding the EMU, and relates to the concept of Europeanisation (see Dyson, 2002a!).
- The role of supranational institutions: European institutions, such as the European Parliament or the European Court of Justice.

In his paper, Niemann (2006) also shows, how did the regulation change before the migration crisis regarding the treatment of refugees. He shows that before the crisis from the above aspects, first, classical neofunctionalism had the strongest influence. The current crisis points out the importance of the first two aspects: an external shock might trigger spill overs, reforms are needed to get the integration functioning again. The main cause of the migration crisis is that while within the Schengen Area there are almost no internal border controls, the control of the external border of the integration, the registration of refugees and asylum seekers remains in the hand of national governments. The latter is regulated by the Dublin III agreement (Regulation (EU) No 604/2013 of the European Parliament and of the Council). The core idea of this regulation is that the registration and accommodation of asylum seekers is the task of that member state, through of which border the asylum seeker had arrived to the Schengen Area. That means, that the burden of dealing with immigrants’ lies on those mostly smaller and poorer member states that constitute the external Schengen border. In the same time, this also means, that the evaluation of asylum application is still in the hand of national governments, that maintain the right to have their own national legislation about evaluating those applications, hence there are no federal level regulations that define those variables based on what an asylee will be granted a refugee status.

These problems were not foreseen and took the EU and member states by surprise. There have been many suggestions made to deal with the problem, rather less successfully. (Carrera et al, 2015):

- The temporary relocation system – the quota approach: the core idea of this policy change is the relocation of refugees from countries on the border of the Schengen Area into all member countries of the integration based on their economic situation (more developed countries would take in more people).
- The hotspots approach: according to this suggestion the community itself needs to participate more in the registration and evaluation of asylum seekers, by setting up centrally funded and manned registration hot spots in troubled countries dealing with masses of immigrants.
- Safe third countries: currently all member of the Schengen Agreements can have its own legislation, which countries they consider to be a safe third country. This is an important regulation, because migrants arriving from safe third countries can be denied from receiving refugee status. The idea of the suggestion is to create a common list of safe third countries and this would be a huge step in the unification of asylum policies within the Union.

- Irregular migration, trafficking and smuggling: common action against illegal activities connected to migration.
- Funding: extra funds for frontier countries helping registering and accommodating refugees.
- The Commission's proposal for a European border and coast guard: another major step towards the creation of a common immigration policy suggests the creation of a common border and coast guard force. Obviously, this would decrease sovereign rights of individual member countries to control their own borders, hence it is opposed by some members.

What is common in these suggestions that they reflect to spill over pressures started because of the external shock of the Arab Spring. What is clearly visible from ongoing negotiations, that during the talks countries, though realizing the pressure, they rather put that aside and they focus on their national interest, hindering the effectiveness of common policies. And, however the logic that member countries follow is not new or surprising, decision makers will need to understand that unifying migration related policies will be a must if they want to maintain the logic of the Schengen Agreement.

3. The logic of intergovernmentalism

Intergovernmentalism pointed out the weaknesses of earlier theories: the neglect of national interest. After this a new theory of the European integration emerged: the theory of intergovernmental institutionalism. This theory, which later was simply called intergovernmentalism in many major textbooks (like Gilpin, 2001) was developed by Andrew Moravcsik in the 1990s. According to Moravcsik (1991: 25 – 26) the three key elements of his theory are:

- Intergovernmentalism: according to Moravcsik the most important actors are the nation states.
- Lowest common denominator bargaining and paying off of smaller states.
- Protection of sovereignty: Joining the integration means that a nation state has to sacrifice a part of its sovereignty in exchange of grants from cooperation, this case the integration. Thus nation states are interested in maintaining their sovereignty therefore "policymakers safeguard their countries against the future erosion of sovereignty by demanding the unanimous consent of regime members to sovereignty- related reforms. (ibid: 26)

The intergovernmentalista theory considers regional integrations (including the European Union) as a regime. The theory of international regimes has a huge literature (see Krasner, 1983; Keohane, 1984; or for a later more comprehensive one Hasenclever – Mayer – Rittberger, 1997). International regimes are "sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations" (Krasner 1982: 186). According to the definition regimes change if the principles or norms of the regime change.

Changes and cooperation in international regimes are explained by several theories; though according to this neoliberal institutionalist approach these are the states that change their behaviour because of their national interest. In the intergovernmentalista approach however states are no longer black boxes: "they are entities entrusted to governments, which themselves are responsible to domestic

constituencies. State interests change over time, often in ways which are decisive for the integration process but which cannot be traced to shifts in the relative power of state." (Moravcsik, 1991: 27) National interest can be traced back to internal politics. That, however, doesn't change the fact, that according to this intergovernmentalista approach European governance can be described as a bargaining process, where domestic politics of the member states play a very important role.

According to the intergovernmentalista approach European governance works as a bargaining process among member states and their governments, where the main explanatory variable is each nation's interest. These interests are the results of intra state debates, the interests of pressure groups and the vote-maximizing behavior of politicians (Moravcsik, 1991). In this sense the European integration is nothing else but the same two-level-game Putnam (1988) describes. Another important point is sovereignty-consciousness (Niemann, 2006). This encapsulates actors' lacking disposition to delegate sovereignty to the supranational level, or more specifically to yield competences to EU institutions Sovereignty-consciousness tends to rise with waning trust in the objects of delegation, i.e. EU institutions, which, as we saw was happening after the 2008 crisis. This is nothing else as the opposition of what we called Europeanisation earlier in this paper. Base on this the future of the Euro and the Schengen Agreement is in the hands of utility maximizing politicians.

Regarding the reforms of the Economic and Monetary Union, the main battlefield of neofunctionalism and intergovernmentalism lies around the questions about fiscal federalism or the construction of a fiscal union. As Benczes (2014) shows the spill over logic forces the EMU towards the creation of such a fiscal federalism, however, in reality the road leading there is quite bumpy. And the obstacles are mostly the results of the individual advocacy skills of national governments.

The same is visible in case of the migration crisis. Since the outbreak of Arab Spring in 2011, member states have been dealing with migration pressure as a security problem, leading to individualized and non-cooperative answers. Dekalchuk (2015) shows in details the changing behavior of governments when refugees arrived to their border.

During recent negotiations member states' interests played a major role, and the changing attitude of governments often mirrored the changing attitude of popular opinion to maximize popularity. Just as the death of the young refugee boy Alan Kurdi, and the pictures of his body in newspapers shaped public opinion all over Europe in favour of asylum seekers, the criminal offenses committed by immigrant on New Year's Eve in Köln, or the terrorist attacks in Paris turned public opinion more against immigration.

4. A multi-tier Europe?

The idea of multi-tier Europe means that different countries of the European Integration engage themselves in different level of integration. The case of Economic and Monetary Union, and also the Schengen Agreement might be seen as one of this issue. However, with the two exceptions of Great Britain and Denmark in case of the EMU and Great Britain and Ireland in case of Schengen all other countries promised and are required to join the agreements as soon as possible after their EU accession. If this pledge could be enforced than we hardly could talk about multi-tier Europe in this case.

But after the outbreak of the two crises the picture is different. They put the problems of European level governance into the spotlight and the leaders of the integration have to choose now among the three possible scenarios of Rodrik. Though, as we said earlier, we should exclude the market based solution from the investigation. The other two scenarios depend on the decisions made by the national governments.
The two remaining options are: decreasing the level of integration or enhance European level governance. First let's consider the first option. In case of the EMU that would mean for a single country to leave the Eurozone. In case of the entire integration that means breaking up the Eurozone. Leaving the Eurozone can be costly for both the one that leaves and for those who stay. Leaving the Eurozone would result in high rate of inflation, bankruptcies in the financial sectors. This would certainly hurt the country's economy and society. But a potential exit would also mean the acceptance of default on the public debt which could cost a lot to the lenders as well. On the other hand if a country tries to continue paying back its debt that would cost also a lot because of the fiscal restrictions. Therefore we might argue that quitting the Eurozone is at least as costly for the rest of the member states as for the country in trouble. And as today we do not have any mechanism that handles quitting it is quite unlikely that it would happen. In case of the Schengen Agreement, reducing the level of integration would mean the reintroduction of border controls on internal borders. This would also have significant costs (according to studies the consolidated GDP of the area would drop by app. 0.8% (see European Parliament, 2016). This does not seem as catastrophic as the breakup of the Eurozone, but beside the economic effect it would also have a symbolic role, since the passport free zone is one of the most important symbol of the European Integration.
Governance in the EU is still based on the intergovernmentalista approach, and the EU still works as an international regime. There are several conceptions within regime theories that try to explain how norms and rules evolve and change in these institutions. The more liberal conception is that nation states recognize that if they cooperate and adhere to rules they agreed on, they all share benefits from it. Realists are more pessimistic about cooperation and rule making and say that this is only possible, if there is a hegemonic state that "supervises" other states behavior and lays down the rules of cooperation. Intergovernmentalists are in between that two views. Small states are usually bought off with side payments while larger states can veto significant changes. Therefore bargaining moves toward the lowest common denominator of large state's interest.
If we take a look at recent happenings in the European Union concerning the problems in the Eurozone, what we can see is that the proposed solutions including institutional changes and bail-out packages were subject of bargaining processes. These discussions were mostly prevailed by Germany and France the two largest country of the Eurozone. We do not want to present all the suggested solutions. What is important however to see that all of these suggestions would decrease member states sovereignty. What makes it even more painful is, that member states' fiscal policy will be circumscribed. But as fiscal policy is dominated by politics and political goals, therefore it is very painful for a politician to give up the control on it. The same is true for migration. Controlling borders and who passes them is a key part of domestic sovereignty that is hard to be given up.
This means, that there is a trade-off between deep integration and sovereignty, which can be modelled through a cost benefit analysis. But, when we are talking about costs, we must to include the political costs of deep integration, too. Based on

that it is a fair assumption to say, that there will be countries finding it too costly to engage in deeper integration, while for others the potential benefit might be higher. Based on that, it is a valid argument that those countries finding it more costly to integrate will be left out from further integration, while others will engage in such activities. And this is the scenario, the European Commission refers to as "Those Who Want More Do More" or the multi-tier Europe concept.

5. Conclusion

In our essay we merged two theoretical approaches of economic integration: Rodrik's trilemma of global politics and the integration theories of neofunctionalism and intergovernmentalism. Based on that we showed two possible outcomes for the European integration. One, where spill over pressures are automatically translated into policy decisions, and a flawless deepening of the integration happens. The possible outcome of this scenario is a deep integration, a federal-state like European Union. Regarding of the investigated areas that would mean a Eurozone with enhanced stability mechanisms regarding external and internal balances, the realization of fiscal federalism and redistribution. Regarding migration, the spill overs show in direction of the creation of a federal level immigration policy, regarding the controlling of external borders.

In case of the other approach, intergovernmentalism, the question is not about, whether these spill over pressures do exist? The question whether there will be any change due to the emergence of these pressures? What intergovernmentalism states is that the spill over pressure won't be translated automatically into a policy decision. Recent changes in the European decision making process gave a larger role to supranational transgovernmental bodies, large the European Parliament or the European Commission. The introduction of qualified majority voting makes it possible to vote down individual countries, while the introduction of enhanced cooperation makes it easier for a designated group of countries to introduce policies affecting only them.

The reason it is important to stress these changes, because if we accept the intergovernmentalista reasoning, it might happen that the actual policy outcome will be different from what the neofunctionalist logic would predict. At the very end, such an outcome might result and be interpreted as constrain on integration, and might also turn around integration. To stick with one of our examples, nowadays there are many countries (Denmark, Sweden, Germany, France, Austria) using temporary or permanent border controls: currently these are in line with the Schengen Agreement, however, it is very likely, that in the future this will change.

However, when we think about this intergovernmentalista scenario, it can interpreted not only as a dissolution of the integration, but also as a partial continuation of the integration process. In this case we are talking about a multi-tier integration. In case of our examples that might mean the stabilization of the Eurozone and the Schengen Agreement by implementing those policies that are required to be carried out. In the same time, there might be member states, who would not accept these new rules, and most likely they will need to leave that particular cooperation; and there will be potential candidate countries, which would be not interested anymore to join the existing enhanced cooperation.

That doesn't necessary will mean the collapse or break up of the European Union. The Union itself will be what in the Commission's White Book is called scenario 2,

nothing, but a single market. And within that single market, different types of enhanced cooperation will come into existence, in which case the major explanatory variables of state behavior will be that of the intergovernmentalista approach. Whether this is in line with original idea of European integration is for everybody on her own to decide.

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SECTION: *MANAGEMENT, MARKETING, ECONOMIC INFORMATICS AND CYBERNETICS*

LITERATURE REVIEW ON THE RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND PERFORMANCE IN QATAR'S PUBLIC SECTOR ORGANIZATIONS

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Abstract: *The relationship that exists amidst organizational culture and performance has never been a straightforward task to decipher. This is illustrated in this approach to the research problem. The research problem stems from the fact that organizational culture in a company is very significant to the success of any organization. The basic assumption is that an appropriate and strong organizational culture with motivated employees who accept the goals of enterprise affects the success. In light of the fact that the Qatari public sector attempts to perform better, the literature review has only helped to expound why its performance needs to be studied with respect to organizational culture. Therefore, the purpose of this article is to examine the relationship that exists between organizational culture and performance by reviewing the available literature. The review of the literature probably concludes that organizational culture is regarded as being part of the most prevalent notions in management and organization theory. Organizational culture is not only a vital feature in any organization. It is usually the main reason for remarkable performance in an organization. One imperative issues in the organizational science is the reason behind the success of some organizations and the failure of others. Culture of the organization influences everything that an organization does. A number of studies have discussed the critical importance of the organizational culture on organizational performance. A thorough secondary (literature) review of multifaceted selected worldwide sources/authors., such as books, journal articles, internet sources, etc. was conducted. The literature review leads to the conclusion that organizational culture and performance have mutually reciprocating relationship. Strong organizational culture usually leads to high performance and overall profitability. The study's findings will warrant incorporation of integrated organization's cultural models in improving efficiency in the Qatari public sector.*

Keywords: *organizational culture; profit; cultural change; corporate culture; behavior; Qatari public institutions.*

JEL classification: *M21; O15; M14; L33.*

1. Justification

The significance of this study rests on the fact that the Qatari public sector strives to perform with high effective standards. This study aims to comprehend how present day public organizations approach the countless facets of organizational culture and determine the relationship between organizational performance and culture of the company. The research problem derives from the premises that the organizational culture in a corporation is very important for successful organizational performance. The basic assumption is that an appropriate and strong organizational culture with motivated employees who accept the goals of enterprise affects the success. For an organization, performance evaluation of its employees plays an important role in promoting the efficiency of employees' recruitment and induction. The data derived from the process of evaluation of performance can be used to inform the policies of development of organizations in helping them realize success. In the same way, the data on performance can be utilized in determining the most efficient strategies of employment (Pichler, 2012). The study's findings will warrant incorporation of integrated organization's cultural models in improving efficiency in the Qatari public sector.

2. Literature Review

The literature review helps to frame critical questions that need to be answered to account for improving the performance in the Qatari public sector. The theoretical aspect includes literature reviews through an internet search for e-books, official journals and publications of academic institutions. The most essential focus in this section is dealing with the theoretical features of organizational culture and the relationship amid organizational culture and organizational performance. According to Ilieş and Gavrea (2008: 322), the phrase 'organizational culture' was first used in an academic journal " Administrative Science Quarterly " by Pettigrew, in 1979.Organizational culture was used to explain the economic successes of Japanese firms over American firms by motivating workers who were committed to a common set of core values, beliefs and assumptions (Denison, 1984). A very significant reason that led to the interest in organizational culture is the postulation that some organizational cultures improved the financial performance of the organization.

Jones, George and Hill (1998: 285) explain that organizational culture as the set of values, norms, standards of behavior, and common expectations controls the ways in which individuals and groups in an organization interact with each other and work to achieve organizational goals. Supplementary theoretical development of the organizational culture concept includes research in the area of organizational theory. These researches have concentrated on comprehending and describing the culture of the organization of concepts by making use of typologies or arrangements, as explained below:

Deal and Kennedy (1982) recognized four basic types of culture to define organizational culture. They are the macho-man culture, bet your company culture, work-hard/play-hard culture and the process culture. Handy (1985) defined organizational culture by utilizing four categories of classification, which include power, role, task and cultures of people. Schein (1985) made use of three strata to describe organizational culture. They include values, relics and fundamental assumptions. Scholtz (1987) acknowledged five types of primary culture, i.e. anticipating, stable, exploring, reactive and creative. Hampden-Turner (1990) described organizational culture by making use of four culture types viz. role, authority, atomistic culture and task. O'Reilly, Chatman and Caldwell (1991) offered seven fundamental characteristics to explain organizational culture. They are attention to detail, innovation and risk taking, orientation to results, orientation of people, stability and aggressiveness.

In the literature, the typology of culture is often used as originally researched by Harrison, whose work was perfected and modified by Handy in 1979. It proved to be the most effective and best way for quickly and easily understanding of organizational culture in our region. According to this classification there are four basic types of culture: power culture, role culture, task culture and person culture. Handy assigns each of them a suitable symbol which with his personal qualities best reflects the characteristics of each type of culture. Power-oriented philosophy is a prominent feature of organizational culture model. In an organization, it is necessary to use the power to gain control and influence workers behaviour. Harrison and Stokes (1992: 14) describe this power-oriented philosophy as "an organizational culture caused by an unequal access to resources."

There is no lack of alternative ways that individuals might invest, including entirely different forms of organizations. Even if it is limited to corporate organizations, there are clearly alternative ways capital might be raised, i.e., through fixed claims of various sorts, bonds, notes, mortgages, etc. Moreover, the corporate income tax seems to favour the use of fixed claims since interest is treated as a tax deductible expense. Marris (1964)

Subsequently, Harrison and Stokes (1992: 15) explain role-oriented culture as "the substitution of a system of steps and procedures for the complete authority of the leader." This form of culture emphasizes more on job specialization and description. Consequently, the work is controlled by the steps and procedures specified in the job description. This is

far more significant than the person filling the position (Harrison, 1993). Harrison and Stokes (1992: 17) also described an achievement-bases culture as "aligned culture that unites people behind a shared vision or goal". Aligned culture is often called task culture, which means that members of the organization focus on achieving the goal and objectives of the organization. Brown (1998: 67) explains that "the culture of task is one in which power is diffused, based on experience rather than on charisma or post". Achievement-oriented culture is different from support-oriented culture based on the fact that the former focuses on teams, as it encourages individuals as a focal point of the organization. Harrison and Stokes (1992: 20) outline support-oriented culture as an "organizational environment grounded on common trust amongst the individual and the organization". Therefore, support-based organizational culture is often called people-oriented culture.

Brown (1998: 69) explains that a support-based organization "exists only for people that compromise it and can be represented schematically as a group that no person single-handedly oversees". A number of studies have discussed the critical importance of the organizational culture on organizational performance. For example, Brown (1998: 226) is of the opinion that a strong organizational culture can allow an organization to achieve high performance due to the reasons mentioned below:

• Strong organizational culture eases alignment of objectives.
• Strong organizational culture increases employee enthusiasm level.
• Strong organizational culture is enabled to learn from its previous experience.

With regard to the above advantages of a robust organizational culture, Martins and Martins (2003: 382) argue that "a specific result of a strong culture must be less turnover of employee". This is explained by the fact that when the employees agree about the objectives of an organization, there is organizational commitment, cohesion and loyalty (Martins and Martins, 2003).

Weak culture ,is consequently the opposite of a strong culture. Weak culture also translates to a lack of common beliefs, norms and values amongst employees in the organization (O'Reilly et al 1991). Members of the organization in a weak culture have difficulty identifying the objectives and goals of the organization (Wilson, 1992). Due to this, the different components or services of an organization encounter such different beliefs that do not necessarily meet the organization's core objectives.

Organizational culture is not just an important factor of an organization. It is the central driver of superior organizational performance. One of the important questions in organizational sciences is why some organizations succeeded while others failed. Culture of the organization influences everything that an organization does.

Some of these reformulation attempts have rejected the fundamental principle of maximizing behaviour as well as rejecting the more specific profit-maximizing model. We retain the notion of maximizing behaviour on the part of all individuals in the analysis Meckling, WH (1976). Performance of any organization is the most imperative issue in any company. These researchers have conflicting opinions on the performance that remains a controversial issue among the researchers of organization. The central question is the relevance of different approaches to the use of the concept and the measurement of organizational performance. Performance is a controversial issue within researchers of organization. For instance, Javier, referenced in Abu Jarad et al. (2010: 28-29), performance is corresponding to the famous 3E (efficiency, economy and effectiveness) of a program or activity. In the words of Daft (2000), the organization's performance is the organization's capability to accomplish its objectives by effective and efficient management of resources. Much like Daft (2000), the existence of competition in product and factor markets will not eliminate the agency costs due to managerial control problems as has often been asserted (Friedman,1970) Ricardo and Wade (2001) definition of organizational performance is the organization's ability to accomplish its aims and objectives. The word 'performance' has sometimes been confused with productivity. According to Ricardo and Wade, cited in Abu Jarad et al. (2010: 28-29), performance is different from productivity. Productivity is a ratio of the amount of work

performed in a given time. Performance is a larger gauge that includes productivity, consistency, and quality amongst others. Performance should be wide-ranging, including effectiveness, economy, efficiency, consistency, quality and performance of policy. Organizational performance includes the output or results of an organization, in relation to the expected (objective) results. In light of the fact that the Qatari public sector attempts to perform better, the literature review has only helped to expound why its performance needs to be studied with respect to organizational culture.

3. Conclusion

A review of the literature probably concluded that organizational culture is one of the most popular concepts in the areas of management and organizational theory. One of the main explanations for popularity and interest in organizational culture stems from the argument or hypothesis that some organizational cultures improved organizational performance. Many researchers claim that an organization's performance depends on how widely the values of culture are shared.

The literature on organizational culture and performance revealed that organizations which know how to develop their cultures in an effective way most probably have the benefit of advancement in productivity and the quality of work life among the employees. Indeed, employees must absorb the organizational culture at the maximum strength and the top management should provide a precise guideline and direction to motivate the employees in achieving the objectives of enterprise.

In general, the literature on the culture of the organization is broad and diverse. Much of the wealth is based on the assumption of many researchers that organizational culture is linked to the performance of the organization. Although some researchers have questioned the universality of the link between culture and performance, there is insufficient evidence to prove that organizational culture is related with organizational performance. This research work tries to show the relationship between the organizational culture and the functioning of the institutions in the Qatari public sector.

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A CASE STUDY OF AN ALTERNATE SOURCE OF PROTEIN: WHAT DO THE CONSUMERS THINK ABOUT ENTOMOPHAGY?

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Abstract: *Consuming insects can be the solution for providing food security all around the globe in the future. It is a widely accepted fact, that the Earth's population will exceed 9.5 billion in 2050. To be able to feed that many people, the current volume of food production needs to be doubled, therefore we need to (re)discover new basic food sources. Insects are consumed on nearly all continents excluding Europe. The aim of the research is, to sum up, the challenges and opportunities of entomophagy in Europe and to evaluate the consumer's willingness to try out these insect-based food products. An online survey was edited, which was filled out by 158 respondents. The socio-demographic aspects were gender, place of living, age, qualification and hours of exercise per week. The database was evaluated with descriptive statistical methods and non-parametric procedures. The results show that the biggest obstacle ahead of the insect-based products to be widely consumed is the European consumer itself. The „yuck-factor" means that there are some deeply rooted cultural differences between the European and other cultures. Nearly all of the respondents heard about insects as a food ingredient. 45% of them would taste an insect based dish. Males have significantly higher willingness to try out these insect-based products, however, no other socio-demographic group played role in determining the faction. In conclusion, until the conventional food products price does not raise significantly compare to the average salaries, consuming insects in Europe will not be a common thing. In the meantime, the goal should be to introduce these innovative food sources like insects to the consumers. The positive changes in the EU and Switzerland's regulation can be an empowering factor in the continent. All in all, it is too early to widely introduce an innovation like this into the market, but there are few segments where the consumers are more likely to adopt edible insects into their diet.*

Keywords: *entomophagy; edible insects; food neophobia; alternative protein sources; consumers' attitude.*

JEL classification: *Q13; M31; O52.*

1. Introduction

According to UN Population Division's forecast, Earth will have to feed approximately 9.7 billion people in 2050. Nowadays, nearly 1 billion people starving due to food security reasons. Due to these reasons, we have to think again about food production and its efficiency to waste less during the process. New food production technologies must be made. Insects offer an opportunity to mold our modern technologies and scientific knowledge to give entomophagy a new perspective. Consuming insects can be examined from many sides including physiological, economic, environmental and psychological. To talk about the advantages, insects are a healthy and rich in nutrients alternatives to the conventional food products. According to Rumpold and Schlüter (2013) study who examined 236 species, insects provide satisfactory amounts of energy, protein, micronutrients, amino acid requirements for human needs. Livestock rearing is responsible for 18% share of GHG emissions in CO_2 equivalent, which is a higher share than the transport sector produces. Nitrous oxide and methane are mainly responsible for the emissions in livestock rear. Beef

cattle rearing produces around 2800 gram GHG per kg mass gain, however, mealworms or locusts GHG production per kg mass gain is nearly zero (Oonincx et al., 2010). These results should be considered with caution because the tests were performed in laboratory. Rumpold and Schlüter (2013) discovered, that there are many factors, which determines the insect's protein amount. Species, feed, stage of the metamorphosis, place of living and the measurement system of the research have its role to determine the calculated amount of protein in insects. One of the biggest obstacle ahead of entomophagy is the consumer's misbeliefs. They have a negative attitude towards insects, which stages a big challenge for developers.

To help the development of the industry, the European Parliament agreed on a new regulation (Regulation EU 2015/2283) on novel foods in November 2015. It states, that insect-based foods were not widely consumed in the EU before May 1997 (Regulation (EC) No. 259/97), so that is why insect-based products require a pre-market authorisation. Producers are obliged to submit an application for authorization to the European Commission by 2nd of January 2020 (Laaninen, 2016). A similar law will be applied from 1st of May 2017 in Switzerland. Coop supermarket chain and the start-up firm Essento have already agreed on to develop insect-based products to the market.

In the past few years, studies about entomophagy are based on the consumer's attitude. Verbeke's (2015) study showed the Belgian consumers readiness to adapt insects into their diet. He measured among other things their neophobia, importance of tastiness and the opinion about the food production's impact on the environment. The results showed, that the Belgian consumers are not ready to adapt insects into their diet, however, he identified a group of young men, who are willing to try these innovative food products and have a low neophobia value. Gere et al. (2017) examined the Hungarian consumers with a similar survey to Verbeke's. They found that males are more ready to eat insects and the food neophobia is a barrier for consumption of insects, however, low food technology neophobia values were seen which gives opportunities for the food industry. Verneau et al. (2016) states that the acceptance of entomophagy depends on the country's gastro-culture. The Danish consumer's willingness of try out were significantly higher than the Italian consumer's. The reason behind this could be the stronger Italian gastro-culture, which tolerates less the unusual food products. Piha et al., (2016) ended with the same result: the Northern Europeans are more willing to accept insects as an alternative protein source than the Central Europeans. Le Goff and Delarue's (2017) study contains the result of flavoured chips try out which was labeled as insect flavored. One hundred people took part in the research and their emotions before and during the try-out were recorded. The footages showed the differences in the consumer's attitude. The participants rejected the idea of tasting an insect-based food product, however, after the first bite, most of them showed signs which meant that they are into accept the product.

2. Materials and Methods

In the following paragraphs, we would like to present the collected materials and used statistical methods of the case study.

2.1. Methods of sampling and interviewing

The research includes a primer and secondary data source. For the first, an online survey was edited to measure the knowledge of the participants about entomophagy. Altogether 158 replies were received between 29. July – 19. August 2016. The number and quality of the respondents do not make the research representative to any group, however, at the time there was not done any representative research about the topic in Hungary. Therefore the results are only informative. The items of the survey are about the idea of consuming an insect and their knowledge about entomophagy around the world. The main question of the study is, that the respondents are opened enough to take the insects into their diet.

Five grouping variables were made which are the following: gender, age, qualification, place of living and hours of exercise per week. The results are visualized in Table 1.

Table 1: The sample's demographic factors

Demographic factors	Total Sample (n=158) (%)
Gender	
Female	69.60
Male	30.40
Age	
16-22	15.80
23-30	29.70
31-50	38.00
above 51	16.50
Qualification	
Elementary	2.50
Technical college	2.50
High school	32.30
Higher degree	62.70
Place of living	
Village	12.70
City	24.70
County town	50.60
Capital city	12.00
Exercise per week	
between 0-2 hours	43.70
between 3-5 hours	37.30
between 6-8 hours	10.10
above 8 hours	8.90

Source: Own collection of data, 2016

The secondary data sources are based on the FAO's food security conference, which was held in Rome 2012 and previous studies in the topic of entomophagy.

2.2. Applied methods for data evaluations

The data from the survey was analyzed with IBM SPSS Statistics 23.0. statistical software. The items were measured with Likert- and nominal scales. The latter was analyzed with Pearson's Chi-square test and Phi and Cramer's V. To evaluate the Likert-scale items, we used the one sample Kolmogorov-Smirnov test to determine the sample's distribution. It was not normally distributed ($p<0.001$). Therefore we used nonparametric tests (Mann-Whitney, Kruskal-Wallis) to analyze the differences between the items and the grouping values.

3. Results

The results of the research will be showed in this section. Firstly, the results of the related knowledge questions, then the related questions to edible insect consumption.

3.1. Results of the related knowledge questions

3.1.1. Do you know that insects are consumed around the world at daily basis?

99.4 percents of the respondents (only excluding one) said that they know that the insects are suitable for human consumption. However, only 96 people (60.8%) knew the correct

definition of the listed possibilities of consuming an insect. We compared the two groups each (who knew the definition and who did not) with the grouping variables with Chi-square test which did not result in any significant (p=0.14) differences.

3.1.2. Citizens of 80% of the countries around the world are consuming insects' part of their diet, however, it is not common in the western European countries. Which are three of the following possibilities most likely the reason?

The respondents had to choose three out of the seven possibilities. Due to a system error, two of them chose only two answers. Table 2 shows the reasons for rejection.

Table 2: Reasons for rejection of entomophagy

Choices	Number of choices (count)	Percentages (%)
Cultural differences	137	29.03
We identify the insects with causing damages and health issues	101	21.40
From European's point of view, consuming insects is a primitive way of eating	92	19.49
Displeasing appearance and presentation	77	16.31
Doubts about food safety	45	9.53
Better weather conditions in the tropical zone	13	2,75
Low nutritional value	7	1,48
All	472	100.00

Source: Own collection of data, 2016

According to the respondents, cultural differences is the biggest obstacle ahead of entomophagy to be a conventional food protein in Europe (29.03%). Moreover, they identify the insects as a being the cause of damages (mainly in agriculture) and health issues (21.40%). Thirdly, from their point of view consuming insects is a primitive way of eating (19.49%) which connects to the cultural differences. On the other hand, they know, that the insects have a high nutritional value and only 45 of them (28% of the respondents) has doubts about its safety. The three most chosen answers were put under a Chi-square test to see if there is a difference in any grouping variables from the expected numbers. There was not any significant connection between the measured and the expected values (p=0.512).

3.1.3. Consuming insects has many advantages. Mark two of the most significant from the list below.

Five answers were available for the respondents. High nutritional value (32%), environmentally friendly production (31%) and low retail price (26%) were the most chosen answers. The third place of the low retail price shows that most of them do not have relevant information about the insect-based products retail price. Crosstabs were edited between the top three answers and the grouping values and we found one significant difference between a groupings values (Table 3).

Table 3: The result of Pearson's Chi-square test between the matter of low price and place of living

Name of the items			Place of living				All
			Village	City	County town	Capital city	
Low price	No	N (count)	15	15	35	11	76
		% within place of living	75.0	38.5	43.8	57.9	48,1
	Yes	N (count)	5	24	45	8	82
		% within place of living	25.0	61.5	56.3	42.1	51,9
All		N (count)	20	39	80	19	158
		% within place of living	100,0	100.0	100.0	100.0	100.0

Source: Own collection of data, 2016

According to the test's result (p=0.035), for respondents living in the „City" or „County town" more likely to matter the low price than the people who live in a „Village" or in the „Capital city". However, the strength of the connection is weak due to the 0.233 value of the Phi and Cramer's V.

3.2. Results of the related questions to edible insect consumption

3.2.1. Did you taste any insect-based dish?

Only 8% percent of the respondents tasted an insect-based dish before. 53% percent of them are between ages 31-50. No significant connection was found with Chi-square test with any grouping variable.

3.2.2. Would you try an insect-based dish?

Four possibilities were available: never, only to avoid starving, I may try, I would like to try. 55% percent of the respondents would not try it (never and only to avoid starving answers combined). Differences between the grouping values were evaluated and were found one connection (Table 4).

Table 4: Connection between the willingness of try out and gender

			Gender		All
			Male	Female	
Would you try an insect based dish?	Never	N (Count)	8	32	40
		% within gender	16.7	29.1	25.3
		Residual value	-1.7	1.7	-
	Only to avoid starving	N (Count)	9	40	49
		% within gender	18.8	36.4	31.0
		Residual value	-2.2	2.2	-
	I may try it	N (Count)	21	31	52
		% within gender	43.8	28.2	32.9
		Residual value	1.9	-1.9	-
	I would like to try it	N (Count)	10	7	17
		% within gender	20.8	6.4	10.8
		Residual value	2.7	-2.7	-
All		N (Count)	48	110	158
		% within gender	100,0	100.0	100.0

Source: Own collection of data, 2016

Men are more likely to taste ($p<0.01$) insect-based dish than women, however, the connection is semi-moderate (Phi and Cramer's V is 0.301). The result in Table 5 confirms it even more.

Table 5: The Mann-Whitney test's result of „Would you try an insect based dish?" question connected with gender

Name of the item	Gender	N (Count)	Mean rank
Would you try an insect based dish?	Male	48	97.39
	Female	110	71.70
	All	158	-

Mann-Whitney rank test, $p<0.05$
Source: Own collection of data, 2016

Further investigation was done inside the male group, however, the age, qualification, place of living or the hours of exercise had not affected any differences either.

3.2.3. In your opinion, which group can be persuaded to consume insects?

The respondents had to name one group (children, students/young adults, adults, and elderly, none of the above) which can be persuaded to consume insects in their opinion. The most likely to persuaded group is students/young adults (45%) and the children (31%). Most of the respondents think people in the younger age groups are more willing to try an innovative protein. However, the students/young adults group (age between 16-30) would not like to try (61.2%) an insect-based dish.

4. In conclusion

The goal of the study was to analyze the status of entomophagy in Hungary with quantitative statistical methods. Nearly all of the respondents had heard about the fact, that some of the insects are suitable for human consumption. The biggest reasons for rejection are identical to the previous researches. The respondents think consuming insects are not fit into their cultural beliefs and they identify insects with the cause of harm. Verbeke (2015) and Tan et al., (2016) discusses the same problem, which they identify as the „yuck factor". We may say, it is a general problem, not a country-specific one. Nowadays, the price of the insect-based products is not affordable for many people. For instance, 1kg flour from insects costs around 70-75€ which is nearly 50 times more than the price of 1kg bread flour. The respondents named the low retail price as an advantage when it comes to insect-based products, but at the present, it is a misbelief. 45% percent of the respondents would try out an innovative food product, especially the men, who have significantly higher possibility for this outcome.

In conclusion, we would like to make a few recommendations based on our research and secondary data. Consuming insects may be a solution for food security in the future, however until the conventional food products price do not raise significantly compare to the average salaries, it will not be an alternative. In the meantime, the goal should be to introduce these innovative food sources like insects to the consumers. The positive changes in the EU and Switzerland's regulation can be an empowering factor in Europe. It opens opportunities to companies (start-ups possible) and research centers to develop products which are able to decrease the high product prices and destroy the cultural walls.

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UNIVERSITY STUDENTS' DARK TRIAD TRAITS AND ETHICAL ATTITUDES

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Abstract: *One of the personality models which has recently become very popular is the Dark Triad theory, which draws our attention to the fact that there are some personality traits which can indeed show the negative side of our personality. The theory encompasses three socially undesirable personality traits – Machiavellianism, narcissism and psychopathy. These traits are, to a certain extent, recognisable in everyone, and are significant in a work context, too. The first part of our research aims to measure the manifestation of these traits in the students of the Faculty of Economics at the University of Debrecen. The students we questioned responded to 12 statements on the validated Dirty Dozen questionnaire, which is designed to measure the Dark Triad; following this, the points assigned to the answers were aggregated in order to establish whether the "three dark traits" were present or absent in their personalities. The other set of questions in our study concentrated on discovering the ethical attitudes of the students at the faculty. The work of Ludlum and his associates was the first to offer an analysis which included students' evaluations of situations arising at the workplace and the extent to which they considered them unethical. Using the questionnaire prepared by these authors, we also asked our students to evaluate these situations, and in this way we were able to compare the ethical attitudes of American and Hungarian students. During the analysis we presented the results with average and standard deviation indicators, and calculated Pearson and Spearman correlational coefficients. During our work we also attempted to link the two subjects mentioned above, i.e. with those students who have a negative personality in terms of the three dark traits we were looking to establish what kind of value system they follow as regards workplace ethics. Here, too, we support our findings with correlation coefficients. According to our initial assumptions, those students who scored higher on the Dirty Dozen questionnaire, i.e. those who were strongly characterised by the Dark Triad personality traits, probably have a less ethical value system. On the basis of the responses we received, we only succeeded in establishing a weak link between these two factors. Our attempt, and also our research itself, is novel in several respects: firstly because to our knowledge no attempt has yet been made in Hungary to measure the existence of the Dark Triad of personality traits; secondly, because the presentation of the ethical attitudes of university students is also a relatively little-known and researched area, and thirdly, because thus far in Hungary there has been no work examining the relationship between these research questions.*

Keywords: *Dark Triad; Dirty Dozen; ethical attitudes.*

JEL classification: *M100.*

1. Introduction

The present study aims to explore possible correlations between personality traits of the Dark Triad and ethical values among economics students.

Today, the Dark Triad personality model – which features three socially undesirable human qualities of Machiavellianism, narcissism and psychopathy – is becoming more and more widely known in the Hungarian literature. We all have these same traits to varying degrees, and they play an important role both at work and in our private lives. In this respect our

research question was intended to discover to what extent students are characterized by these traits.
In the second part of our work we examined the ethical values of the same sample of students. Presented with 20 workplace situations, our students stated the extent to which they consider them unethical. In this context, the aim of our research is twofold: first, to assess the ethical attitudes of student respondents; secondly, to compare our results with related results from the US sample.
In our study, we tried to combine the above two areas: so we are looking for an answer to the question of what kind of value system in terms of workplace ethics is followed by those students who are considered to have a more negative personality in terms of the dark traits.
In this paper we first provide a brief literature review of the above two topics, and then introduce the applied methodology and the sample used as the basis of the analysis, before presenting the results of the experiment to the reader.

2. Literature Review

The examination of Machiavellianism, narcissism and psychopathy personality traits has a long history. Paulhus and Williams (2002) referred to them as the Dark Triad because of the social aversion associated with them. Each is accompanied by a certain amount of ill will, which can directly affect behaviour between individuals.
Machiavellianism is named after Niccolo Machiavelli, who in the sixteenth century wrote about how to acquire and exert power (Robbins and Judge, 2016). Strongly Machiavellian individuals are pragmatic, keep an emotional distance and believe that the "end justifies the means." Research shows that they can easily manipulate and convince others, but they themselves are hard to convince, and often emerge from a situation as winners (Jonas et al, 2012). They easily become aggressive and can often produce other forms of undesirable behavior (Paulhus and Jones, 2009).
Narcissistic individuals are characterized by their faith in their own greatness and superiority and crave the admiration of others (Morf and Rhodewalt, 2001); they are more charismatic than others (Galvin et al, 2010), and in some situations they, too, can become aggressive (Bushman et al 2009).
Psychopathy manifests itself in indifference towards others and regulatory mechanisms. They are characterized by a lack of conscience and guilt when their actions cause harm to others. In personal relationships they can make a good impression, are talkative and charismatic, but emotionally shallow, often lead a parasitic lifestyle and even become involved in crime in order to achieve their goals (Hare and Neuman 2009).
We can often find individuals with these personality types as heads of political and economic organizations and in the media, as people who clearly benefit from their membership of the Dark Triad (Jonas et al, 2012).
We have not found statistical or research results detailing what proportion of the population are typically characterised by these personality traits. The only estimates concern psychopaths, who are believed to make up about 1% of the general population (Tweng et al 2008).
Regarding students ethical attitudes, both international and domestic research should be mentioned. Among international studies the work of McCabe is considered outstanding. Since 1960 McCabe and his colleagues have studied many aspects of the attitudes of university students towards cheating. McCabe's working group conducted research in two directions: on the one hand trying to uncover attitudes of university students relating to cheating; on the other hand, seeking to identify the factors that influence them. Trevino and McCabe (1996) showed that in 1993, compared to their counterparts in 1963, the proportion of American college students who copied from their fellow students during exams had increased by 26%, and those who worked in groups despite being asked by their teacher to work alone had increased by 38%, although among the same students the rate of plagiarism

decreased by 4%. Discussing the influencing factors in terms of gender differences, McCabe and Bowers (1996) revealed that over the 30-year period under examination the rate of cheating among women had increased by 7%, while among men it had remained constant (possibly due to the fact that more women participate in higher education today, but also to the fact that women's competition with men forces them to cheat, rather than that they themselves are so unethical). McCabe and Trevino (1993) also further showed that if peers accept cheating, or if one student witnesses another cheating, this increases the incidence of cheating, and it was also found that the power of peer behavior is twice as effective as the threat of severe penalties.

In the context of university codes of ethical conduct, McCabe et al (2001) found that at those campuses where there a formal code of ethics the students develop positive attitudes during the monitoring, reporting and management of cheating, and thus cheat less in these higher education institutions. According to researchers, it is very important to emphasize that the mere existence of a code in itself is not enough; the students and educators need to embrace it as their own, all the more so because it has been shown to produce an effect which is twice as strong as the threat of severe punishment.

Another direction of international research has been to examine which workplace situations university students consider unethical and the extent to which they do so. In this area, we build on the work of Ludlum et al (2009), who first tried to identify among Russian university students what they think of corruption and its causes. Ludlum's research was also conducted on five US campuses in the autumn of 2009, and repeated in 2015, although this time on only three campuses. In these empirical surveys students had to judge twenty workplace situations on a five-point Likert scale according to how ethical they considered them. The students assessed four of them as being particularly unethical: accusing an innocent colleague of what they themselves were being accused of; making public secret information; getting credit for others' work, and faking reports; for all these, the average value was greater than four (Ludlum et al., 2013 Ludlum et al., 2015).

International researchers also sought answers to another question, which is whether students' ethical values are likely to affect their future workplace behavior. Sims gave an affirmative answer to this in a 1993 study. However, reference should be made to the test results in that the ethical studies of the students did not influence their actions and their moral and immoral choices (Curren and Harich, 1996, Waples et al., 2009).

We have, however, so far only found two authors in the Hungarian literature who have worked on an analysis of students' cheating habits.

One is Márta Fülöp (2008), who analyses ethical behavior in relation to competitive behavior. In one study she concludes that Hungarian students cheat more than their foreign counterparts, but points out two interesting facts; firstly, that in Hungarian schools we are only confronted with the phenomenon of cheating if it is noticed by the teacher, and secondly, if a student indicates to a teacher that cheating is going on, the common reaction from the teacher is typically a "mind your own business" type response (Fülöp, 2008).

Another Hungarian author on this topic is Gábor Orosz, who, in a study published in 2011, reports that the majority of students consider copying to be admissible, and regularly copy during tests, and allow others to copy from them, even though two thirds of them are aware that such cases constitute cheating (Orosz, 2011).

We will refer back to one of our smaller-scale analyses. In this (building our questions on Ludlum's research) we tested how students at the Faculty of Economics at the University of Debrecen viewed specific workplace behaviors in terms of their ethical nature. According to the students of the Faculty, there were 9 statements which could be categorised as particularly unethical behaviour (with an average value above 4). These included: the disclosure of secret information, accusing others of what we ourselves have been accused of, stealing the company's assets, reaping the rewards of others' work, falsification of reports, sleeping during work, allowing business rules to be violated, increasing bills by more than 10% and sleeping in church (Barizsné and Kiss, 2016).

Many studies can be found in the international literature that analyze the relationship between the Dark Triad and ethical behavior. Here we present two specific examples. Gephart Kish et al (2010), in their meta-analysis of the origins of unethical decisions at work, have shown a positive relationship between Machiavellianism and unethical behavior, among others. O'Boyle Jr et al (2012) also examined the relationship between the Dark Triad and work practices, in the form of a meta-analysis. More specifically, they tried to show the relationship between Machiavellianism, narcissism and psychopathy, and job performance and undesirable workplace behavior in 245 independent samples published between 1951 and 2011. They found that the deterioration in job performance is clearly related to Machiavellianism and the intensification of psychopathy. Undesirable behavior at work is linked with the intensification of all three components of the Dark Triad.

3. Research Methodology

Our research was carried out among students at the Faculty of Economics, University of Debrecen. In February 2017, in the context of classroom teaching, we asked the students present to complete the questionnaire. 211 questionnaires were collected (inadequately completed questionnaires were excluded from the analysis). The distribution of respondents by gender was 60 men and 150 women (one respondent did not indicate gender). Respondents were between the ages of 19 and 45, most of them 20-21 years old, with a mean age of 21.57 years (SD 3.19, mode 20, median 21 years old, 5 missing data).
The questionnaire is divided into several parts. In this work we analyze the Dirty Dozen 12-question personality test (Jonas and Webster, 2010), and the results of the ethical attitude test developed by Ludlum et al (2013).
Respondents had to mark the Dirty Dozen questionnaire on a seven-point Likert scale, according to how much the statements listed were characteristic of them. Of the 12 questions, 4 each measure narcissism, Machiavellianism and psychopathy. Each personality trait can be given a score between 4 and 28 points, and so the combined total points available ranges from 12 to 84. The researchers considered a score of 45 points and above to be characteristic of the Dark Three.
The questionnaire regarding ethical attitudes of respondents in work situations evaluates the ethical nature of the workplace situations developed by Ludlum and his colleagues on a five point Likert scale. (Method of evaluation: 1 = very ethical; 2 = ethical, 3 = neutral; 4 = unethical; 5 = Very unethical).

We formulated three research questions:

1. *How characteristic are Dark Triad traits in the student sample from the Faculty of Economics at the University of Debrecen?*
2. *Which forms of behaviour do students consider most, and least, ethical?*
3. *Is there a relationship between the Dark Triad and the judgement of the ethical nature of situations at the workplace?*

During the analysis, taking into account the value of the answers given on the Likert scales we calculated means and standard deviations, and examining the Pearson or Spearman correlation indicators for the entire sample we illustrate the relationship between the individual questions. The correlation coefficient values can be interpreted on the basis of Evans (1996), as follows:

- - 0.19 : very weak
- 0.20 - 0.39 : weak
- 0.40 - 0.59 : medium
- 0.60 - 0.79 : strong
- 0.80 - 1.0 : very strong relationship between the examined factors.

4. Results and Discussion

Table 1 shows the mean and standard deviation of the individual replies to the Dirty Dozen, the average of the three personality traits, the standard deviation, and the average and standard deviation for all the questionnaire answers.

Table 1: The means and standard deviation of the Dirty Dozen Dark Triad items

Statements	Average for the whole sample	Standard deviation
Machiavellianism	11.388	5.2273
I am willing to manipulate others, in order to get ahead.	2.99	1.703
I have used trickery or lies in order to get ahead.	3.03	1.751
I have used flattery in order to get ahead.	3.14	1.816
I am willing to use others in order to reach my goals.	2.23	1.536
Psychopathy	9.292	4.1308
It is not typical of me to feel problems with my conscience.	2.26	1.65
I don't usually pay attention to the moral aspects of what I do.	1.98	1.257
I am usually ruthless or without feeling.	1.82	1.335
I am usually cynical.	3.23	1.844
Narcissism	14.029	5.0268
I want other people to think I'm wonderful.	3.5	1.837
It is typical of me that I seek power and recognition.	3.64	1.762
I usually expect others to do special favours for me.	2.25	1.493
I want other people to pay attention to me.	4.64	1.535
Overall average	34.708	11.985

Source: Authors' own research

It can be seen that the statements related to narcissism scored the highest point average, reaching or passing the average of 3.5 which indicates membership of the Dark Triad in three out of the four questions. Of the three personality traits the second is Machiavellianism and the two statements which produce the lowest averages are related to psychopathy.

Analysing the students' answers individually, 50 of them (23.9%) are highly Machiavellian (i.e. the four related statements produce a total of 15 or more), divided into 25 male and 25 female respondents. A strong narcissistic personality was a feature of 94 students (45%), 32 men and 62 women, and a strongly psychopathic personality was a feature of 20 students (9.6% of the sample), 11 men and 9 women. Analysing the three traits together revealed that 35 people, or 17.1% of the sample, belonged to the Dark Triad, i.e. they scored at least 45 points in total. This result can be considered very significant. In the international literature we only found data relating to the frequency of psychopathy. In the general population this was measured at around 1% (Boddy, 2011), which is well below our finding of 9.6%. Our research results more or less confirmed the findings of other studies in terms of frequency relating to gender, in that among men all three characteristics are more common (Paulhus and Williams, 2002).

If we treat the data a little more strictly, and only include those who scored 15 points or more in all three traits as members of the Dark Triad, then there are 12 such individuals in the sample, making up 5.7% of respondents, of whom 7 are men and 5 women.

Next, we move on to analyze how students included in the survey assessed the ethical aspects of specific workplace situations. Examining the mean and standard deviation of the

total sample we can determine which behaviors our students considered the most and which the least ethical, (Table 2).

Table 2: Statements assessed

Situation assessed	The average of the whole sample	Standard deviation
Making public confidential information.	4.75	0.6
Accusing an innocent colleague of something you are accused of.	4.70	0.6
Taking credit for the work of others.	4.55	0.7
Small-scale theft of the company's tools or stock.	4.49	0.7
Falsifying information relating to time, quantity or quality on a report.	4.35	0.7
Increasing the value of an invoice by more than 10% by increasing the cost of individual items.	4.09	0.9
Allowing an employee to break the company's rules.	4.00	0.8
Falling asleep in church.	3.78	1.0
Falling asleep at work.	3.71	0.8
Snacking and visiting the snack bar at work.	3.71	0.8
Increasing the value of an invoice by less than 10% by increasing the cost of individual items.	3.64	1.0
Stretching out the time needed to finish the job.	3.50	0.9
Claiming to be ill in order to get a day off.	3.50	0.7
"Sneaking" extra free time for yourself (e.g. coming in later to work, finishing work early).	3.47	0.7
Remaining silent while others break the company's policy or rules.	3.45	0.8
Sorting out your own affairs while at work.	3.37	0.7
Accepting a gift or discount in order to get a favourable contract.	3.33	1.0
Using services paid for by the firm for your own personal purposes (e.g. telephone services).	3.24	0.7
Giving a gift or offering a discount in order to get a favourable contract.	3.15	1.0
Covering for somebody's mistakes.	3.13	0.9

Source: Authors' own research

With regard to the individual situations, when considering the averages we can say that students considered seven situations to be particularly unethical (with an average above 4): disclosing confidential information; accusing an innocent colleague of something we ourselves have been accused of; taking the credit for someone else's work; small-scale theft of company property; falsifying information relating to time, quantity or quality on a report; increasing the value of an invoice by more than 10% by increasing the cost of individual items; allowing an employee to break the company's rules. In these cases, although the value of the standard deviation was relatively high, it did not reach 1. The respondents considered 6 situations moderately unethical (with an average between 3.5 and 4). These are: falling asleep at work, falling asleep in church, eating at work, increasing the value of an invoice by less than 10% by increasing the cost of individual items, stretching out the time needed to finish the job, and claiming to be ill in order to get a day off. The remaining seven situations were considered slightly unethical (with an average between 3 and 3.5): "sneaking" extra free time for yourself, remaining silent while others break the company's policy or rules, sorting out your own affairs while at work, accepting a gift or discount in order

to get a favourable contract, using services paid for by the firm for your own personal purposes, giving a gift or offering a discount in order to get a favourable contract, and covering for somebody's mistakes.

Compared with the results obtained by Ludlum and his colleagues (2013 and 2015), we can say that beyond the four situations mentioned above Hungarian respondents considered a further three to be particularly unethical, but their ideas about which situations were unethical were completely different from those of the American students. The explanation probably lies in cultural differences; our assumptions in this direction, however, require further research.

We were also looking for correlation connections (using Pearson's correlation coefficients) between the ratings given for the situations. However, notable results were only found in two cases: the same proportion of students who considered it unethical to increase the value of an invoice by less than 10% in value also considered it unethical to increase an invoice by more than 10% (r = 0.549 at a 1% significance level). Giving gifts and offering discounts, and receiving them in order to secure a contract also moderately correlate with each other (r = 0.548 at a 1% significance level).

By examining the correlation coefficients between the individual Dark Triad traits we were searching for an answer as to whether a statistically demonstrable correlation exists between them, i.e. whether, for example, a person who has a more narcissistic personality is more likely to have Machiavellian traits, as well. Based on our analysis, moderate correlation coefficients were found in three cases:

- Machiavellian personality traits co-occur with narcissistic personality traits in the students questioned (r=0.59 at a 1% significance level),
- Machiavellian personality traits with psychopathic traits (r=0.564 at a 1% significance level),
- narcissistic personality traits co-occur with psychopathic personality traits (r=0.449 at a 1% significance level).

Below, we examine whether we can demonstrate with statistical methods a clear link between university students' personalities and ethical attitudes. In other words, while the analyses described above examined these two issues separately, we now attempt, with the help of Spearman's correlation coefficients, to explore the relationship between them. Based on our results we can say that a weak and opposing co-occurrence can be observed between the students' Machiavellian traits and ethical attitudes (rho = -0.241 at a 1% significance level), i.e. the more Machiavellian traits featured in the students' personality traits, the less ethical would be their judgement of workplace situations. We can make a similar statement concerning the students' narcissistic traits and ethical attitudes: a weak co-occurrence in the opposite direction is observed between these two factors (rho = -0.244 at a 1% significance level).

5. Conclusion

The objective of our work was to analyze university students' personality traits and ethical attitudes. This study sought to answer three research questions:

- How typical are Dark Triad traits among the sample of students from the Faculty of Economics, at the University of Debrecen?
- Which behaviors do our students consider the most and the least ethical?
- Is there a connection between the Dark Triad and the ethicality judgements of workplace situations?

First of all we established the strength of three properties which feature in the Dark Triad model, which is becoming increasingly widely known. Regarding psychopathy, we can state that there is a clearly higher proportion of these personalities in our sample than is described in the specialist literature. We found even greater proportions of individuals with the other two traits, but there is no data available for comparison.

Examining the ethical attitudes of students based on our results, we can say that the respondents recognized unethical workplace behaviors, and considered the majority of them to be particularly or moderately unethical (thirteen situations out of twenty), and only a few situations to be slightly unethical (seven situations out of twenty). Compared to the American sample, the ethical values of the Hungarian students proved to be stricter.
The analysis of the relationship between personality and ethical values among the Debrecen students can be summarized by stating that the existence of three negative human qualities and the strength of their presence co-occurs to a limited degree with unethical behavior.
The possible future directions of our research are varied: we would like to carry out similar tests on samples which are both larger and more diversified. We intend to extend the analysis to university students on courses other than Economics, as well to students from abroad.

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THE MANAGEMENT OF WELLNESS SERVICES. CASE STUDY ICE DYP RESORT AND SPA 4*

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Abstract: *A healthy lifestyle is being adopted by many individuals nowadays. This fact generates the need of wellbeing that is being felt by more and more people. The need of wellbeing is becoming more and more spread and stimulates the individuals' demand for healthy products and for wellness products. This demand for wellbeing stimulates the demand for wellness products, packages and services. Nowadays the services are an extremely important part of the economy. The increase of their competitiveness transformed them into a real development engine. The same situation is applied when it comes to tourism services and also to wellness services. The concept of wellness is more and more frequently met in our society. This concept is more and more common not only in Europe but also worldwide. In the last few years, this concept began to be used also among the managers of the tourism industry in Romania. The services in general, and the tourism services in particular, developed a lot during the last years and have an important impact upon the tourism and hospitality industry. The wellness services are quite new in the tourism industry in Romania. The wellness tourism is part of the tourism industry. It started to develop in Romania only a few years ago. The management of the tourism services and the wellness services represent a key aspect for the managers in the hospitality industry. In order for the managers to be able to provide top quality tourism services and wellness services they must take into account all the aspects regarding the services culture. When talking about the wellness services, the managers must consider an entire, complete and complex package of services, including extra services. This paper presents also a case study upon the management of the wellness services at Ice Dyp Resort&SPA that is a 4 stars hotel in Romania, too.*

Keywords: *management; tourism; wellness; services.*

JEL classification: *Z32; O31.*

1. Introduction

Economic development is more and more stimulated by activities that include services. There is a significant relationship between the evolution of services and the economic development, if we notice that the developed economies are developing their positive growth mostly due to the services sector. The problems of development, competitiveness and specialization of services are getting more mixed up.

Tourism industry is also positively affected by the development of tourism services. One of the fastest developing are wellness services. Wellness services are new, innovative and complex services, including the customer in the direct performing of the service itself. Another particularity of these services is the fact that the satisfaction of wellness services customers is based on their individual perception about the wellness services themselves, and related to the whole experience they have from all the other related services: accommodation, food, distractions, and making up for their wellbeing. One of the main goals of the managers is to learn how to work with and how to develop these kind of services in their own organizations.

The main purpose of the article is to show how the management of the wellness services happens in a 4 stars hotel in Romania. In the beginning the article illustrates a theoretical approach of the services sector, and presents theoretical approaches related to the concept of services, tourism services and wellness. Then, it shows in a case study about how managers manage the wellness services in a 4 stars hotel in Romania, Ice Dyp Resort &Spa.

2. Literature Review

According to the American Association of Marketing, "services will present activities, benefits or utilities that are offered on the market or provided in association with the sale of a material good".

According to Gronroos "a service is an activities or a group of activities more or less tangible that usually take place in the moment of the interaction of the buyer and the provider". (Gronroos 2007:20). This definition is more comprehensive that the one offered by the American association of marketing.

From it, there results not only that the services are not material, but also the great importance of the relationship between the buyer and the services provider. This relationship is most of the time decisive in providing the service.

The growth of the specialization and competitiveness level has transformed the services into a real development engine. The services economy is already a reality in the developed countries, where the services sector represent over 70% of employment and the GDP. (Ioncica M., et all 2010:5). Figure 1 presents the weight of the services in the GDP in four countries that address in different ways to the wellness tourism.

The statistics point out the strong addiction between the specialization and competitiveness of the services on one hand, and the economic development on the other.

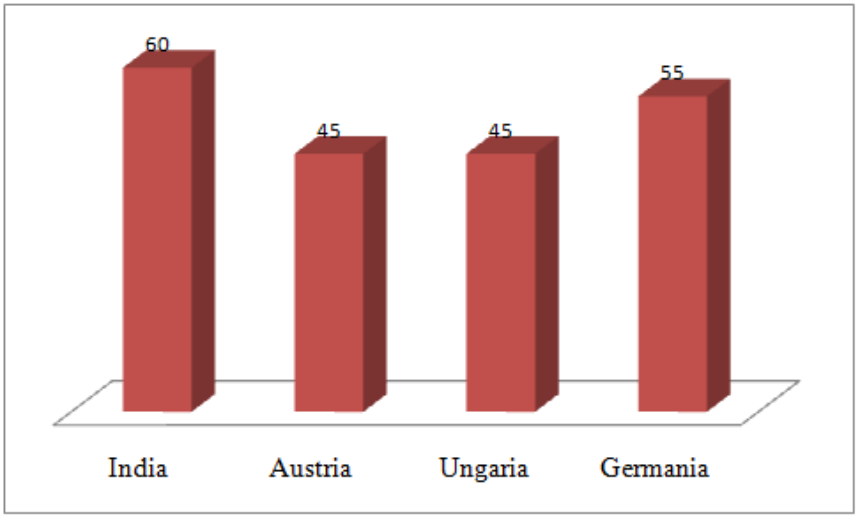

Figure 1: Services weight in the GDP
Source: Personal approach, Eurostat, 2015

The statistics point out the strong addiction between the specialization and competitiveness of the services on one hand, and the economic development on the other.

In his book. Kaufman R. (2016:260) presents a classification of the services viewed from another perspective than that of the manager. From his point of view, the services are:

- Infractional – they do not comply to the minimum expectations;
- Minimum – the services are disappointing and do not exceed the minimum level;

- Predictable – the do not have anything special, and in the past they reached an acceptable standard;
- Desired – they reflect what other people want or prefer;
- Surprising – these services have something special, a surprise or an unexpected gift. An organization that offers such services distinguishes itself from the crowd and offers the clients more than they expect;
- Incredible – those incredible and fantastic services, the services that people never forget.

In order for the mangers of the wellness organizations to succeed in providing superior, and complex services, adapted to the clients' needs, they must simultaneously take into account the main pillars of the services culture.

Tourism is defined by Witt, Brooke and Buckley (1991:2) as being a person's temporary move to destinations outside its residential area, with a certain goal and the activities done in the time spent in those destinations.

The term wellness refers to the general well-being. Due to this fact, it is extremely important for a hotel that offers wellness products to services, to provide high quality services overall. This means, that if the wellness center offers high quality products and services, it should also provide high quality accommodation and restaurant products and services, and not only. The entire range of products and services provided by that accommodation unit should meet the highest standards of quality.

Mueller H. and Kaufmann E. (2001:3) suggest the following definition of the wellness tourism: "Wellness tourism sums up the relationships and phenomena that result from a trip taken by people whose main motive is to preserve or promote their health. They stay in a specialized hotel which provides the appropriate professional knowhow and individual care. They require a comprehensive service package comprising physical fitness/beauty care, healthy nutrition/diet, relaxation/meditation and mental activity/education."

The scientific report of Global Spa Summit (2011:45) suggests the following definition of the wellness tourism: "Wellness tourism refers to people that travel in a different place or seek proactively activities that are aimed to maintain or improve their health and well-being, and that look for unique experiences/therapies, authentic or traditional, that are not available at home." The wellness tourist generally seeks preventive wellness approaches to improve its health and life quality.

While there are known regional differences regarding the definition of the concept of wellness, there are some common characteristics of the them:

- Wellness is multidimensional;
- Wellness is holistic;
- Wellness is constantly changing over time;
- Wellness is individual and in the same time influenced by the environment;
- Wellness is a personal responsibility; (Global Spa Summit, SRI International 2010:2)

When talking about superior wellness services, we talk about complex services that are customized as a local offer for the willing tourists.

3. Case study Ice Dyp Resort&Spa 4*

The methodology used consists of developing a qualitative descriptive study case of a 4 stars hotel in Romania doing also wellness services. For the study case we used internal data that we gathered from the hotel and its managers. It was also used an interview with the manager of the hotel. The interview took into consideration two aspects: the wellness services provided by the hotel and the management of the hotel and particularly the management of these services.

The accommodation unit Ice Dyp Resort&Spa is a 4 stars hotel. It offers hotel services, organizes events and has a wellness centre. Ice Dyp Resort&Spa started its activity in 2013 as a 10 room pension. In 2015 they added and extra room and reached a total of 11 room

available. Now, in 2017 they have 27 rooms, a restaurant, a conference room and a wellness centre.
One of the main goals of the managers is to invest in order to improve and expand the wellness sector. They want to redecorate it, to renew the furniture in the lockers, to refurbish the bathrooms, to purchase new equipment and the latest technologies. Also they want to extend the range of services they offer. They want to add a beauty salon, to provide new and more types of massages and so on. One of the results of these changes is hiring new and specialized personnel.
The wellness centre has an open circuit and offers services like dried and wet sauna, relaxing massages, anti-cellulite massages, semi-olympic pool, exterior pool, jacuzzi, gym, relaxing zone. Besides these, next to the interior pool there is a closed circuit restaurant (only for the clients of the wellness centre).
The wellness centre does not have its own management. The hotel's mission is to satisfy its clients. The managers state that they, together with their team, want to be the best and to satisfy their clients' needs at the highest level possible.
Ice Dyp Resort&Spa has three main sectors: the accommodation sector, the spa and wellness sector, and the planning of events sector.

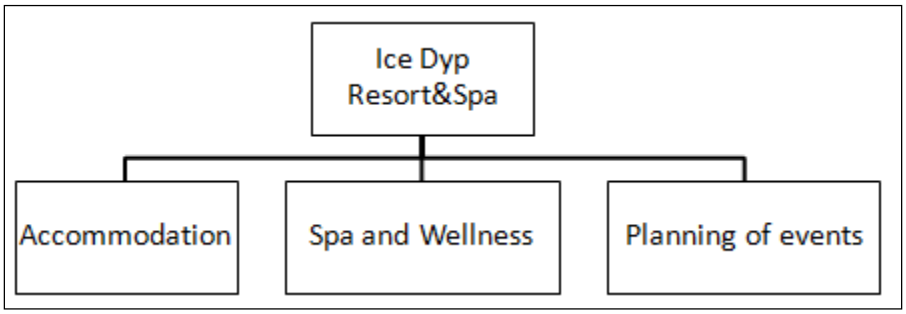

Figure 2: The hotel's three main areas of activity.
Source: Personal Approach, Internal Data Ice Dyp Resort&Spa

According to the hotel's internal data, the spa and wellness sector highly influence the turnover. For example, in 2015 and 2016, according to the data provided by the managers of the hotel, the spa and wellness sector participated to the final turnover with the highest percentage: 43% and 46%. Table 1 shows the turnover of the Hotel Ice Dyp Resort&Spa in 2015 and 2016.
Besides the managers, the hotel has 26 employees. The manager of the hotel describes the relationship between her and the employees as being a good or even friendly one.
Table 2 presents the number of employees that work in the wellness center and the ones that work in the other areas of activity of the hotel. It can be observed that the wellness center has only 4 employees.

Table 1: Ice Dyp Resort&Spa – Turnover

Ice Dyp Resort&Spa - Turnover		
	2015	**2016**
Accommodation Turnover	583.181 RON	624.254 RON
Spa&Wellness Turnover	1.080.728 RON	1.357.365 RON
Events Turnover	876.414 RON	981.435 RON
Total Turnover	**2.540.323 RON**	**2.963.054 RON**

Source: Personal Approach, Internal Data Ice Dyp Resort&Spa

Table 2: Ice Dyp Resort&Spa – Distribution of the employees

Ice Dyp Resort&Spa – Distribution of the employees		
	2015	**2016**
Number of employees of the wellness center	4	4
Number of employees in other areas of activity	22	22
Total number of employees	26	26

Source: Personal Approach, Internal Data Ice Dyp Resort&Spa

The work productivity (turnover/number of employees) is presented in Table 3. It can be observed that the work productivity in 2016 is higher than in 2015. It can also be observed that the work productivity in the Spa and Wellness sector is considerably higher than in the other two areas of activity of the hotel.

Table 3: Ice Dyp Resort&Spa – Work productivity

Ice Dyp Resort&Spa - Work productivity		
	2015	**2016**
Accommodation and Events	66.345	72.986
Spa&Wellness	270.182	339.341
Total	**97.704**	**113.964**

Source: Personal Approach

Figure 3 presents a graphic of the work productivity in 2016 compared to 2016. As mentioned above, it can be noticed the big difference between the work productivity in the Spa and Wellness area of activity compared to the other two areas of activity of the hotel: accommodation and events.
The managers consider that they have to behave like a leader and to set an example for the other employees. Although the relationship cannot be described as an extremely close one, it is based first of all on respect. The managers attempt to take into account each employee's main characteristics and its personality and try to improve their qualities and strong points.

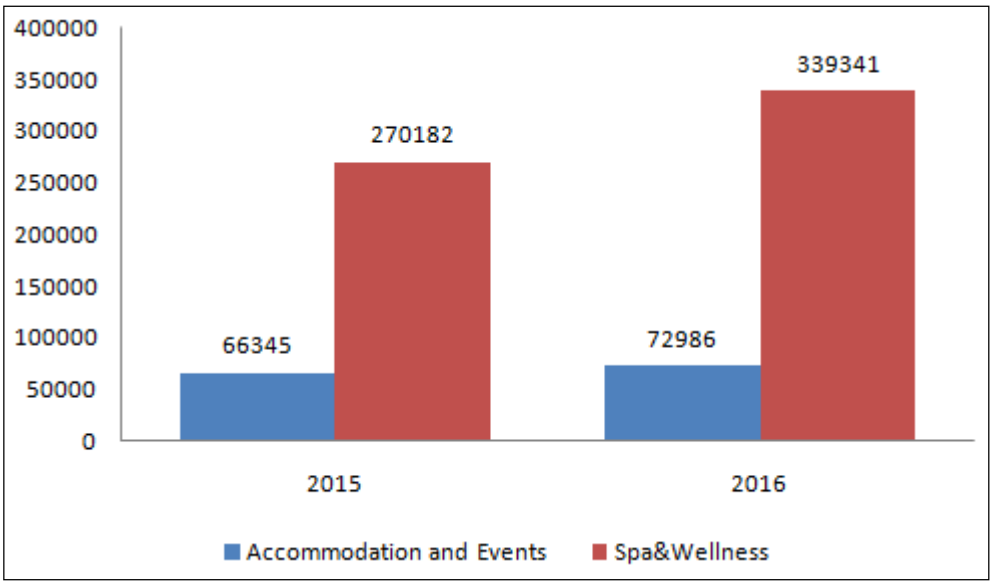

Figure 3: Ice Dyp Resort&Spa - Work productivity
Source: Personal Approach

According to the internal data provided by the Hotel Ice Dyp Resort&Spa, both the employees and the managers are encouraged and supported to participate in improvement training courses. When talking about the development or innovation of the wellness services, and not only, the employees' opinions and perspectives are taken into account.
Besides, employees benefit of different incentives in order for them to do their jobs at high standards. These incentives are first of all financial ones, but also the employees have free access to the wellness services (except for massages). They also have free access to different parties and reunions organized for them by the hotel managers, and during their working hours they benefit from the restaurant services as well.
Regarding the feedback, the managers are receiving from hotel clients. One way to take feedback is the direct, face-to-face one. In this case, clients get an immediate, direct response, and managers take action to improve the aspects mentioned by the customers... Another way of taking feedback from the clients is in writing form. The hotel has a register where the clients can express their complaints, opinions and suggestions for improvement. This register is checked-out once a week by the general manager. If the complaining client gives his contact data, he or she will receive a response by e-mail or by phone. Still, this method is not very frequently used by the hotel's clients. Or, even if it is used, they rarely live their personal contacts, indicating that they do not trust the management of the hotel...
The most common way of taking feedback is online: the hotel is listed on various specialised websites like tripadviser.com or booking.com, or by social media (Facebook etc.). The manager responds personally online to the comments. The manager checks out the online environment daily. According to the internal data provided by the manager of the hotel this last way of tacking feedback is the most frequently used by the clients.

4. Results and conclusions

One of the most important concepts for an economy based on competitiveness is innovation. The term „wellness" itself represents an innovation, and the wellness industry can be seen as a result of innovation in tourism services, adding important features to increase the wellbeing of hotel customers, and enriching their experience and satisfaction, thus increasing their desire to return later and benefit from these new experiences. In our opinion, it can be observed that the management of wellness services has to be specific to this new industry based on new and innovative services intended for a category of clients that are opened to innovation and are willing to pay premium prices for them.

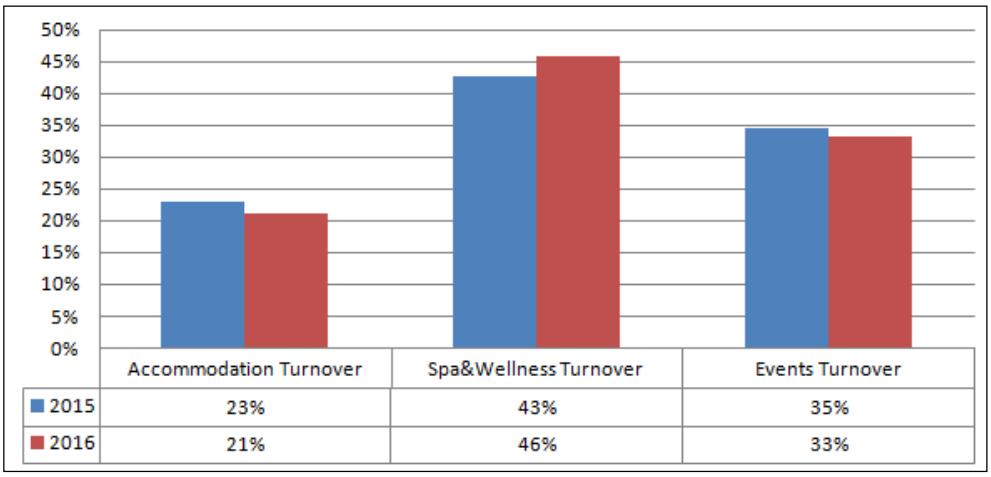

Figure 4: Ice Dyp Resort&Spa – Turnover
Source: Personal Approach, Internal Data Ice Dyp Resort&Spa

In my case study it is observed that the management is aware of the wellness market need. So, Figure 4 shows the percentage each of the three main sectors of the Hotel Ice Dyp Resort&Spa contributed to the total turnover in 2015 and 2016. It can be observed, as mentioned above, that the spa and wellness sector has the most significant influence in the total turnover.
The fact that 43% and 46% of the turnover comes from Spa and Wellness, offers the possibility for a future development. This means investments in facilities and personnel. The development of the facilities and the improvement of both the employees and the managers automatically lead to better and improved wellness services and high quality wellness products.

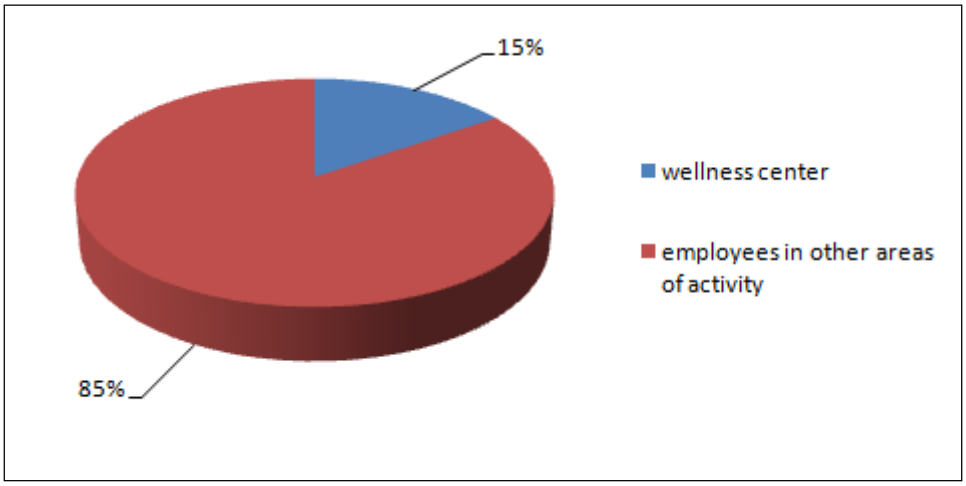

Figure 5: Ice Dyp Resort&Spa – Distribution of the employees 2015 and 2016
Source: Personal Approach, Internal Data Ice Dyp Resort&Spa

Figure 5 shows the percentage of the employees of the wellness center in comparison with the total number of employees of Ice Dyp Resort&Spa. It can be observed that only 15% of the employees work in the spa and wellness area. The rest of 85% that is 22 employees work in the other areas of activity of the hotel: accommodation and events.
When correlating Figure 4 and Figure 5, it can be observed that the distribution is upside-down. So, although the wellness centre has the lowest number of employees (15% of the total number), it has the highest contribution to the turnover (43% and 46%). This means that the managers have given special attention to the continuous improvement of the personnel of the wellness centre and also to the incentives offered to them. This is also an explanation why the work productivity in this sector is considerably higher than in the other two sectors of the hotel. Still, the managers should consider to bring more personnel to this important sector of activity of the hotel, especially since they also want to extend it.
When talking about the wellness tourism we must take into account an entire and complex services package, including extra services. In order to handle the industry that is constantly developing, the wellness organizations must have specialized and highly trained personnel that offers high quality services, adapted to the individual needs of the clients but also to the local specificities.
Not only the offered services and facilities, but also the entire concept of wellness and the management of the organization represent the main difference between a common wellness centre and a modern one.

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A NEW EQUATION FOR SMART ORGANIZATION INNOVATION =Q-EUATION

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Abstract: *The paper want to establish the orientation of the entrepreneurs and identify the barriers for a future smart specialization on the market. The survey was applied on 208 respondents from Baia Mare city, Maramures County, Romania, a miner zone, with big potential in tourism, under UNESCO Heritage in continuous development and adaptation on the new market trends. The survey was structure in six parts to establish and identify the entrepreneur profile, to define the new re-evolution of needs and skills for a new type of entrepreneur= a zen-entrepreneur, a jump start to a new smart organization. The barriers identify by authors can be group in four clusters taking in consideration the personal barriers (age, gender, social status, etc.) the personal and organization needs to training or specialization in new fields, the innovation needs and not at last the organizational culture for management culture. The equation for a smart organization take in consideration the innovation as a new variable for the new q-equation.*

Keywords: *management change; zen-entrepreur; innovation; quality equation; re-evolution.*

JEL classification: *M11; M14 O14; O33.*

1. Introduction

The paper is trying to identify the new orientation on the market and how entrepreneurs and managers are ready for a flexible management change or re-orientation of organization in a way of re-evolution by:

- Identifying new concepts of products and services;
- Anticipating customers' needs by analysing the market;
- Anticipating trends and competitors' successes;
- Encouraging new ideas and creativity among staff;
- Identifying the mechanisms and criteria used for selecting the ideas to be developed;
- Planning the creation of new product concepts.

What makes it difference from other organizations type and innovation? We are on the fifth so-called "innovation friendly" activity which is crucial in the field of organizations fields of action:

How can organizations become management innovators? The only solution is by innovation through technology. A new type of managers or entrepreneurs which is capable to decide on which technologies to develop, what kind of training his staff and employees need, creation of a new product generation.

A pioneer in that field it was Gary Hamel, (2006), which for the first time try to make the connection between the Why, What, and How of Management Innovation and Organizational culture.

The propose of the paper is to provide the answer to the **Why'**s management innovation so important? Nowadays it is the key of success.

The Elements of Management Innovation after Gary Hamel (2006) in most companies are:

- management innovation is ad hoc and incremental;
- it is a systematic process for producing bold;
- management breakthroughs must include;

- commitment to a big management problem;
- novel principles that illuminate new approaches.

Because the new orientation of economy, the new generation of customers with a different culture need a new vision about the entire market, the authors consider that an research about the needs and vision of young entrepreneurs or managers on existing business from market can be helpful in the earlier identification of potential niche on re-orientation and re-design of the business can give some models or solutions in change management in their own business.

2. Method of research. Case study.

A survey was apply in Maramures County, in Baia Mare city and rural zone around on a sample of 208 respondents involved in small business or different business activities, between June –July 2016. The survey was structure in six parts to:

Part 1. Identify the profile of entrepreneur age, gender, education;
Part 2. Identify how rural or urban zone has impact upon the respondent mentality in the perspective of beginning of a business;
Part 3. Identify the factors which stop the business;
Part 4. Identify if they know their skills and abilities for future business;
Part 5. Establish the needs;
Part 6. Identify the opportunity to start a business,

Measures shared, beliefs, values and expectations of 208 respondents within a future organization and business and provide a relevant look at future ZEN-Entrepreneur:

- What behaviours;
- How motivated and satisfied they are to start a new business;
- How effectively they know their skills;
- Which are the needs to improve their business on market.

In conclusion an entrepreneur or manager of organization can have a culture inventory, can have several subcultures based on differences in training, occupations or individual goals. Starting from Kaizen method to improve management quality in organization from ***kai*** and ***zen*** change in a good way our research start with a model which can establish the barriers and challenges of organizational culture and entrepreneur/manager knowledge in management culture.

ZEN entrepreneur it is a new term introduce by John Murphy's (2013) a new entrepreneur a jump start into professional and personal life, a person which create a culture of innovation and fearlessness. In authors' opinion ZEN –Entrepreneur can be translate as good (zen) entrepreneur.

3. Results.

The majority of the respondents are the age between (18-38) age old a 66% percent from a total of 208 respondents and 23 % percent between (35-44) age old. If we analyze the connection between age and education we can observe that the active persons open an individual activity or a small business have graduate academic level.

If we make the correlation between age and the factors of perturbation in their orientation and needs, the results present that money are the biggest problem for 116 respondents, follow on the second place by information regarding the opportunities to start a business, and the information for 48 respondents Table 1.

Table 1. Correlation between Age and respondents needs

		What do you think you need to start your business?			Total
		money	time	information	
Age	18-38	97	15	26	138
	38-58	13	20	14	47
	58-78	6	9	8	23
Total		116	44	48	208

Source: Own results

Another factor analyze as a potential barrier who can influence the business and entrepreneur spirit it is the gender (Table 2) a percent of 43,3 % are male and 56,7% are women (Boca, Mukaj, 2015), in function of the gender typology the orientation in economic and business activities are specific oriented too.

Table 2: Gender- In which field do want to start your business?

		In which field do want to start your business?					Total
		industry	agriculture	commerce	services	IT	
Gender	male	19	16	29	23	3	90
	female	14	24	29	51	0	118
Total		33	40	58	74	3	208

Source: Own results

The correlation between the gender influence and economical activities of respondents motivate the selection of personal fields taking in consideration the skills and competences in function of specific characteristics for male 58% are oriented in industrial activities, agriculture and in equal percent with female in commerce activities.
The 69% of ladies are oriented in services fields using their communication skills, empathy and flexibility on market needs and utilities.
The correlation between age and business orientation present the specialization and qualification in time of respondents in direct implication the young generation 68 % it is involved in new activities, in small and medium business which gives them free spirit and flexible program, independence and the possibility to create and touch their dreams.
The Facebook generation it is involved in commerce and services activities under the influence of fast communication and market information (Table 3). The mature persons 34 % percent are oriented to traditional activities like agriculture and industry sectors. The retirees' person enjoy to work in agriculture and services and socialize with other persons.

Table 3: Age- In which field do want to start your business?

		In which field do want to start your business?					Total
		industry	agriculture	commerce	services	IT	
Age	18-38	26	9	45	55	3	138
	38-58	6	20	13	8	0	47
	58-78	1	11	0	11	0	23
Total		33	40	58	74	3	208

Source: Own results

The conclusion for our sample it is that the person with medium education it's interested and want to be involved in different economical activities or to start their own business, Fig.1.

The zen spirit influence the individual cultural mentality regarding the daily life living and encourage the participation of courses and trainings in their specific fields of activities.

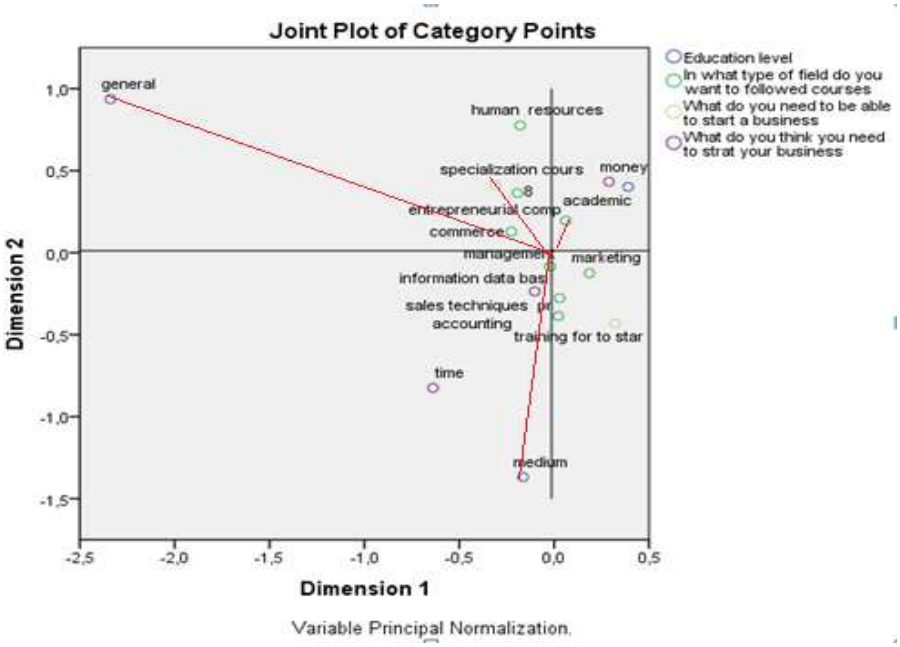


Figure 1. Correlation between education and entrepreneurial spirit
Source: Own results

The respondents in a 72,1 % percent recognize their skills, competencies and qualities as entrepreneurs and 27,9% percent know their missing knowledges and skills in entrepreneurship and they don't want to be involve or to open a business.
If on the first part of survey we obtain the individual profile of the future entrepreneur, on the second part we want to establish the individual needs for training or specialization in different fields of business.
The data confirm that an equal percent of 49% are oriented for training and 51% to courses or specialization courses in business.
The third part of survey present in fact the actual mirror of the orientation of respondents to the needs in different fields like in Table 4. 20,2 % percent wants courses to develop their entrepreneurial competences, 19,2% in business management, for market 14,4% percent and in developing sales technique 16, 3% percent.

Table 4: The specific courses for the new zen –entrepreneur

In what type of field do you want to followed courses?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	entrepreneurial competences	42	20,2	20,2	20,2
	management	40	19,2	19,2	39,4
	marketing	30	14,4	14,4	53,8
	accounting	18	8,7	8,7	62,5
	human resources	12	5,8	5,8	68,3
	sales techniques/ promotion	34	16,3	16,3	84,6
	commerce	11	5,3	5,3	89,9
	communication	21	10,1	10,1	99,5
	Total	208	100,0	100,0	

Source: Own results

A deep investigation was realized on the respondents' provenience from rural or urban life living style and the impact upon their orientation as manager or future entrepreneurs.
Their perception about the market and the benefits obtain from a business, the privileges and benefits from implication in different economical activities are in direct connection with the living residence.
68,8% percent from respondents belongs to urban zone and 31,2% percent to rural zone with direct implication in traditional activities specific with the zone of provenience.
An important information obtain from survey present the perception between rural and urban zone, an earlier signal which can be used for future vision to eliminate the difference between this two mentalities.
The final result presents that the peoples from

- **Rural zone** –are interested to develop abilities and skills in industrial activities to open small and medium enterprises: manufacture the milk, meat and wood, traditional handcraft, vegetables for the big market companies sustainably the Romanian state law. A politic which want to encourage the national consume and start a campaign Made in Romania, and sustaining the bio and eco production of small countryside peoples.
- **Urban zone** – in comparison with rural zone people are oriented to activities and small business on rural zone because of the facilities according to the projects and found which encourage this kind of activities. Another explanation can be the new trend of returning to country cite to a quiet and natural life, a childhood grandparents memories.

Table 5: Correlation between business field and personal motivation

In which field do want to start your business?			**Are you interested to open a new business?**		**Total**
			Yes	**No**	
industry	Social provenience	rural	18	1	19
		urban	12	2	14
	Total		30	3	33
agriculture	Social provenience	rural	2	3	5
		urban	18	17	35
	Total		20	20	40
commerce	Social provenience	rural	14	2	16
		urban	32	10	42
	Total		46	12	58
services	Social provenience	rural	16	7	23
		urban	39	12	51
	Total		55	19	74
IT	Social provenience	rural	2		2
		urban	1		1
	Total		3		3
Total	Social provenience	rural	52	13	65
		urban	102	41	143
	Total		**154**	**54**	**208**

Source: Own results

A normal percent it was according to market and sales information which are considered important for the future or existing young entrepreneur to be capable to sale his product on the market.
It is important to mention that from the 208 respondents, 25% percent recognise that they don't have any skills and competences to become entrepreneurs and 65% percent mention

that they are open to start or to improve their actual business but with help from experts or by following qualified courses...

Table 6. Correlation between needs and the opportunity to start a business

What do you think you need to start your business?			Are you interested to open a new business?		Total
			Yes	No	
money	Social provenience	rural	31	6	37
		urban	60	19	79
	Total		91	25	116
time	Social provenience	rural	9	4	13
		urban	15	16	31
	Total		24	20	44
information data	Social provenience	rural	12	3	15
		urban	27	6	33
	Total		39	9	48
Total	Social provenience	rural	52	13	65
		urban	102	41	143
	Total		**154**	**54**	**208**

Source: Own results

A barrier in their desire can be considered for both side of participants from rural and urban zone money 59%, followed by time 16% and information's 25% on the last position.

Table 7. Correlation between personal training and personal interest

Did you ever followed a professional training?			Are you interested to open a new business?		Total
			Yes	No	
accounting	Social provenience	urban		2	2
	Total			2	2
no interest	Social provenience	rural	45	9	54
		urban	83	24	107
	Total		128	33	161
entrepreneur	Social provenience	rural	3	2	5
	Total		3	2	5
mechanic	Social provenience	urban	0	5	5
	Total		0	5	5
services	Social provenience	rural	4	2	6
		urban	16	6	22
	Total		20	8	28
wood	Social provenience	urban	3	4	7
	Total		3	4	7
Total	Social provenience	rural	52	13	65
		urban	102	41	143
	Total		**154**	**54**	**208**

Source: Own results

4. A ZEN-entrepreneur Model to predict

Table 8. Zen entrepreneur cluster characteristics

Case	**4 Clusters**	
Age	1	Q1
Education level	1	Q4
Gender	2	Q2
In which field do want to start your business	2	Q6
Social provenience	3	Q3
Do you think that you have entrepreneur qualities	3	Q8
What do you need to be able to start a business	3	Q10
Are you interested to open a new business	3	Q5
In what type of field do you want to followed courses	4	Q11
What do you think you need to start your business	4	Q7

Source: Own results

If the cluster 2= 80 respondents as internal environment (here including the age and gender) are important in orientation on market type of individual business, the cluster 5= 52 persons sustain that increasing cultural flexibility of each person is an important factor of influence a barrier for future activities.

Number of Cases in each

Cluster	1	28,000
	2	80,000
	3	48,000
	4	52,000
Valid		208,000
Missing		,000

Source: Own results

Modelling the items as variables, from the model we verify the connections and relation between the selected variables

BARRIERS = Q1	1,18	strong connection with age
NEEDS = Q4	0,44	strong connection between education level and needs, an educated person assimilate in time information's
NEEDS = Q5	0,26	strong connection between needs and individual interest and cultural education
BARRIERS = NEEDS	0,56	strong connection age, gender, social provenience and needs

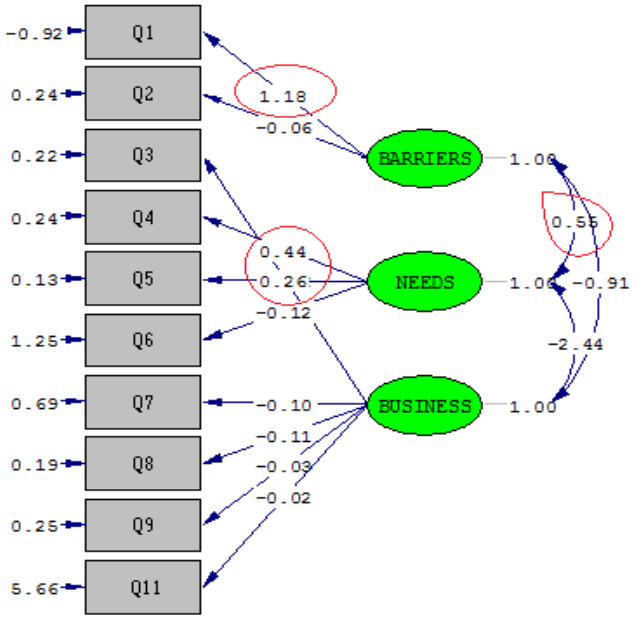


Figure 2. A Barriers model for Zen –entrepreneur
Source: Own results

The model created verify the Cronbach's Alpha values of 0,546 so the results for the two variables internal and external environmental barriers are available for our research.

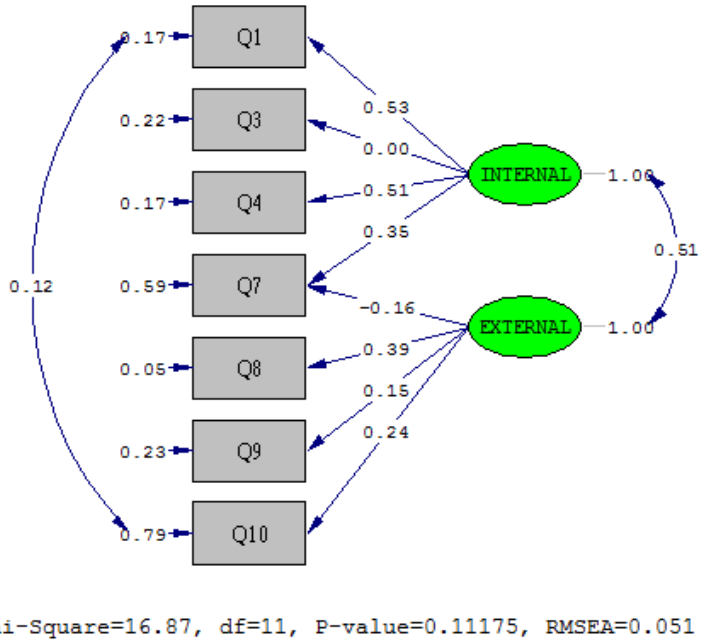
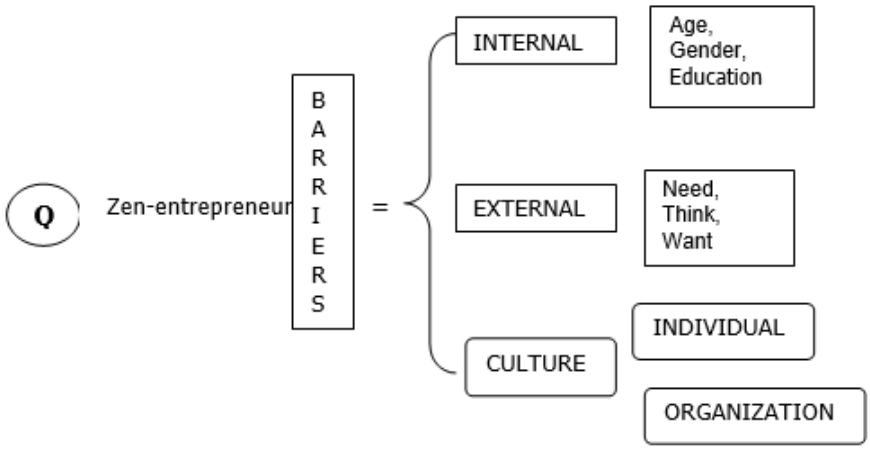


Figure 3. A model for zen-entrepreneur
Source: Own results

5. In conclusion

In conclusion the paper can be a guide to identify the needs and goals on actual market and make a vision for future.

A new type of organization a smart one with a new manager, entrepreneur a zen spirit flexible can be by applying a new equation a Quality equation



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ORGANIZATIONAL LEARNING, QUALITY AND INNOVATION - EVIDENCE FROM MANUFACTURING INDUSTRY

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Abstract: *Organizational learning is a new management paradigm and is defined as the collective capability based on experiential and cognitive processes. This study considers organizational learning as a multidisciplinary and complex process, involving four dimensions: managerial commitment; systems perspective; openness and experimentation; and knowledge transfer and integration. Companies working in the footwear and clothing industry must face and meet increased quality requirements, must be flexible to the needs of different market segments, move quickly in the direction of meeting customers the needs, and must provide a user-friendly interface. The current requirements of organizational learning (related to quality management) consider a new way of thinking, centred on providing more comfort and convenience. Organizational learning has an important role in innovation as it stimulates creativity, supports gaining new knowledge, increases the potential of understanding, and stimulates the desire to put new ideas into practice. Product innovation, as well as, the innovation process is based on a deep understanding of consumer needs, of the actions of competitors, and of the technological development. It is possible, only, through the commitment of the management. Organizational learning has the potential to explore and, therewith, capitalize on the available knowledge in an organization. Moreover, organizational learning often involves an implicit knowledge and the actions involving dexterity are often based on such kind of knowledge that with time creates organizational routines. Since this study is an exploratory one, we chose the interview method, method that belongs to qualitative research. The purpose of this study was to assess the mechanisms of organizational learning and their relation to quality and innovation. The results of our research confirm once more that Romanian companies are preoccupied by profit rather than performance, by productivity and not creativity, of compliance and not innovation. We can say that the concern for quality management and innovation aimed at organizational learning is driven by necessity rather than opportunity. Communities of practice (the apprenticeship system), compared with any other learning solutions proposed by the theory and practice of management, have the advantage of being operated with good results in the area of Bihor. The findings of the present study allow us to suggest that the revival of communities of practice is a solution to revitalising organizational learning in the manufacturing industry companies. Our future research efforts will be directed to this organizational solution.*

Keywords: *organizational learning; quality; innovation; community of practice.*

JEL classification: *M10.*

1. Introduction and purpose

Organizational learning is a new management paradigm and is defined as *the collective capability based on experiential and cognitive processes.* It involves the creation, acquirement, transmission and use of knowledge and experience (Bolivar-Ramos et. al., 2012; Certo, 2002; Jimenez-Jimenez and Sanz-Valle, 2011). The literature highlights that organizational development deals with solving systemic problems; experimenting of new ideas; learning from the others practice; the rapid transfer of the knowledge within the

organization (Argyris and Schon, 1996; Senge, 1990). Organizations that presented this important feature, have: a. *the structure based on the team;* b. *a free flow of information;* c. *the employees are invested with authority* (Goh and Richards, 1997; Bustinza et. al., 2012). The core idea of organizational learning is the transfer of knowledge from individuals to the organization through social interactions (Santos-Vijande et. al., 2012). This study is considering the organizational learning as a multidisciplinary and complex process that according to Jeres-Gomez involves four dimensions: *managerial commitment; systems perspective; openness and experimentation; and knowledge transfer and integration* (Jerez-Gomez, 2005). *The managerial commitment* implies the ability of management to create a corporate culture based on learning, which is seen as a source of maintaining and developing the organization. When we talk about *systems perspective* we consider the organization as a whole, accountable to all stakeholders, meaning that, managers see the cooperation as a very good form of competition. *The openness and experimentation* represent the component which considers the exchange of ideas and knowledge between people, taking over risks and encouraging of attempt. *The knowledge transfer and integration* considers the elimination of internal barriers and encourages collaboration between departments in order to improve the responses to the stimuli of business environment.

Starting with the idea of exploring these components we conducted a study; in this study, we included companies active in the manufacturing industry who are representative of the economic environment of Romania, in general, and of Bihor County, in particular. These industries (footwear and apparel) are increasingly more dependent on quality and innovation, in parallel with maintaining the costs. The purpose of our study is to explore the relationship between organizational learning, innovation, total quality management and business performance in the two industries mentioned above.

2. Quality Management in manufacturing industry

Traditionally, quality management was developed in the manufacturing industry. After the early phase, when it was focused on quality inspection, quality management became concerned with statistical quality control methods (Lagrosen and Lagrosen, 2009), in the development phase. After the Second World War, quality management developed a conceptual apparatus, designed to ensure a continuous improvement of results, of employee motivation and the idea of leadership (Ishikawa, 1985; Deming, 1986; Duran, 1989). Nowadays, quality management is invoked as an integrated system that includes values of management, alongside time-tested techniques and tools (Hellsten and Klejsjo, 2000). In addition, a growing emphasis is placed on attitudes, openness and experimentation, seen as key ingredients of the proper functioning of quality management (Conti, 2010). Companies working in the footwear and clothing industry must face and meet the increased quality requirements, to be flexible to the needs of different market segments, to move quickly in the direction of meeting the needs of customers, and to provide user-friendly interface. The current requirements of organizational learning that are related to quality management consider a new way of thinking, centred on providing more comfort and convenience. Exposure of the staff, to requirements of the market segments increasingly and demanding smaller, requires generating new knowledge, accumulation and testing them. Managers feel all this pressure that can be considered a learning opportunity. In this respect, in the organizational learning circumscribed, and becomes much more visible, the building trend of capacity for generating results. Thus it escalate the activities such as: weekly meetings, trainings, workshops, seminars, participation in various collaborative projects. All these encourages the creation and transfer of knowledge, facilitate understanding and contribute to feeding of motivation for bridging the gap between the level reached by top competitors and the firm concerned. As a result of all the above, we can issue the following hypothesis:

H1: Organizational learning is determined by necessity and by the requirements of quality.

3. Organizational learning and innovation

Organizational learning has an important role in innovation as it stimulates creativity, supports gaining new knowledge, increases the potential of understanding, and stimulates the desire to put new ideas into practice (Cohen and Levinthal, 1989). The product innovation, as well as the innovation process, is based on a deep understanding of consumer needs, on the actions of competitors and on technological development. It is possible, only, through the commitment of the management (Calantone et. al., 2002). Organizational learning has the potential to explore and, therewith, capitalize the knowledge in an organization. Moreover, organizational learning often involves an implicit knowledge and the actions involving dexterity are often based on such kind of knowledge that with time creates organizational routines (Argyris and Schon, 1996).

People who innovate in the world of business must be in contact with the society they live in and draw inspiration from it. Of course, they have to formulate judgements based on information, but, also on empathetic appreciation of any situation. They need to see and feel what exists, to focus on what they experienced, to identify the cause for which it happens, and to act in the necessary direction to correct, to improve or to transform according to identified needs. An extended model of the management process of the organization focused on innovation also includes methods of work, management roles and the agenda. A manager's knowledge, skills and capacities are important factors in achieving performance, all together with understanding the importance and implementation of innovations.

These arguments suggest a second hypothesis:

H2: Organizational learning supported by management stimulates innovation.

4. Methodology

Since this study is an exploratory one, we chose the interview method, method that belongs to qualitative research. Seven companies from Bihor County, four working in the footwear industry and three in the clothing industry, agreed to take part in the study. The interview method is considered to be the most important collecting technique of information and it is recommended by economists to be used in studies devoted to industrial enterprises (Roman et. al., 2009). We have chosen a semi-structured interview and we developed an interview guide. It included 18 questions, 12 of which were open, to provide to subjects - managers or administrators, the possibility of a relatively wide response. During the interviewing window - in January 2017- we tried, to focus on assessing the effects on organizational learning capacity, on quality and innovation as elements that serve as stimulus for learning. The need to achieve greater accuracy in respondents' answers led us to use the Likert scale of five steps for three questions. In developing the interview guide we had in mind that people learn by four different mechanisms: a. cognitive learning; b. classical conditioning; c. instrumental conditioning; d. modelling (Datculescu, 2006). The interview guides were sent in advance to the interviewees. They were encouraged to speak honestly and openly about the situation of the firm they manage, about problems they have and especially explain their vision for the future. Each interview lasted between two and three hours. The place, date and time were set so as to provide every respondent with the best framework possible.

5. Findings and discussion

The data analysis following from these interviews, strengthened experience and observation on the spot, have repeatedly led us to some results. During evaluating the information we sought clues to the mechanisms of learning and their relation to quality and innovation.

We examined, the first mechanism that is the cognitive learning. We tried to find out how a stimulus related to quality or innovation was taught, whether passively (through compliance and enforcement) or actively (on its own initiative and/or problem solving). We were interested in the proportion of employees who lean towards active or passive learning, respectively.
Concerning the second mechanism of learning, classical conditioning, we sought to identify the ambient stimuli, that can create a positive emotional response or a strong negative one, and that can be associated with two conditioned stimuli, namely innovation and product quality.
The exploration of the third learning mechanism, instrumental conditioning, was done by researching how different groups of employees respond to different rewards and punishments.
Gathering information on the fourth learning mechanism, modelling, and the study sought to identify characteristics that exert the greatest attraction on employees.
Hypothesis H1: Organizational learning is determined by necessity and quality requirements, was partially confirmed:

- Cognitive learning takes place through the acquisition of new information, orally or in writing. Executive staff learns mostly by the passive learning mode - exposure to the repetitive stimuli. The top management learns by active repetition, including by solving problems (e.g. the transfer costs, quality differences depending on market);
- Employees respond to rewards, but this lasts a short amount of time;
- We have not identified any impact of the negative rewards, of the classical conditioning or the modelling one.

Regarding hypothesis H2, namely, that organizational learning that is supported by management has stimulated the innovation, this is not confirmed.
In our opinion, in the manufacturing industry in Bihor, particularly in Oradea, the organizational learning mechanism is not functioning as it should, due to several causes, including:

- The companies are focused on short-time profit;
- They are concerned almost exclusively with productivity at the expense of creativity;
- The collapse of communities of practice, and of the gradual qualifications system: novice, apprentice, journeyman, master.

Moreover, shoes/clothing production is conceived outside the firms, the units are working in lohn system, meaning the actual production, takes place in Romanian factories, with workers that are too little motivated to learn, predominantly are self-sufficient and prone to conform. The companies' management, and also the owners, do not see organizational learning and innovation as priorities, because these require short-term investments, with benefits appearing only in the long-term. Four managers have explicitly stated that they do not intend to change their approach due to the high staff turnover. These workers are gathered from a very wide geographical area, with a radius up to 70 km. Most workers have completed general education schools and they are less interested by the opportunity to make a career in the field. Added to this is the lack of material progress, supported by a system of promotion and awards in their job, as well as lack of initiative.

6. Conclusions

The results of our research confirm once more that Romanian companies are preoccupied by profit rather than performance, by productivity and not creativity, of compliance and not innovation.
We can say that the concern for quality management and innovation aimed at organizational learning is driven by necessity rather than opportunity. The most obvious thing is the

disintegration of communities of practice (the apprenticeship system) and the absence of any other alternatives, with serious impact and long-term repercussions. Communities of practice (the apprenticeship system), compared with any other learning solutions proposed by the theory and practice of management, are operated with good results in the area of Bihor. Their main advantage is that they are a good fit for the cultural matrix of the participants, encouraging the sharing of experiences and creativity in an unrestricted manner, enabling new approaches to problems. In this case, expertise does not exist outside the community of practice, and thus the community fosters and stimulates commitment towards the field. Organizational learning as stage process, offering the necessary time to complete the assimilation of specific knowledge. The community of practice is made up of people and the relationships established between them, and is confined by certain characteristics that act as filters.

The findings of the present study allow us to suggest that the revival of communities of practice is a solution to revitalising organizational learning in the manufacturing industry companies, producing shoes and garments, in Bihor County. Our future research efforts will be directed to this organizational solution.

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RESEARCH ON MOBBING AND BULLYING AT WORKPLACE

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Abstract: *In this paper we intend to research two aspects at work, mobbing and bullying. The both aspects are negative and they have negative consequences on safe and health at work. The persons confronting such problems may no longer perform daily tasks and come, sooner or later, to resign. After leaving their jobs it is very probable for these persons to suffer a posttraumatic stress. So, these issues must be deeply analyzed in order to found methods of prevention. As an employee, the ideal situation is to have a safe and healthy workplace. The employers have to create and maintain it. A safety and health management system that managers could adopt is necessary for improving the work environment. This system, that is unique for every organization, has to contain rules, principles, generally what the people in the organization have to do to prevent injuries and illnesses at workplace. A safety and health management system differ a lot from one organization to another and that depends mainly on the dimension of the firm and especially on the level of hazardous. The most important thing is the system to work for a certain organization, no matter how simple or complicated it is, to be put into practice and the result to be a safe and healthy workplace. From theoretical point of view we have defined these concepts, finding the difference between mobbing and bullying. The terms mobbing and bullying are very similar, both referring to the perpetual psychological violence committed at the workplace. While the term "mobbing" refers to psychological aggression that comes from the colleagues, the term "bullying" refers to the same issue, but this time psychological aggression that comes from a person with a higher position. We also pointed out the* effects of these two negative phenomena on the victim and the most common tactics adopted by bullies. *We studied these theoretical aspects in practice as well. We chose investigation as a research method. 100 first-line and middle managers from Bihor County were questioned related to mobbing and bullying issues. Our objective was to find out to what extent they confront with these negative aspects and how they deal with them.*

Keywords: *mobbing; bullying; emotional abuse; safe workplace; stress; mental illness.*

JEL classification: *M10; M12; M14.*

1. Introduction

Emotional or psychological abuse involves any verbal or nonverbal behavioural attitude that produces a negative impact on a person's emotions. Emotional abuse occurs in different types of relationships, including at work. It can appear either between employees at the same level, this case we talk about mobbing, or between employees at different levels, when we can talk about bullying. This phenomenon occurs no matter it is about men or women, young or old ages, high or low level of education. Being touched by this negative phenomenon, they simply could hate their workplaces. These persons feel every working day as a torture. Some people are incapable to cope with this situation and simply get sick. The person who is abused is most of the time an efficient employee, not an ordinary one. The emotional abuse affects the health condition of the person who is abused who could have problems as: sleep problems, breakdowns, irritability, depression, concentration problems, panic attacks or even heart attacks.

The workplaces where the persons must cope with emotional or psychological abuse are emotionally unsafe workplaces. These people feel as they go to a battle without weapons

every morning when they hear the alarm clock for going to work. The question is: Should the employees' show how they feel?
An article in Workforce magazine (2014:11) has an interesting answer for this question. It boldly stated: "Mental illness is the workplace's dirty little secret. Employees want to hide it and employers don't want to hear about it."
In our days the normal behaviour regarding this issue must be another one; both the employees and employers should recognise they face this issue. The key factor in coping with this problem is to recognize it first. On the one hand, for the employees there should be no shame in accepting the fact that the emotional abuse is present at workplace. The employers, on the other hand, must not deny that sometimes employees could have emotional problems that require attention.

2. How to Tell the Difference between Mobbing and Bullying

The term "mobbing" comes from the English verb "to mob" (meaning "move too close to someone") and the Latin word "mobile vulgus" ("the crowds' motions"). In an organizational environment, mobbing refers to aggression, persecution or psychological violence perpetuated by one or more employees to one or more colleagues. The aggressive employees' purpose is to isolate the victim in order him/her not to exert his/her tasks anymore.
The bullying term is very similar but the one who is aggressive is the manager, a person who has a higher position. His/Her behavior could be described:

- unjustified unequal treatment of certain employees;
- imposing arbitrary sanctions on an employee;
- assigning tasks that the employee cannot realistically fulfil;
- assigning humiliating tasks;
- social isolation;
- sexual harassment of an employee, etc.

The manager's purpose could be to determine the employee to resign.
On the other hand, a conflict is not considered mobbing or bullying if:

- it is an isolated incident;
- is the teasing at work;
- aims to motivate the less performant employees.

An inappropriate interaction or process needs to take place repeatedly in a period of about six months, to be considered mobbing. A mobbing type behavior more than once a week, for more than six months is considered the threshold value for the diagnosis of mobbing.
The researchers found five categories of effects on the victim of these two negative phenomena:

- it is not allowed to the victim to speak
- the victim is isolated
- the victim is disconsidered in front of the colleagues
- the victim is discredited from the professional point of view
- the victim's health is affectated.

3. The Most Common Tactics Adopted by Bullies

Studying deeply the categories of effects on the victim, Gary Namie, PhD, director of the Workplace Bullying Institute, says there are 25 tactics adopted by bullies; we list below 15 tactics that we consider the most common ones:

- Falsely accusing someone of "errors" not actually made.
- Using the "silent treatment" to "ice out" and separate from others.
- Exhibiting presumably uncontrollable mood swings in front of the group.
- Making up own rules on the fly that even she/he does not follow.

- Disregarding satisfactory or exemplary quality of completed work despite evidence.
- Harshly and constantly criticizing having a different 'standard' for the target.
- Starting, or failing to stop, destructive rumours or gossip about the person.
- Encouraging people to turn against the person being tormented.
- Yelling, screaming, and throwing tantrums in front of others to humiliate a person.
- Abusing the evaluation process by lying about the person's performance.
- Using confidential information about a person to humiliate privately or publicly.
- Retaliating against the person after a complaint was filed.
- Making verbal put-downs/insults based on gender, race, accent or language, disability.
- Making undoable demands– workload, deadlines, duties — for person singled out or assigning undesirable work as punishment
- Encouraging the person to quit or transfer rather than to face more mistreatment.

What an employee must do if his/her colleagues or bosses use the tactics listed above?
If a person becomes a victim of one of these two forms of psychological violence at work he/she must not hide this fact, on the contrary, he/she must give it a special attention because the effects could be dangerous. He/she must study which are the options to fix things. It would be useful for him/her to collect evidence and talk to the witnesses related to a possible testimony if he/she wants to submit a complaint.

4. Research Methodology, Results and Discussions

The research is a descriptive one; in order to implement this quantitative research, the investigation was chosen as a research method. In this view, there was drawn up a questionnaire. The data base has in total 100 first-line and middle managers from Bihor County, 50 women and 50 men. 48 people completed the questionnaire, which means that response rate is 48%. From those 48 people, 19 are women and 29 are men.
Our objective was to find out whether the respondents confront with mobbing or bullying at their workplace.
The results of our research are presented in Figure 1 and 2. We analysed the answers to the following questions:

- Was one of your colleague offended by other colleagues? (Figure 1)
- Were you offended by your colleagues? (Figure 1)
- Was one of your colleague offended by his/her boss? (Figure 2)
- Were you offended by your boss? (Figure 2)

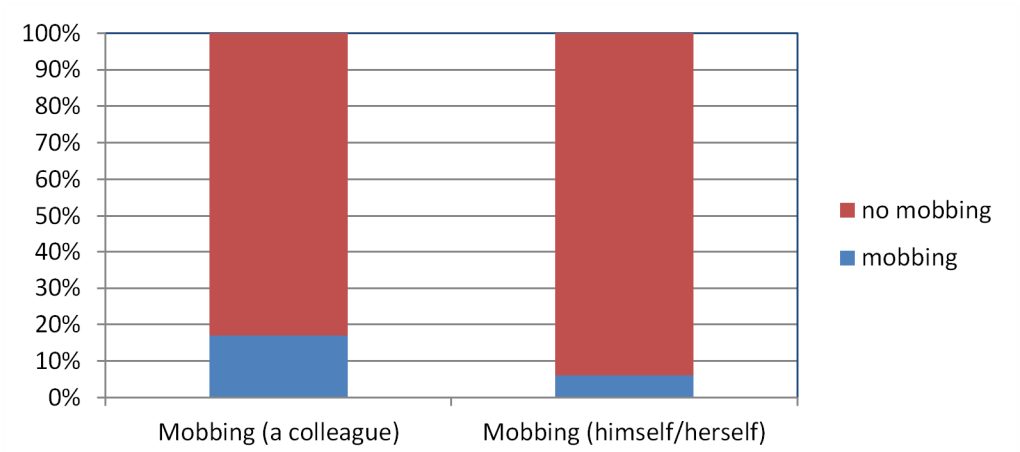

Figure 1: Mobbing at workplace

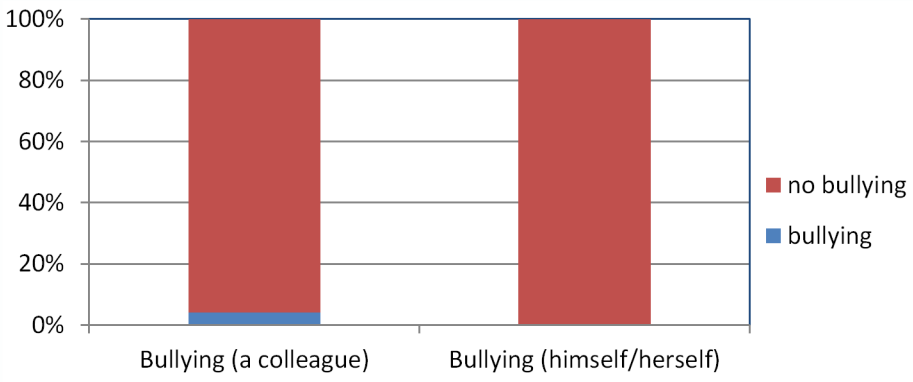

Figure 2: Bullying at workplace

- 17% (8 out of 48 persons) claimed that one of his/her colleague was offended by other colleagues
- 6% (3 out of 48 persons) claimed that he/she was offended by his/her colleagues
- 4% (2 out of 48 people) claimed that one of his/her colleagues was offended by his/her boss
- 0% (0 out of 48 persons) claimed that he/she was offended by his/her boss.

5. Conclusions

The two negative aspects we theoretically and practically analyzed in this paper have critical consequences on both the victim, by losing self-confidence, anger, frustration, unemployment and the company, by low productivity, loss of reputation and the key employees. People resort to mobbing to cover their own weaknesses and shortcomings; this is an unpredictable, irrational and unfair phenomenon. Mobbing victims are people qualified above average, they are enthusiastic, smart, dedicated people who are considered a threat by colleagues.

Unfortunately, both, the employers and the employees want to hide these negative aspects. In Romania, a study (http://www.ziaruldeiasi.ro/stiri/hartuirea-morala-la-serviciu-cum-o-identificati-si-cum-o-puteti-dovedi--126418.html) shows that 25.7% of participants said that a colleague was offended by their colleagues or bosses, but when it came to himself only 7.4% said they were offended. 24.7% said that a colleague has been criticized and 19.5% believe that a colleague do not integrate into the team. 41% of respondents admitted that the boss or colleagues screaming at each other at work. The research was conducted on a representative sample of the population aged 18 to 65 from four regions: Bucharest-Ilfov, South-Muntenia, North-West and Centre.

In our research the employees also did not recognize they are victims of mobbing or bullying. The respondents stated that their colleagues were offended by the colleagues or boss (in a small extent, indeed), but they were not.

The cruel truth is that the both phenomenon exist in our company and it is even harder to deal with them if the employers and employees do not recognize their presence at work place. The prevention of harassment at the workplace is an important element for better working conditions. We propose the following methods of prevention:

- to be formulated anti-harassment policy,
- to be improved psychosocial climate at work,
- to create an organizational culture with standards and values against bullying,
- the employees to have the opportunity to participate at trainings in conflict management area.

In the Romanian law there was a vacuum regarding harassment at the workplace until recently, but law 229/2015 have created in Romania the legal basis for sanctioning the harassment and discrimination at work.
The employees can prove harassed by various evidence accepted by law, such as photos, statements, documents, audio and video footage, emails containing insults or humiliation, etc. The employees may appeal several authorities: National Council for Combating Discrimination (CNCD), the Labour Inspection, and the National Agency for Equal Opportunities for Women and Men, courts or Anti-Mobbing Centres.

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DIFEFERENCES IN CANDIDATES INFORMATION NEEDS WHEN CHOOSING THE FACULTY TO ATTEND IN THE TECHNICAL FIELD

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Abstract: *Two important issues are currently at the forefront of national and European debates regarding sustainable economic development and access to education: fostering education and employment among the young and reducing attrition rates in higher education. These two aspects are even more important in the context of young people from disadvantaged backgrounds where various aspects such as lack of information or lack of funding challenge graduating from higher education. Romanian universities are currently faced with considerably high drop-out rates, with more than 30% of students not reaching graduation day. Yet, little quantitative analysis has analysed the causes generating such high levels of student attrition. The article takes on this challenge and aims to analyse the differences in candidates information needs when choosing the faculty to attend in the technical field between students coming from disadvantaged backgrounds and students not facing such difficulties. The approach focuses on the information search phase of the buying decision-making process by analysing what information is offered and sought at the moment students present themselves to the admissions office for the admission procedure. A number of 430 questionnaires asking first year students to rate the quality and importance of the various information received during the admission phase were analysed with the goals to: 1) identify the information students require in order to make a conscious, informed choice when choosing their specialty and 2) identify differences in information needs between students coming from disadvantaged backgrounds and students not facing such challenges. Results show information needs to be tailored according to the different socio-demographic characteristics of the candidates. The article then suggests concrete measures for developing the information phase during the admission process in order to thus contribute to reducing attrition, while at the same time foster higher education enrolment and completion of studies among students from disadvantaged backgrounds. The paper is particularly aimed at higher university professionals involved in the admissions process in the technical field by offering them concrete suggestions for selecting and adapting the information offered based on students backgrounds and interests.*

Keywords: *higher university; attrition; disadvantaged backgrounds.*

JEL classification: *M31; I24; I25.*

1. Introduction

European Union Member States are currently facing considerable socio-economic challenges with regards to ensuring sustainable economic development. On the one hand, Europe is characterized by an ageing population due to lower fertility rates and an increase in life expectancy, while at the same time experiencing high unemployment rates among its young people. According to Eurostat estimates (Eurostat, 2016), unemployment rates among young people (under 25 years old) continue to remain much higher (double or more) than the general unemployment rate in the EU28. In 2016, the youth unemployment rate was 18,4% in EU28, 2,2 higher than the general unemployment rate of 8,3%, the number of unemployed young people being of 4,169 million persons. This situation is generally

caused by two important aspects: 1) the difficulties young people face in finding employment due to inadequate skills, limited geographic mobility or inadequate wage conditions and 2) the fragility of their position on the labour market, young people generally being the most affected in conditions of economic crisis. In addition, one third of young people aged between 15 and 24 years old are facing the risk of poverty or social exclusion (Paolini, 2013).

One of the means identified for counteracting this situation aims at increasing the level of education among young people. In this context, the European Union is closely committed to stimulating the completion of university studies. This goal is included in the EU2020 Strategy which aims for at least 40% of those aged between 30 and 34 years old to hold a tertiary education degree by 2020 (EU2020 Strategy). Efforts have thus been made to increase access to higher education and develop a mass higher education system (BIS, 2014). These efforts have translated into an increased number of students enrolling for a higher education degree, also generating increased variety in the student population. At the same time, a surge in attrition rates was recorded, with large percentages of students not reaching graduation day. Higher education attrition was first defined by Tinto (1982) as "a student voluntary drop out is anyone who withdraws from the institution without completing the academic program in which the student was enrolled". The terms student attrition and dropout will be used in the content of this paper with this meaning.

1.1 Higher education attrition in European countries

In terms of current student attrition, research (Quinn, 2013; Arce et al, 2015; Aljohani, 2014; DeShields Jr et al, 2005) suggest this phenomenon to be common among European countries. According to a recent report of the European Commission (European Commission, 2015), higher education attrition percentages among European countries vary from 59% in Norway to 82% in the UK. More than 30% of students decide to withdraw from university before finalising their studies in Romania, while more than 50% of those dropping-out do so after their first year of studies (ANOSR, 2013). The main consequences of students' attrition include less positive labour outcomes for students deciding not to complete their studies involving lower employment rates and lower paid jobs (BIS, 2014).

Quinn (2013) identifies three six categories of factors determining university attrition: 1) socio-cultural factors including different community attitudes and the normalisation of dropping out for certain types of students; 2) structural factors including mainly pressures caused by poverty, class, race, disability or gender; 3) policy factors dealing with different strategic decisions that impact on the ability to complete studies negatively; 4) institutional factors including cultures and practices that do not support students finalise their studies; 5) personal factors such as various health issues or traumatic experiences and 6) learning factors including the lack of appropriate learning strategies and a mismatch between the students interest and the subject chosen.

The case of students from disadvantaged backgrounds was also analysed in the literature with research results indicating that, although the lack of resources plays an important role in the drop-out decision, the high rate of dropout among this category of students is generated by a mix between poor choice of course, inaccurate expectations of student life and negative perceptions with regards the university environment (BIS, 2014). This is consistent with the general characteristic of young people coming from disadvantaged backgrounds who are faced with a lack of sources of support and advice. Many of them are also the first ones in their family to attend higher education so they have no previous similar experience in the immediate environment to relate to. Furthermore, they often face negative feedback from their closed ones who tend to discourage them from pursuing tertiary education in favour of identifying an immediate employment that would contribute to ensuring financial resources for the family (Forsyth and Furlong, 2003). Because of this, they are often more likely to choose a course that is not suitable to them.

1.2 Information search and decision-making in higher education admissions

The model of consumer buying decision-making was first developed by Engle, Blackwell and Kollat in 1968. They identified 5 steps of this process: 1) need recognition meaning the gap existing between the actual situation the consumer finds themselves in and the ideal, desired state), 2) information search implying the efforts made by the consumer to seek information about possible solutions to the problem they are facing, 3) alternative evaluation where the different alternatives are being considered, ranked and judged upon, 4) purchase decision – the consumer completes the purchase and 5) post-purchase behaviour where the consumer evaluates the adequacy of the choice made with regards to the original need (Kotler and Keller, 2006; Kotler and Armstrong, 2008).

Information is key in the process of selecting the right course of studies at university level. A lack of complete and correct information in this regard often leads to students selecting a line of studies which they then find to be inappropriate and that can further lead to student dropout.

Consumers generally engage in two types of information searches: internal and external. The first one implies that the consumer identifies alternatives from their memory, while the second means that the consumer will ask for information among their peers, perform research using magazines, websites and various other sources of information available. When faced with information on a certain topic, consumers will generally follow the AIDA model, which stands for Attention, Interest, Desire and Action (Rawal, 2013). This model explains the four phases consumers will go through. The first stage means that the information provided needs to capture the attention of the audience that will then become interested in the product or service, reach the point where they desire it and finally take action to purchase the product or service.

The literature available examining students' higher university choice process generally considers the role played by personal attributes such as parental background and the socio-economic status (Drewes and Michael, 2006). The topic of how students seek information and where they search for it remains, to our knowledge, little examined. In this context, the article aims to analyse the extent to which information provided by the admissions staff during the admissions process is adequate for choosing the right path of studies and what are the different information needs among students coming from disadvantaged backgrounds and those from well-off families. The added value of the article lies in the fact that it explores an concrete evidence from first year students with regards to the impact information available during the admissions process has on their potential for drop-out as well as then suggesting practical steps universities can take in order to aim at reducing attrition levels by reducing course choice mismatch through adapting the type of information offered based on the different categories of student candidates. The article is particularly aimed at university staff involved in the admissions process and university admissions policies.

2. Research Methodology

2.1. Research objectives

The aim of the paper is to identify whether differences exist in candidates information needs when future students register within the admissions office of a faculty in the technical field. Two groups were analysed: candidates with disadvantaged backgrounds and candidates not facing such difficulties. The specific objectives of the study are therefore the following:

a) Ranking the information received by students within the admissions office based on the relevance they attributed to it;

b) Analysing students' satisfaction level with the information received at the admissions bureau when applying to a faculty in the technical field;

c) Comparing the results obtained for the two analyses above for the two categories of students considered: students with disadvantaged backgrounds and students with so such difficulties.
d) Analysing the particularities of the information needs of students with disadvantaged backgrounds.

2.2. Empirical study description

The empirical study was conducted using a questionnaire distributed for online completion to students from the Central and North Western part of Romania enrolled in the first year of studies within the Technical University in Cluj-Napoca. The *simple sampling method* was used.

The sample size

To dimension the sample size, we used the following formula (Smith, 2013):

a) $n = t^2 \times p \times \frac{1-p}{e^2}$, where:

n = sample size;
t = probability allowed (1.96 was chosen for a confidence level of 95%);
p = 0.5 (usually);
e = accepted limit of representativeness error; e = 4 %

Hence, for this research the computed sample size is:

$$n = 1.96 \times 0.5 \times \frac{1-0.5}{0.05^2} = 3.8416 \times 0.5 \times (\frac{0.5}{0.002209})$$

n = 434.76

Moreover, we corrected the sample size using the following formula:

b) $n_1 = n/[1 + \frac{n-1}{N}]$, where

n_1 = corrected sample size;
n = sample size;
N = the total population.
Therefore, after applying the correction formula we received the following result:

$$n = \frac{434.76}{\left[1 + \frac{434.76 - 1}{450000}\right]} = \frac{434.76}{1.00096391} = 434.341334$$

According to available statistical data, there were 450,000 students in Romania between the years 2015-2016 (insse.ro) *hence, our sample* includes 430 respondents. The survey was conducted between March and April 2017.
The questionnaire included both open and closed questions. It comprised 55 items, grouped in 4 sections: information required (satisfaction scale and importance scale), students behavioural traits (multiple answers questions, attitudinal scale), academic performance (open, multiple answers questions) and identification questions (demographic, economic, aspects related to identifying students with disadvantaged backgrounds).
The sample included 50.2% female and 49.8% male respondents among first year students with the Technical University in Cluj-Napoca. A percentage of 18.6% of the respondents are from the rural area and 72.1% from the urban area, with a further 6.7% from the sub-urban area (max. 15 km to a city).
Among the respondents, 145 students were registered as having a disadvantaged background as follows: orphans (7.2%), candidates with parents that work abroad and are tutored by relatives (4.2%), belonging to an orphanage (1.4%) and coming from rural areas (76%). None of the respondents had disabilities or belong of Roma ethnicity.
Respondents' accommodation arrangements is presented in Table 1 below.

Table 1: Students' accommodation

		Frequency	Valid Percent	Cumulative Percent
Valid		82	19.1	19.1
	University campus	165	38.4	57.4
	Rented apartment	111	25.8	83.3
	Living with my parents	44	10.2	93.5
	I have my own apartment	6	1.4	94.9
	Staying with relatives	18	4.2	99.1
	Commuting	4	.9	100.0
	Total	430	100.0	

Source: computed from the questionnaire

As shown in Table 1 above, 38% of respondents live in the university campus, 25.8% are living in rented apartments and 10.2% are staying at home with their parents.
All respondents are following a degree in the electrical profile of the Technical University in Cluj-Napoca. The majority of the students in the sample are part of the Electronics, Telecommunications and Information Technology Faculty (40.5%), followed by students of Automation and Computer Science Technology (32.1%) and Electric Engineering students (24.4%).
The monthly disposable income of the students in the sample, namely the amount of money they have to spend after paying accommodation, ranges from 55 Euro (19.8%) to 110 euro (24.4%) and 165 Euro (13.5%). Only 12.8% of students had a larger disposable income amount (more than 165 Euro).
Data was computed using SPSS24 using cluster analysis, frequencies, cross tabs assessment and bivariate correlations.

2.3. Research findings and discussion

The questionnaires capture respondents' attitudes towards the information they consider relevant when they are in the "action" phase (see AIDA models) referring to the buyer decision-making process. The degree of students satisfaction with regards to the various aspects included in the analysis can represent a basis for adapting the admission strategy of the university in terms of how appropriate, complete, complex and true to the student realities the information they provide is.

Students' ranking of the relevance of the information provided

When candidates present themselves to the admissions office to register for a certain faculty, their decision is already made or they at least have a short list of preferred faculties. However, the type and amount of information offered by the admission staff still plays an important role in students consolidating their decision. In this stage, the information provided by the staff can help build a strong positive image of the faculty and determine more intrinsic satisfaction among candidates. This step will be therefore crucial for a long term efficient marketing strategy of a faculty.
For the Technical University in Cluj-Napoca, the admission consists either in a mathematics exam for some faculties, or is based on calculating a students' admission average based on various proportions of the grades they obtained in their high-school final exams. No entrance exam is to be taken in this latter situation which allows candidates to opt for a range of faculties, paying just one single admission fee. In this particular situation, if the candidate has not decided for a certain faculty, he will most often choose one from the faculties he had shortlisted previously based on the amount of information, its appropriateness and even the manner it is delivered by the admissions staff. For these candidates, offering tailored

information, adapted to their needs, is crucial for choosing the faculty that is the most appropriate for the candidates' character, skills, needs or wishes.
Table 2 below presents the importance ranking based on first year students answers of the different information candidates are presented to by the admissions staff. A 5 points importance scale was used (1 - unimportant; 5 – important).

Table 2: Importance ranking of admissions information

	Mean	Std. Deviation
Public relation office	3.42	1.276
Canteen	3.47	1.334
Study counsellor	3.48	1.212
Accommodation	3.57	1.328
Schedule	3.61	1.246
Practical activity (stages)	3.61	1.210
Scholarships	3.64	1.267
Academic curricula	3.76	1.101
Lectures and practical activities location	3.77	1.196
How courses take place	3.78	1.116
Course assessment	3.80	1.133
The student life in Cluj-Napoca	3.89	1.266
How practical applications take place	4.02	1.182
Job opportunities	4.09	1.158
What kind of jobs I could practice when I graduate	4.12	1.083
Valid N (list wise)	430	

Source: computed from the questionnaire

Firstly, it is worth noting that all types of information offered by the admission staff were considered important enough by respondents (all items have a mean score above 3 points). Secondly, the importance of data can be clustered in 3 groups: *very important* (4 to 5 points), *important* (3.5 to 4 points) and *average important* (3.4-3.5 points). The most relevant information for candidates is that related to their future job: the professions future students can exert when graduating, along with the local job opportunities. Very strongly linked to those issues is also the third category of information – how the practical skills and competences are built: lectures, curricula, projects. The answers reveal a very pragmatic orientation (very anchored into the actual macro business environment) which is specific to technical sciences students.
The next important category of information comprises facts related to student life in Cluj-Napoca, details about the lectures and practical activities –the curricula, location, and the lecture schedule. The administrative details are also appreciated as relevant: the schedule, the accommodations facilities and the scholarships regulations.
The admission staff should not insist on providing extra information regarding public relation offices, canteen or the study advisor.

Candidates' satisfaction regarding the information received from the admissions office when applying to a technical university

We analysed students' satisfaction regarding the information received during the admission process. A 5 point Likert scale was used (1 – not satisfied; 5 – very satisfied). Results are presented in Figure 1 below.

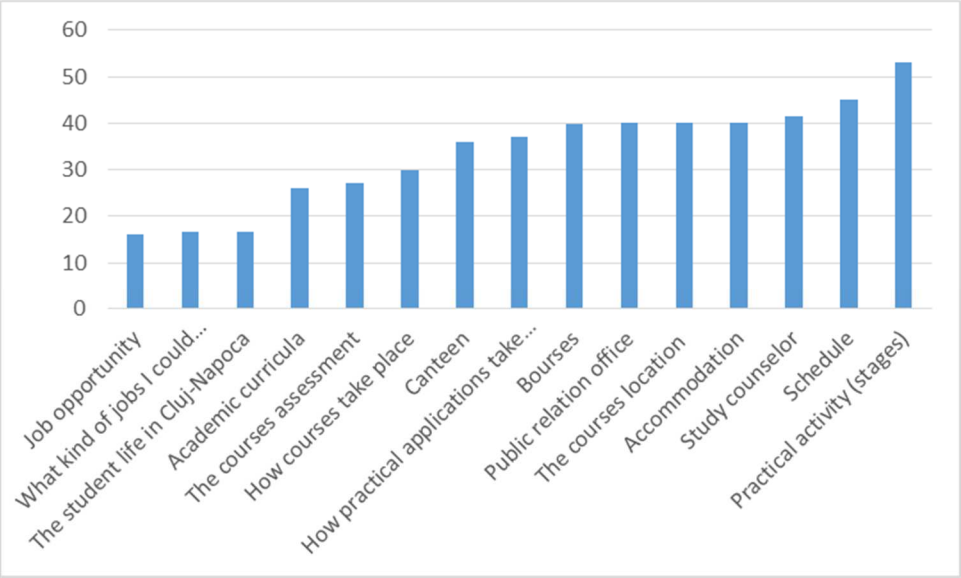


Figure 1: Candidates satisfaction with the information received
Source: computed from the questionnaire

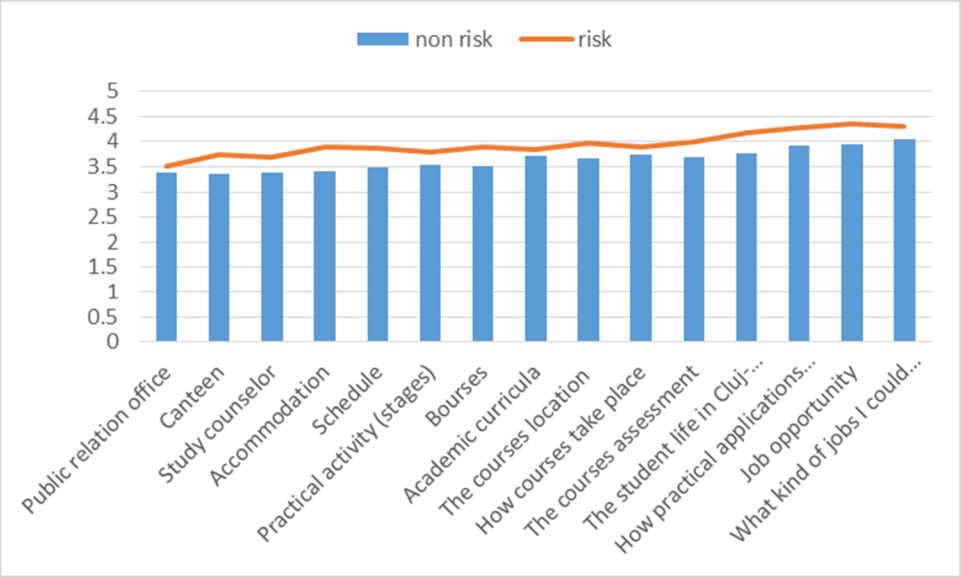
A correlation in respondents' perceived importance and satisfaction can be observed. Pearson correlation is strong and negative (p=0.89), meaning that a lack of satisfaction with the information provided is present for issues students are interested in. The highest level of dissatisfaction was recorded for aspects relating to information on future employment, followed by information on the student life in Cluj-Napoca. The next category of information that students are *little satisfied* with is related to lectures.
It is worth emphasizing that answers offered by first year students who have experienced student life for one semester are significant as they have had the opportunity to be confronted with various decisional problems regarding every day and academic life. They have often found themselves in the position to analyse, prioritize and evaluate alternatives. In this period, students are more independent, and the decision is more decentralized than in their earlier period. The lack of information can slower or even interfere with the decision making process. Based on these results, it is recommended that the admission staff emphasize employment opportunities after graduation, along with the living costs, possibilities for covering at least the physiological needs such as accommodation, canteen, security needs and socialization needs. Furthermore, offering students more information regarding lectures, the practical activities and assessment methods could also contribute to a more positive experience with the admissions office as well as helping students adjust their expectations regarding university academic life.

Comparing information needs for the two segments: students with disadvantaged backgrounds and students with no such difficulties

Students with disadvantaged backgrounds for this study included the following categories: orphans, students having parents working abroad and being tutored by their relatives, those coming from an orphanage, students with disabilities, belonging to the Rroma minority or from rural areas.

Figure 2 displays the comparative assessment importance rankings for the information provided by the admissions staff for the two groups

Figure 2: Comparison in information needs for students with disadvantaged backgrounds and students facing no such difficulties



Source: computed from the questionnaire

The results presented above indicated a stronger tendency of candidates from disadvantaged backgrounds to rely on the information received from the admission staff. As shown above, these candidates indicated higher scores for the information offered to them during the admissions stage. This result was not surprising given the fact that research shows (BIS, 2014) these candidates are often faced with considerable lack of information regarding what student life entails.

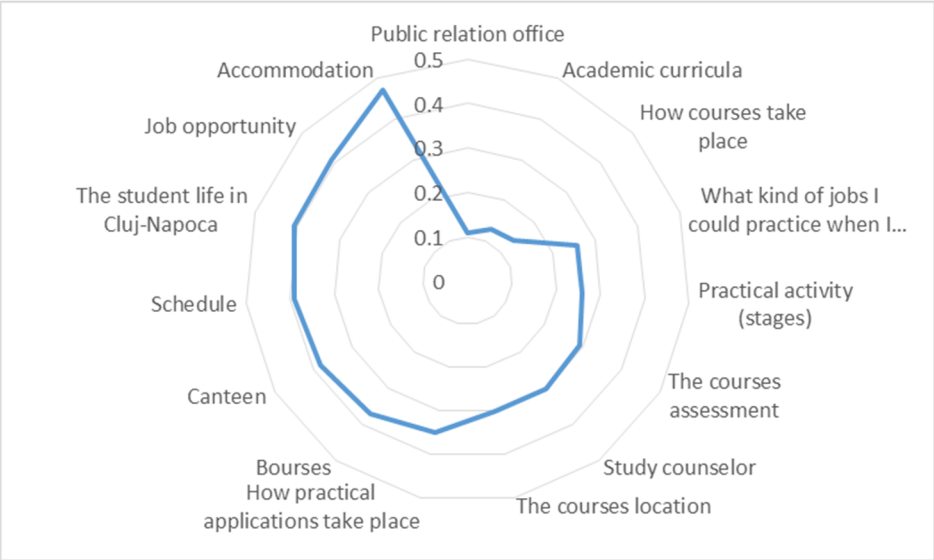


Figure 3: Disparities in the information needs for the two groups analysed
Source: computed from the questionnaire

It is highly probable that their primary group of reference could not share with them information regarding what to expect in tertiary education. Moreover, the literature review indicated that this group is even discouraged to attend a faculty. When analysing the data more in depth, the greatest disparity among the two groups is registered in the case of information regarding the basic needs: accommodation, canteen, financial support. Figure 3 above comprises a visual presentation of the results.
According to our results, candidates with disadvantaged background are more interested in information regarding accommodation, employment opportunities and living costs. An interesting result was there keen interest in the scheduling details. This could be explained by the fact that generally, technical universities, require compulsory attendance for practical activities and project classes so having a part-time job during the semester could be challenging.

Segmentation of information needs for students with disadvantaged backgrounds by categories

Findings reveal that orphans are the most interested in the future employment opportunities, along with information regarding the public relations office and the study advisor. Respondents from orphanage are most interested in academic life: lectures and practical activities details, location and assessment methods. Surprisingly, the assumption that financial support in the form of scholarships could be an issue valuable for this category of candidates is not supported. An explanation could be that orphans already know they will receive financial allowance because of the disadvantaged situation. Candidates with parents working abroad who are in the care of their relatives are interested especially in students' life details and accommodation. Candidates coming from rural areas are interested primarily in administrative aspects such as scholarship regulations, schedule and location of the lectures/practical activities.

4. Conclusion

A faculty's admission staff represent the first contact of candidates with the institution. They are therefore the marketing front line officers and the first persons candidates interact with when deciding to attend a certain college. Based on the research findings we recommend the admission staff to adapt the type and amount of the information provided to the demographical, economical, psychological and cultural background of the future students. The 430 respondents of this empirical perceived the information provided by the admissions staff to be delivered following a certain strategy. They perceived the admissions staff as promoters of educational programs and registered an above medium satisfaction level with the information provided. They did not consider the information obsolete or not covering the aspects they were interested in, but rather indicated an interest for more details and more practical, concrete descriptions and examples. An important correlation was identified in the sense that student satisfaction with the information offered was indirectly related to the relevance attributed to the information provided.
Answers also indicated which are the most significant categories of information from the point of view of first year students: future employment opportunities, job flexibility, information regarding the academic process (lectures, practical activities, location of the educational activities). Students with disadvantaged backgrounds allotted higher importance scores for all the information categories analysed. The largest disparities were registered in the case of information about accommodation, job opportunities and student life. A surprising result was the fact that no particular difference emerged between the perception of the importance and relevance information provided regarding financial support in the form of scholarships between students with disadvantaged backgrounds and students facing no

such difficulties. This could be explained by the level of disposable income of students in the sample. Based on these findings we can conclude that the information needs of candidates wishing to pursue a degree in the technical field is determined by rational, rather than emotional reasons. Hence, an integrated, strategic and efficient academic marketing cannot operate in an organization that is not truly customer oriented and systematically interested in the candidates' needs, desires and expectations.

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ONLINE TRADING PLATFORMS. A SITUATION ANALYSIS OF 2016

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Abstract: *Competitiveness between financial investment services companies manifests on all levels, including the distribution channels. Therefore, the investment companies are looking for cheaper and easier alternatives for investors to trade. So, online trading platforms have been developed to offer investors the opportunity to make their own transactions without the help of a stockbroker. Online trading platforms offer multiple benefits to users, such as reduced fees, portfolio in real time, transfers of cash or shares in/out to/from their accounts, access to multiple markets (SSIF Broker and Tradeville are offering to their clients access to over 100 exchanges markets), fast transactions, transparency of transactions, access to technical and fundamental analysis, news alerts etc. Assuming that in Romania the number of experienced retail investors is growing and they don't need consultancy in trading, our aim is to discover the strengths and the weaknesses of online trading platforms. We analysed the online trading platforms of 20 Romanian financial investment services companies (SSIF). In essence, on each SSIF Web page and/or online platform we have sought information about: content, minimum amount required to open the account (cost), time (period of time in which the order appear in the system used by Bucharest Stock Exchange - Arena) and the level of platform interactivity. Please note that where the information was not found, its absence was noted. This doesn't necessarily mean that the SSIF doesn't have this element, but it means that we didn't find any information. We found that time criterion was the winner element, and most of the companies described it well. The most neglected element of the platform is interactivity with visitor/ investors (non-stop assistance, alerts, etc.).*

Keywords: *online trading platforms; retail investors; stock market; financial investment services companies (SSIF).*

JEL classification: *M31.*

1. Introduction

Regardless the size or scope of activities, many companies are making efforts to develop businesses on the internet (Berthon et al., 1999). There are studies regarding the influence of the Internet (World Wide Web) on financial services development (Gordon, 1998). Online trading is an important factor that increases volatility and volume of transactions on stock markets (Choi, 2002; D'Avolio et al., 2001; Barber & Odean, 2000; Oh et al., 2007; Davis et al., 1999). All these studies show that online transactions are important in the development of financial markets (Barber & Odean, 2008). There are very few studies in Romanian literature regarding this area (http://www2.bvb.ro/Investors/files/Survey%20H1%202014.pdf, Iancu, 2015).
Online platforms use the Internet as a medium for transactions. Experts say that in order to trade online, the investment firm must prove strategic flexibility, ability to be trusted and information technology (Saini & Johnson, 2005).

2. Methodology

We analysed the online trading platforms of 20 Romanian SSIF's. In essence, on each SSIF Web page and/or online platform we have sought information about content, cost, time and

the level of platform interactivity. Please note that where the information was not found, its absence was noted. This does not necessarily mean that the SSIF's do not have this element, but it means that we didn't find any information.
The choice of these criteria came from our experience as stockbroker and marketing specialist. Some of the most important criteria that the evaluators have followed and noted are in Table 1.

Table 1: Most important criteria used for the evaluation of online trading platforms

Content	Cost	Time	Interactivity
Online trading markets	Minimum amount required to open the account	Alerts on the platforms	Possibility of consulting tax liabilities
Order type on online platforms		Portfolio in real time	Forums or chat rooms
Online trading products		Market visualization on all price levels	Non-stop assistance
Services offered on trading platforms		Electronic money transfer	Demo version of the online trading platform
		Voice commands	Platform for smartphones
		SMS alerts	
		Average time of processing orders	

3. Results

3.1. Content

Regarding the content we searched information about:

- The *markets* where the clients can trade (BSE and International markets);

Although the logic tells us that all investment firms that have an online trading platform in Romania, offer the possibility to trade on BSE, our data shows that only 13 SSIF have information about this (Table 2). The other (7) SSIF don't have any information about the facility of online trading on BSE and that could have two explanations: either the stock broker has to be contacted for negotiating the fees or they don't encourage online trading because of the technical issues.

Table 2: Online trading markets, used by Romanian SSIF's

SSIF Market	BSE	International Markets	No details
Super Gold Invest	yes		
Intercapital Invest	yes		
SSIF Broker	yes	yes	
Alpha Finance	yes	yes	
BT Securities	yes	yes	
Confident Invest	yes		
Estinvest	yes		
SSIF Market	BSE	International Markets	No details
Goldring	yes		
Ieba Trust	yes		

SSIF Market	BSE	International Markets	No details
IFB Inwest			yes
Interfinbrok Corporation			yes
Muntenia Global Invest			yes
Oltenia Grup Invest			yes
Prime Transaction	yes		
Raiffeisen Bank	yes		
Romcapital	yes	yes	
S.S.I.F. Vienna Investment Trust			yes
Swiss Capital S.A			yes
Tradeville	yes	yes	

- The type of *orders* used in trades (market, limit, stop loss/take profit, stop, order cancels order, parent & contingent, trailing stop, stop guaranty, others)

Of the 20 SSIF, 12 web pages do not provide information on the types of orders accepted by the online trading platform. The most common orders are market orders, limit and stop loss / take profit. At least three SSIF allow customers to enter all orders through an online trading platform (Table 3.). According to Adrian Pop (Deputy Manager of SSIF Broker), "the number and type of orders (on the online platform) rely only on the imagination of the creator of the online trading platform and the type of customers to whom it is addressed. The costs do not differ, and in terms of technological capabilities, the presence of several types of orders does not require additional efforts. "

Table 3: Online trading orders

Order type on online platforms	The number of SSIF's on which we found information about orders type
Market	7
Limit	8
Stop loss/take profit	6
Stop	3
OCO (Order Cancels Order)	4
Parent & contingent	4
Trailing stop	3
Stop guaranty	3
No data	12

- The *products* which can be traded: shares, futures, options, bonds, fund units, certificates, warrants, FOREX, others).

As shown in Table 4, 9 out of 20 SSIF's which provide online trading platforms do not provide information about the products traded, and most companies offer the possibility to trade shares online.

Table 4: Online trading products

Online trading products	The number of SSIF's on which we found information about trading products
Shares	11
Future	5
Options	6
Bonds	6
Indices	4
CFD	5

Online trading products	The number of SSIF's on which we found information about trading products
ETF	6
Warrants	3
FOREX (C4.9.)	4
No data	9

- The *services* offered on trading platforms: technical analysis, fundamental analysis

We considered the existence of elements such as technical analysis, fundamental analysis and the possibility to customize the online trading platform extremely important. Why? The results of a study on Romanian investor behaviour (Iancu, 2015) shows that subjects consider as important and very important those two types of analysis. Therefore, access to technical and fundamental analysis should be easy. Our study shows that only 8 SSIF provide fundamental analysis, and 7 SSIF provide technical analysis. On 12 trading platforms, there was not found any information about these services. Regarding the possibility of personalizing the trading platform in accordance with the wishes of investors, our analysis shows that only 6 SSIF do.

3.2. Costs

- Minimum amount required to open an account

Data about this criterion was found on only eight SSIF webpages (Table 5). We observe that the amount required to open an online account, is between 0 (two SSIF's) and 10 000 lei. Tradeville requests the highest value. We can say that there is a big difference (within the minimum cost required), even though, at least in theory, costs of development and maintenance platforms are identical. However, Tradeville could justify higher initial cost by the fact that the company carries out an aggressive promoting campaign and has one of the most complex platforms.

Table 5: Minimum amount required to open an online account

SSIF's	Minimum amount required to open an online account (lei)
Prime Transaction	0
SSIF Broker	0
BT Securities	1500
Super Gold Invest	3000
Romcapital	3000
Alpha Finance	3500
Intercapital Invest	3500
Tradeville	10000

3.3. Time

Time management criterion is best described in SSIF's web pages (Table 6). We searched for information about: alerts on the platforms, real time portfolio, and market visualization on all price levels, electronic money transfer, voice commands, SMS alerts, and average time for processing orders.

We observe that most of the SSIF provide information about real-time viewing portfolio. Two SSIF provide information about average speed of processing orders (2 seconds).

There is no official information about the gap between the time an order is placed in the "Arena Trading System" and when the order appears on the market. From personal experience, we can say there is no gap between them.

From our point of view, an important role in reducing the trading time is played by "SMS alert". With such alerts, clients can be warned about changes in the market. Only two SSIF provide this type of alerts.

Time management criterion is best described in SSIF Broker and Tradeville web pages and worst in Confident Invest (2 Point), Interfinbrok Corporation (1 Point) and Prime Transaction (1 Point)
Most of the information about time is linked to real time portfolios, alerts on the platform and personalized platforms.

Table 6: Time criterion

	Alerts on the platform	**Real time portfolio**	**Market visualization on all levels**	**Electronic money transfer out /in the stock market**	**Voice Commands**	**SMS Alerts**	**Average speed of processing orders**	**Total**
BT Securities	1	1	1	1	0	0	0	**4**
Confident Invest	0	1	0	1	0	0	0	**2**
Estinvest	0	1	1	0	0	0	0	**2**
Goldring	1	1	0	0	1	0	0	**3**
Intercapital Invest	1	1	1	1	0	0	0	**4**
Interfinbrok Corporation	0	1	0	0	0	0	0	**1**
Prime Transaction	0	1	0	0	0	0	0	**1**
SSIF Broker	1	1	1	1	0	1	2 sec	**6**
Super Gold Invest	1	1	1	0	0	0	2 sec	**4**
Tradeville	1	1	1	1	1	1	0	**6**
Total	**6**	**10**	**6**	**5**	**2**	**2**	**2**	

3.4. Interactivity

Interactivity criterion is analysed using information about the possibility of consulting tax liabilities, forums or chat rooms, non-stop assistance, demo version of the online trading platform and trading platform for smartphones (Table 7).

Table 7: Interactivity criterion

SSIF	**Tax liabilities**	**Forum/chat**	**Non-Stop Assistance**
BT Securities	0	0	1
Tradeville	1	1	1
Estinvest	0	0	1
Goldring	1	0	0
SSIF Broker	1	1	0

Our analysis (Table 7) confirms the results of previous empirical studies (Petric, 2011), namely, the criterion "interactivity" is the most neglected in the SSIF web pages design. The possibility of consulting tax liability, although very important, exists only at: Tradeville, Goldring and SSIF Broker. Finally, about chat rooms / forums we found information only on Tradeville and SSIF Broker.
The existence of *demo version* of online trading platform;

By creating a demo platform, the customer is given the opportunity to find the product that suits him better and see real platform capabilities. Our analysis led to the observation that only 6 out of the 20 SSIF's offer a demo platform: Intercapital Invest, SSIF Broker, Estinvest, Goldring, and Tradeville Romcapital (Table 8).

Table 8: Trading platform for smartphones

	Trading platform for smartphones
BT Securities	0
Confident Invest	0
Estinvest	0
Goldring	0
Intercapital Invest	1
Interfinbrok Corporation	0
Prime Transaction	0
SSIF Broker	1
Super Gold Invest	0
Tradeville	1

4. Conclusion

Online traders are a presence increasingly evident on the stock market. Therefore, SSIF should take into account when designing marketing strategies for achieving flexible platform tailored to the needs and desires of investors and supported by cutting-edge technological capability. None of the online trading platforms we studied meets these conditions. The time criterion is best described on SSIF Webpages. The most neglected element of the platform is the interactivity with the visitor.

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ORGANIZATIONAL CULTURE: KEY ISSUES. A LITERATURE REVIEW

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Abstract: *In the today's global, knowledge-based digital economy, the organizational culture becomes a strategic source of sustained competitive advantage. Therefore, the organizational culture is an increasingly important issue of academic research, education, organizational theory and management practice. And there are good reasons for this: the cultural dimension is critical in every aspect of the organizational life. Even in those organizations where cultural issues receive little overt attention, the way people in the organization think, feel, appreciate and work is guided by socially-shared ideas, meanings and beliefs of a cultural nature. In most of the nowadays' organizations, organizational culture enjoys a particular attention and is considered a key factor. However, even in those cases where senior managers have shown a strong awareness of the importance of culture, there is often a lack of a deeper insight and understanding of how people and organizations work in terms of culture. Culture is as important as it is complex, so it is difficult to understand and "use" it in a rigorous way. The famous business management guru Peter Drucker said that "culture eats strategy for breakfast". This picturesque phrase comes to advocate the importance of a thorough understanding of the concept that we wish to describe in this study. To this end, we intend to present a summary review of the specialized literature we have studied in order to rigorously understand what the concept of organizational culture actually implies. In this regard, in the first part of this article we present an overview of the concept of culture and the way it has been approached. In the second part of this article, we describe the basic aspects of the concept of organizational culture, such as the organizational culture "vehicles" and flows and the levels, the types and the "weaknesses" of the organizational culture. In our survey we have applied the qualitative research methodology, consisting of collecting documentation and texts. As for the data analysis, we resorted to the content analysis method.*

Keywords: *Culture; organizational culture.*

JEL classification: *M1; M14.*

1. Culture: Concept and Approaches

Management Guru Peter Drucker famously stated that "culture eats strategy for breakfast" (Kinicki & Mel 2016: 480). We understand from this legendary saying that however good the vision and strategy of a company might be, they cannot be put into practice unless the organizational culture is aligned to the corporate strategy.

Specialized literature generally regards culture as the expression of the material and spiritual values created by man and of the means designed to convey them to the world. In other words, culture refers to a model of human activity, as well as to various symbolic structures that make human activities meaningful, thereby being considered as the way of life of an entire society, encompassing human behavior, language, religion, rituals, and codes of conduct and belief systems.

Before discussing the organizational culture concept as such, we will try to explain what the culture concept means in a broad sense. Thus, according to Keyton (2005: 17), who quotes Roeber & Kluckhohn, 1952, p. 18, culture was initially a concept applied to social groupings that were geographically distinguished from one another, and became the focus of anthropological studies. One early definition provides that culture consists in "*patterned*

ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, which constitutes the distinctive achievements of human groups, including their embodiments in artefacts; the essential core of the groups consists of traditional ideas and especially of their attached values." This definition refers to the concept of culture in general, which characterizes groups of people outside an organization, for example, ethnic groups and nations.

A famous author in the field of organizational culture, Hofstede, argues in his works that culture is "the collective programming of the mind that distinguishes the members of one group or category of people from another."

Hofstede, who researched cultural characteristics of more than 70 countries by surveying 116,000 employees working for 72 IBM subsidiaries around the world (Hofstede et al. 2012: 16), also argues that every person carries within himself patterns of thinking, feeling and potential actions, which were learnt throughout his lifetime. Hofstede defines culture by an analogy with the computer programming, calling these patterns of thinking, feeling and potential acting of the individuals "*mental programs*" ("*software of the mind*", "*thinking software*" or "*mental programming*", in analogy with computer programming), meaning that the behavior of an individual is to some extent predetermined by his or her mental program, which shows what reactions in an individual are possible, predictable and explainable.

Based on this approach, we may see culture as a system of values that applies to any group of people, not just societies or nations. Regardless of perspective, anthropologists search for the "meaning underlying human creations, behaviors and thoughts, by observing cultural aspects" (Sackmann, 1991, p.14) (Keyton (2005: 18).

In brief, the definitions of the term "culture" differ with the perspective from which it is addressed. Par excellence, the concept of culture falls within the scope of anthropology. From this perspective, the term culture is most commonly used for tribes or ethnic groups (in anthropology), for nations (in political science, sociology and management) and for organizations (in sociology and management). Geert Hofstede even speaks of the culture of occupations (for instance, engineers versus accountants or academics from different disciplines). The term can also be applied to genders, generations or to social classes. However, changing the level of aggregation studied changes the nature of the concept of 'culture'. Societal, national and gender cultures, which children acquire from their earliest youth onwards, are much deeper rooted in the human mind than the occupational culture acquired at school or than the organizational cultures acquired on the job, which changes when people take a new job. Societal cultures reside in what are often unconscious values, in the sense of broad tendencies to prefer certain states of affairs over others.

Culture influences every aspect of life, yet it is not static; rather it is a process in a constant state of flow and adaptation to new contexts, demands and needs. Culture is not a deterministic force, but rather a subtle and often subliminal pattern of thinking that describes the "organization of values, norms and symbols which guide the choices made by actors and limit the types of interactions that may occur between individuals." (Parsons & Shils, 1990).

2. Organizational Culture: Key Issues

This section is an overview of the concept of organizational culture. According to Kinicki & Mel (2016: 480) organizational culture is "the set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about and reacts to its various environments". This definition reflects the four characteristics of the organizational culture:

- *Culture is shared* - organizational culture consists of beliefs and values that are shared by a group of people.
- *Culture is learned* – culture is passed on to new employees through socializing and mentoring. We wish to emphasize here, right from the start, the fact that

organizational culture is not innate (i.e. something we are born with), but it is learnt and "inherited".

- *Culture influences behavior at workplace* - this explains the saying "culture eats strategy for breakfast."
- *Culture impacts results at multiple levels* – culture influences results at individual, group / team and at organizational levels.

Naqshbandi & al (2015: 2125) argue that organizational culture has been defined in many different ways by the many different researchers (Ott 1989; Schein, 1990; Hofstede et al, 1990; Keesing, 1974, Schein, 1993; Denison, 1990).
Figure 1 illustrates how the organizational culture is formed and maintained. Culture derives from the philosophy of the organizational founder and strongly influences the selection criteria as the company grows. The actions of the top management set the overall environment, including what is deemed to be an acceptable behavior and what is not at the workplace (Robbins & Judge, 2013: 523).

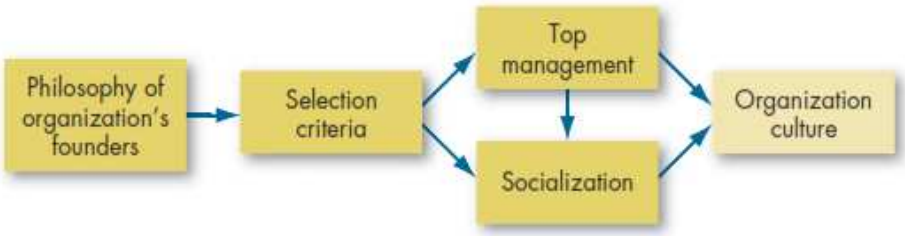

Figure 1: How organization cultures form
Source: Robbins & Stephen, 2013:523

Figure 2 shows the conceptual framework required to understand the "vehicles" and the effects of organizational culture. The following five items are organizational culture vehicles (Kinicki & Mel, 2016:481):

- The founder's values
- The industry and business environment
- The national culture
- The organization's vision and strategies
- The behavior of leaders

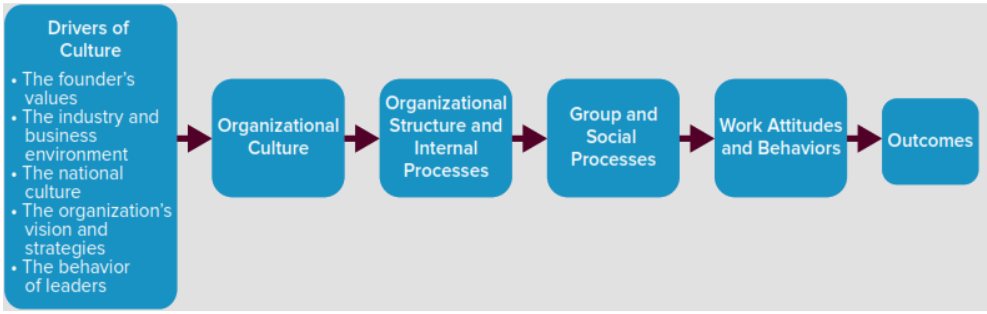

Figure 2: Drivers and flow of organizational culture
Source: Kinicki & Mel, 2016:481

The authors mentioned above believes that organizational culture influences the organization's structure and its internal processes.
Robbins & Judge (2013: 512) believe that organizational culture refers to a common perception held by the organization's members, a system of shared meanings that

differentiates the organization from other organizations. The authors distinguish the following seven primary characteristics that reflect the essence of the culture of an organization:

- *Innovation and risk-taking* - the extent to which employees are encouraged to be innovative and to take risks.
- *Attention to detail* - the extent to which employees are expected to exhibit precision, analytic thinking and attention to detail.
- *Outcome orientation* - the degree to which the management focuses on results rather than on the techniques and processes used to achieve them.
- *People orientation* – the extent to which management decisions take into account the effects of their decision on the people within the organization.
- *Team orientation* - the extent to which activities are organized around teams rather than around individuals.
- *Aggressiveness* - the degree to which people are assertive and competitive rather than easy-going.
- *Stability* - the degree to which organizational activities focus on maintaining the status quo, instead on the growth of the organization.

There is a large amount of literature dealing with approaches to defining the concept of organizational culture. Below is a summary of the various attempts to define the concept (Schneider & Barbera, 2014: 121-122):

- Taylor and Van Every, 2000, define organization as “a form of life that creates a universe of objects and agents.”
- Martin, 2002, defines organizational culture as “patterns of interpretation composed of the meanings associated with various cultural manifestations.”
- Pheysey 2003 argues that the term culture is derived from the same stem as the verb “to cultivate.” In biology, cells are grown in a culture; in anthropology, culture refers to the way of life in which people grow up; in management, the word is used in a more restricted sense as the values and beliefs which provide people with a “programmed way of seeing things.” A culture is thus a way of seeing that is common to many people.
- Keyton 2011 states that organizational culture is “a set of artefacts, values and assumptions arising from the interactions of members of the organization.” This approach allows us to make the following assertions: (1) an organizational culture is a system composed of several layers of artefacts, values and perceptions; and (2) the members of an organization are expected to share a part of the interpretations of the cultural elements of the organizational life, though it is highly unlikely that everyone in the organization shares all or most of such interpretations. In other words, culture is a collective phenomenon, because it is shared, at least partly, by members of a group living in the same social environment, where the culture has in fact been learnt. The organizational culture also consists of a set of unwritten rules governing a group of people and distinguishing them from members of other organizations.
- Cameron & Quinn (2011), Pfister (2009) Schabracq (2007), Cameron & Quinn (2006), Schein (2004), Alvesson (2002), Cooper et al. (2001) and Ashkanasy et al. (2000) define in different ways the concept of organizational culture. However, their definitions share several points in common in the way organizational culture is understood, namely the common idea that an organizational culture is a system of beliefs, values, attitudes and cultural practices expressed through a set of common symbols, meanings and rules that regulate the cognitive and affective aspects of the members of the organization and the means by which these are expressed.

Hofstede et al., (2012) believe that culture is a collective phenomenon, because it is shared, at least partly, by members of a group that lives in the same social environment, where that culture is in fact acquired. Moreover, culture is made up of a set of unwritten rules governing

a group of people (including people of an organization) and distinguishing them from the members of another group (organization) of people.
We may therefore conclude from the definitions above that the concept of culture germinates gradually when members of a group live together for a longer period of time, tending to share a set of patterns of thinking, feeling and potential actions dealing with beliefs, values, attitudes and behaviors.
We may also argue that an organizational culture shows how people perceive the characteristics of the culture of their organization, and not just the reasons behind employee's satisfaction, and this important because it differentiates culture from job satisfaction (Robbins & Judge, 2014). Studies on organizational culture seek to measure employees' perception about their organization: Does the organization encourage teamwork? Does it reward innovation? Does it inhibit initiatives? On the other hand, employee's satisfaction seeks to measure employees' perception about the organization's expectations, reward practices and the like. Although the two terms show several overlapping features, we need to emphasize here that organizational culture is descriptive, whereas job satisfaction is evaluative (Robbins & Judge, 2014: 249).

2.1. Organizational Culture Layers

Another aspect of the concept of (national or organizational) culture deals with the fact that it is composed of several levels (layers). To better illustrate the layers that make up the organizational culture, we have compared the culture concept with an iceberg. Thus, as with an iceberg, most culture layers are invisible (submerged), which determines what is visible and noticeable (i.e. the tip of the iceberg). From this perspective, the innermost layer of the culture is made up of the *beliefs* of individuals, which are "value judgments in terms of true or false". This layer is indeed the most difficult to change. Beliefs generate another layer, namely, the layer of *values*, which are "judgments in terms of good or bad"; we nevertheless need to point out the fact that values are not necessarily positive (value in this particular context is not regarded as the characteristic of something good, but as the actions of the individual; for example, for an employee who does not care about the needs of the customer, his lack of interest in the customer represents a value, despite the fact that, on a declarative front, the employee claims that a customer-oriented behaviour is vital).
In their turn, values generate the next layer (which is still below the water level), i.e., the *attitudes* layer; attitudes are, according to Pop (2002: 53), the "tendencies or propensities to assess in a certain way an object or the symbol attached to it". Attitudes determine the next layer of culture, which, this time, is visible (as the tip of the iceberg), namely the *cultural practices* that define the behavior of individuals and is expressed by *symbols* (language or jargon, gestures, pictures or objects that carry a particular meaning which is only recognized by those who share the same culture); *heroes* (most representative members of the organization, i.e. those people who are most likely to advance quickly in their careers), *stories and codes of conduct* (what members of the organization would like most to happen in their organization, what they regard as the biggest mistake one can make etc.), *rites and rituals* (how meetings unfold and how people in the organization behave during corporate meetings, what events are celebrated by the organization etc.) (Hofstede et al., 2012: 337).
In other words, the (organizational or national) culture comprises the following four components: beliefs, which determine values, which in turn determine attitudes, which determine the cultural practices that shape the behavior of individuals (of an organization or of a nation).
Another great author in the field of organizational culture, Denison (1997), said that the culture has three are four levels, which taken together, are a beginning step in operationalizing the concept (Denison, 1997:32-33):

- *Artifacts*: the tangible aspects of culture shared by members of an organization. The verbal, behavioural and physical artefacts are the surface manifestation of the culture, e.g., language, stories and myths are perfect examples of verbal artefacts.

- *Perspectives*: the socially shared rules and norms applicable to a given context. Perspectives may be viewed as the solutions to common problems encountered by organizational members. They involve how members define and interpret situations of organizational life. Perspectives are relatively concrete and members are usually aware of them.
- *Values*: The evaluation base that organizational members use for judging situations, acts, objects and people. Value reflect the real goals, ideals and standards as well as the weaknesses of an organization. Values are more abstract than perspectives and sometimes experienced members articulate them in statements of organizational philosophy.
- *Assumptions*: The tacit beliefs that members hold about themselves and others, their relationships to other persons. Assumptions are the nonconscious underpinnings of the first three levels.

2.2. Organizational Culture's Functions

According to Robbins & Stephen (2013: 516) culture plays a boundary-defining role, in that it:

- creates distinctions between one organization and others;
- conveys a sense of identity for members;
- facilitates generation of commitment to something larger than individual self-interest;
- enhances the stability of the social system.

According to Kinicki & Mel (2016: 480), organizational culture fulfils four functions, which are illustrated in Figure 3:

- organizational identity;
- collective commitment;
- social system stability;
- a sense-making device across the organization.

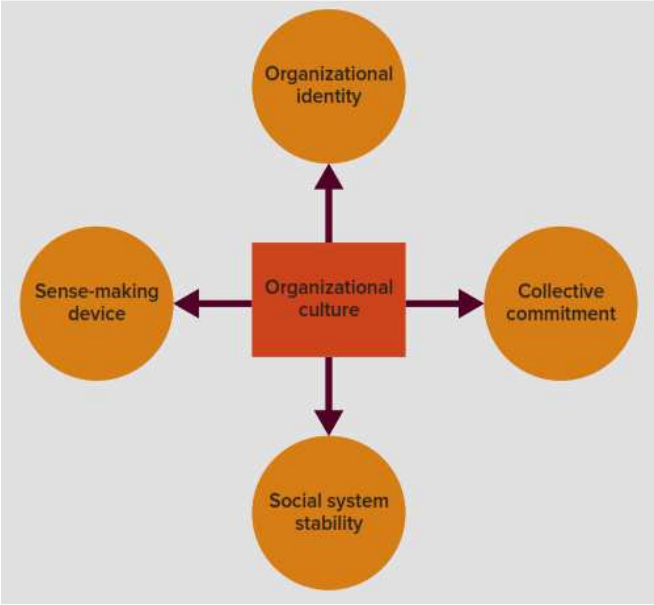

Figure 3: The functions of organizational culture
Source: Kinicki & Mel, 2016:484

Culture is the social glue that keeps organizations integrated and controlled through informal, non-structural means – shared values, beliefs, understandings and norms. Culture in this sense contributes to the avoidance of fragmentation, conflict and tension. Organizational life is seen as characterized by consensus, harmony and community. Finally, organizational culture serves as a sense-making and control-gaining mechanism that can guide and shape attitudes and behaviors (Alvesson, 2002).

2.3. Types of Organizational Culture

There are four main types of organizational culture described by the specialized literature, such as that illustrated by Tseng (2010: 271):

- *Clan culture:* produces a warm and friendly workplace where people can freely share knowledge.
- *Adhocracy culture:* produces a dynamic, entrepreneurial, and creative workplace, which encourages individual initiative and provides freedom for people who are willing to take risks.
- *Market culture:* produces a workplace with hard-driving competitiveness. A results-oriented organization led by tough and demanding leaders who are hard drivers, producers and competitors.
- *Hierarchy culture:* produces a workplace with formalized and structured procedures, which govern what people do.

The authors above (Tseng, 2010:279) indicate that the adhocracy culture has the best development of knowledge conversion and corporate performance. A hierarchy culture, with its emphasis on stability and control, is most likely to result in resistance to change and fewer interactions with external environment, thus it did not score well in knowledge conversion. Clan culture emphasizes the long-term benefit of human resources development with high cohesion, but it is also prudent and conservative, thus, it does not have the best corporate performance.

Kinicki & Mel (2016: 493) also speak about four types of organizational culture when discussing about the outcomes a meta-analysis survey, which involved more than 1,100 companies:

- Organizational culture is related to measures of organizational effectiveness. This means that an organization's culture can be a source of competitive advantage.
- Employees are more satisfied and committed to organizations with clan cultures.
- Innovation and quality can be increased by building characteristics associated with clan, adhocracy, and market cultures into the organization.
- An organization's financial performance (growth in profit and growth in revenue) is not strongly related to organizational culture.
- Companies with market cultures tend to have more positive organizational outcomes.

2.4. Culture as a Liability

Culture can enhance organizational commitment and increase the consistency of employee behavior, clearly benefits to an organization, but we should not ignore the potentially dysfunctional aspects of culture, especially a strong one, on an organization's effectiveness. In this regard, Robbins & Judge (2013:517) mentions several liabilities:

- *Institutionalization*: when an organization undergoes institutionalization and becomes institutionalized it takes on a life of its own, apart from its founders or members. It does not go out of business even if its original goals are no longer relevant.
- *Barriers to change*: culture is a liability when the shared values do not agree with those that further the organization's effectiveness. This is most likely when an organization's environment is undergoing rapid change, and its entrenched culture may no longer be appropriate.

- *Barriers to diversity*: new employees who differ from the majority in race, age, gender, disability, or other characteristics creates a paradox, in the sense that, management wants to demonstrate support for the differences these employees bring to the workplace, but newcomers who wish to fit in must accept the organization's core cultural values.

To the "deficiencies" identified by the authors mentioned above, we may add the fact that a stiff and extensively ramified organizational culture, that is largely typical of big companies, may slow down the responsiveness of the business to market changes, making it less sensitive to the needs of its customers and even exposing it to the risk of loss of opportunities. Therefore, the management should remain alert and strive to prevent the organization from turning into a "mammoth" that is slow in handling the business processes.

3. In conclusion

In the today's global, knowledge-based digital economy, the organizational culture becomes a strategic source of sustained competitive advantage. Therefore, the organizational culture is an increasingly important issue of academic research, education, organizational theory and management practice.

We intend to present a summary review of the specialized literature we have studied in order to rigorously understand what the concept of organizational culture actually implies. In this regard, in the first part of this article we present an overview of the concept of culture and the way it has been approached. In the second part of this article, we describe the basic aspects of the concept of organizational culture, such as the organizational culture "vehicles" and flows and the levels, the types and the "weaknesses" of the organizational culture. In our survey we have applied the qualitative research methodology, consisting of collecting documentation and texts. As for the data analysis, we resorted to the content analysis method.

We may therefore conclude from the specialized literature that the concept of culture germinates gradually when members of a group live together for a longer period of time, tending to share a set of patterns of thinking, feeling and potential actions dealing with beliefs, values, attitudes and behaviors.

The (organizational or national) culture comprises the following four components: beliefs, which determine values, which in turn determine attitudes, which determine the cultural practices that shape the behavior of individuals (of an organization or of a nation).

According to the specialized literature organizational culture fulfils four functions: organizational identity; collective commitment; social system stability; sense-making device across the organization.

There are four main types of organizational culture described by the specialized literature: clan culture, adhocracy culture, market culture, hierarchy culture.

The potentially dysfunctional aspects of culture, especially a strong one are: institutionalization, barriers to change, barriers to diversity.

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SELF ASSESSMENT AMONG HUNGARIAN ADVANCED LEVEL VOCATIONAL TRAINING STUDENTS

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Abstract: *This paper is intended to clarify the phenomenon that lower achieving students tend to evaluate their own academic performance less accurately than those who do better in their studies. Previous studies have found that lower performers generally overestimate while higher performers underestimate their performance. The current study analyses self-assessment behaviour and efficiency among Hungarian higher vocational education students. The data collection took place at the Faculty of Economics and Business, and the Faculty of Agricultural and Food Sciences and Environmental Management at the University of Debrecen. We have 4 hypotheses which are the following: H1: Lower performers generally overestimate their performance while high performers underestimate it. H2: Higher-achieving students evaluate their examination results more accurately than their lower achieving fellows. H2: Higher-achieving students tend to over-assess their examination results less than low-achieving students. H3: Compared to female students, male tend to overestimate their own performance more. We test our Hypothesis 1 with a comparison of the result in the four quantiles (Q1, Q2, Q3, and Q4), Hypothesis 2 with a linear regression model, Hypothesis 3 with a binomial logistic regression model, and use a dummy variable (sex) for testing Hypothesis 4. We found that the lowest level of higher education students typically overestimate while the best performers (the best 25 percentage) underestimate their performance, similar to previous empirical studies. Our results also strengthen the empirical evidences from previous studies that showed: higher-achieving students evaluate their performance more accurately than their lower achieving fellows. Furthermore we found that higher-achieving students tend to over-assess their examination results to a lesser degree than low-achieving students. We also analysed the difference between the two genders. Compared to female students, males do not tend to overestimate their own academic performance more. This analysis provides new empirical results for the literature from a sample of Hungarian advanced level vocational training students.*

Keywords: *self-assessment; self-evaluation; higher education; students' academic performance.*

JEL classification: *A22; I23; M53.*

1. Background

Self-assessment, or how we see ourselves (e.g. our characteristics, abilities, skills, and personality) plays an important role in our daily lives. For young people self-assessment plays an essential role in their decisions on further education or employment, because it determines how aware they are of their abilities, skills and knowledge (Keller, 2016). Accurate self-assessment and self-confidence have a positive effect when wage bargaining on the labour market, i.e. higher levels of self-confidence correlates positively with earnings (Keller, 2010). However, people are usually too optimistic about their social and intellectual activities, especially low-achievers, who tend to overestimate their own performance because their incompetence they are unable to recognize their lack of skills (Ehrlinger et al. 2008). Many tutors experience the difficulties associated with exams (as predicted or suspected by students) and the expected results often differ from the actual performance.

According to McDonald (2004), tutors have to confront the fact that the majority of students are not able to rationally assess their own readiness for the exam. Self-management of learning can be promoted by the development of self-assessment (Karnilowicz, 2012). This may occur if university teachers make greater effort the regularly account for different levels of knowledge and give feedback on results. Nicol, Macfarlane and Dick (2006) point out that students estimate their own abilities, and if these self-assessments are not accurate, they will make poor choices regarding their academic goals and efforts. If the modest abilities of students overestimate their performance, they invest less (or too little) power in learning the curriculum, so their goals and expectations will not be met. On the other hand, if students underestimate themselves, they will waste resources which could be invested in exploiting other opportunities. The present study aims to contribute to this topic by analysing data from higher vocational education students at the Faculty of Economics and Business, and the Faculty of Agricultural and Food Sciences and Environmental Management, booth at the University of Debrecen. We analyse the accuracy of students' self-assessment and whether there is a general tendency to under- or overestimate. We try to find out whether higher-achieving students tend to overestimate their examination results less than the lower-achieving fellows. We also analyse whether there are any differences between the two sexes.

2. Brief literature review

According to Boud and Falchikov (1998) self-assessment is the involvement of students in shaping their view of themselves, especially as regards their results and other learning outputs. In a broader sense self-assessment is not only the evaluation of performance, but also the determination of standards, and so is also linked self-managed learning (see for example Karnilowicz, 2012). In the present study we understand the term in the former sense, i.e., when students assess their own performance (learning outputs).

The quality of self-assessment can be measured by two indicators, one being a review (estimation) of the accuracy of difference (the absolute value of the difference between the previously estimated and the actual achieved results), the other the direction of the difference (the signed difference).

Several studies provide empirical evidences that low-achiever students in higher education tend to predict and evaluate their own academic performance less accurately than those who perform better in their studies. Previously published papers have also supported the idea that low-performers generally over-evaluate while high-performers regularly underestimate their performance, or at least overestimate to a significantly lesser extent. These findings highlight the fact that poor skills and/or abilities are only one element of the low-achievers' handicap. Another serious problem is that they are unaware of these problems. This phenomenon is sometimes referred to as the 'Dunning–Kruger effect'.

Previous studies in the literature have frequently examined the role of sex among self-assessment influencing factors. Most studies did not find significant differences between the two sexes (see e.g. Boud and Falchikov, 1989; Kruger and Dunning, 1999; O'Neill et al., 2006; Basnet et al, 2012; Hobohm, 2012; Kun, 2016a; Máté et al., 2016), while some studies found a tendency to overestimation among men (Edwards et al., 2003; Macdonald, 2004;). These results fit well with the findings of Grilajala et al (2015) who showed that the propensity to narcissism is higher in men.

The type of questions in exams play an important role in the accuracy of evaluation (Csehné, 2013; Kun, 2016b).

Several studies have observed a general trend towards overestimation (see for example Kruger and Dunning, 1999; Basnet et al, 2012; Tejeiro et al., 2012; Kun, 2016a), although Mehrdad, Bigdeli and Ebrahim, 2012 did not confirm this phenomenon.

Most studies produced similar results in terms of better-performing students estimating more accurately (Boud and Falchikov, 1989; Kruger and Dunning, 1999; Dunning et al., 2003; Karnilowicz, 2012; Tejeiro et al., 2012; Kun, 2015a; Máté et al., 2016).
The papers consulted by the authors found that those students who have achieved higher results tend to overestimate themselves less (Boud and Falchikov, 1989; Kruger and Dunning, 1999; Hodges, Regehr and Martin, 2001; Edwards et al., 2003; Karnilowicz, 2012; Kun, 2016a; Máté et al., 2016).
Kruger and Dunning (1999) assessed that the best performer 25% of students think their results belong to the 70-75 percentiles while their real performance is in 87 percentiles. The explanation of this underestimation is that the top performers feel the test lightweight and assume their fellows feel it the same light.
Based on the findings of the literature reviewed above, the current study forms four hypotheses:

- H1: Lower performers generally overestimate their performance while high performers underestimate it.
- H2:Higher-achieving students evaluate their examination results more accurately than their lower achieving fellows.
- H3: Higher-achieving students tend to over-assess their examination results less than low-achieving students.
- H4: Compared to female students, male tend to overestimate their own performance more.

3. Sample and method

The data collection took place at the Faculty of Economics and Business, and the Faculty of Agricultural and Food Sciences and Environmental Management at the University of Debrecen among higher vocational education students. They were in the first semester of the academic year 2016/2017 and on the labour economics element of the course, and taking an examination. The exams were publicised between 21th December 2016 and 6th February 2017, 8 times in total. The students had to answer 18 multiple choice and 14 true or false questions, and give 8 definitions. We asked them to guess their performance, i.e. how many points they would achieve (maximum 40) and to how many per cent the best performers they belong (called best % or top %).
The students wrote 508 examinations altogether, some of them sitting it more than once, if they had failed or wanted to get a better mark (it was possible).
The structure of the sample by major, sex and full- or part time students is presented in Table 1.

Table 1. Sample structure by major, sex and full- or part-time students

		Faculty										
		FAFSEM				FEB						
Structure		Major										
status	sex	SFM	PPPT	AM	EM	MRD	BM	CM	IB	FA	TH	Total
full-time	male	5	11	38	11	18	17	40	24	17	22	203
full-time	female	4	0	13	13	15	32	34	36	49	53	249
part-time	male	0	0	8	2	1	4	5	0	2	0	22
part-time	female	0	0	3	1	0	3	4	9	10	4	34
Total		9	11	62	27	34	56	83	69	78	79	508

Source: primary data

Note: FAFSEM = Faculty of Agricultural and Food Sciences and Environmental Management, FEB = Faculty of Economics and Business, SFM = Stud Farm, PPPT = Plant Production and Protection Technology, AM = Agricultural Management, EM = Ecological Management, MRD = Management and Rural Development, BM = Business and Management, CM = Commerce and Marketing, IB = International Business, FA = Finance and Accounting, TH = Tourism and Hospitality

The mean of students' scores is 24.373 (the minimum is 5, the maximum is 38), the standard deviation is 5.664. The mean of the tutors' scores is 21.537 (the minimum is 4, the maximum is 38), and the standard deviation is 5.681.
In our previous study (even unpublished) we analysed the students' self-assessment measured by students' guessed and tutors (real) test scores. In this paper we analyse the self-assessment measured by students' and tutors percentiles i.e. cumulative percentage (best %).
We analyse the accuracy and direction of students' self-assessment. Accuracy is defined as the absolute value of the difference between the student-assessed and the tutor-assessed test results (best %), while direction is the signed (positive or negative) difference. We test our Hypothesis 1 with a comparison of the result in the four quantiles (Q1, Q2, Q3, and Q4), Hypotheses 2 with a linear regression model, Hypothesis 3 with a binomial logistic regression model, and use a dummy variable (sex) for testing Hypothesis 4.
The dependent and independent variables are listed below:

- ADIFF%: the absolute value of the difference between the student's and the tutor-assigned estimation in %,
- OVEREST: 1, if the student overestimated his/her test results, 0, if not,
- FINALS: tutor-assigned final scores,
- SEX: 1, if the student is female, 0, if male,
- TIME: 1, if the student is part-time, 0, if full-time.
- FAILED: 1, if the student failed, 0, if not,
- MAJOR: as dummy variables: SFM: 1, if the student is on the Stud Farm course, 0, if not; PPPT: 1, if the student is on Plant Production and Protection Technology, 0, if not; AM: 1, if the student is on Agricultural Management, 0, if not; EM: 1, if the student is on Ecological Management, 0, if not; MRD: 1, if the student is on Management and Rural Development, 0, if not; BM: 1, if the student is on Business and Management, 0, if not; IB: 1, if the student is on International Business, 0, if not; FA: 1, if the student is on Finance and Accounting, 0, if not; TH: 1, if the student is on Tourism and Hospitality, 0, if not. The Commerce and Marketing course was excluded.

4. Results

The figure 1. can show the difference between the tutor's evaluation and the students' self-assessment in the four quantiles. This result suggests that low achieving students typically overestimate while the best achievers underestimate their abilities. We can accept our H1 Hypothesis.
According to the H2 hypotheses, multivariate linear regression models should be tested, where the dependent variable is the accuracy of the students' estimations (ADIFF%) measured by the absolute difference value of the student-estimated test results is percentile (best %) and the tutor-assigned cumulative per cents. The FINALSC is substituted by the tutor-assigned test scores one independent variable among others. In our regression models the dummies of SEX, TIME, FAILED and MAJORS (see above) are selected to maximize the 'goodness of fit' (R^2, as the percentage of the response variable variation) of the linear regression models. The first (Model 1) contains all the available independent variables and the other (Model 2) is restricted to those that are significant at least at the 10% p-level.

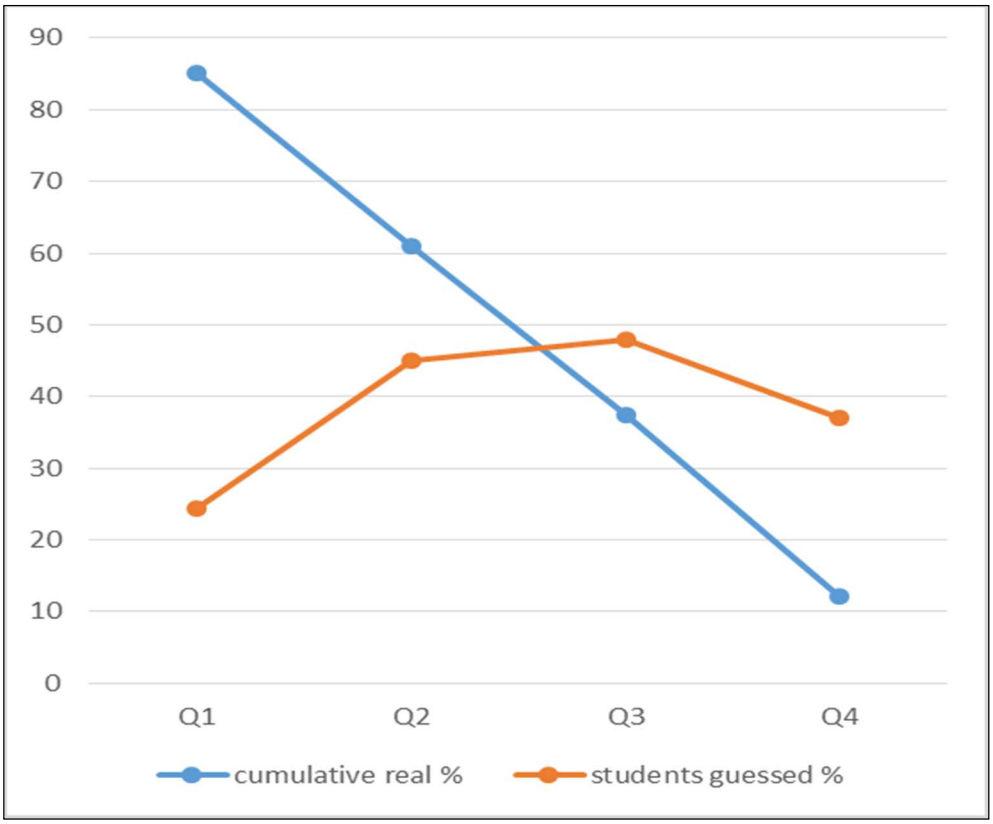

Figure 1. Examination results' cumulative per cent and students' guessed per cent
Source: primary data

Table 2 contains the statistics of our linear regression models. In Model 1 and Model 2 we found a significant linear connection between the accuracy of the students' evaluation and the tutor's assessment. We found a negative correlation between these two variables. This means that higher achieving students (who achieve a higher final scores) miscalculate less than lower achieving fellows. Essentially, the effect of tutor-assigned final scores on the absolute value of the differences of self and tutor assessment does not seems to be large, but in both models the student results correlated negatively with accuracy. Consequently, we can accept the H2 hypotheses; the higher achieving students seem to be able to evaluate their examination results more accurately than their lower achieving fellows. Our results conform to previous empirical studies (see above).

In order to identify the relationship between the students' achievement and the accuracy with which they overestimate their own performance, a binary logistic regression method might be an appropriate tool for our analysis. Table 3 contains the statistics of our binary-logistic regression models. The dependent variable indicates the likelihood of students' over-assessment. Those cases where the students evaluate their own performances accurately are estimated without an error and left out of the sample. The proportion of variance explained by the predictors (measured by Cox and Snell's, and Nagelkerke's pseudo R^2) of the binary logistic regression models are relatively high – indeed high enough – to agree with our results. As a result, for every one-unit increase in the tutor-assigned test cumulated percentage (percentiles) (i.e. for every additional %, and holding all other independent variables constant), we found a decrease in the post-examined self-assessment differences. Consequently, higher achieving students tend to overestimate their own examination

performance less, so we can similarly accept the H3 hypotheses, as well. Our results in the terms of overestimation also conform to previous empirical studies (see above).

Table 2. Results of linear regression models for the self-assessment

Dependent variable:	**ADIFF%**			
	Model 1		**Model 2**	
	β	***t***	***β***	***t***
CONSTANT	**10.827*****	8,384	**38,553*****	11.104
FINALSC	**-0.527*****	-6.663	**-0.536****	-3.470
SEX	2.196	1.116	-	
TIME	-1.251	-0.418	-	
FAILED	-1.121	-0.728	-	
MAJOR-SFM	3.613	0.535	-	
MAJOR-PPPT	6.880	1.049	-	
MAJOR-AM	2.734	0.782	-	
MAJOR-EM	-1.639	-0.364	-	
MAJOR-MRD	1.785	0.434	-	
MAJOR-BM	2.628	0.734	-	
MAJOR-IB	1.584	0.459	-	
MAJOR-FA	1.348	0.416	-	
MAJOR-TH	-0.152	-0.045	-	
N	**507**		**507**	
R^2	**0.036**		**0.027**	
Adjusted R^2	**0.006**		**0.025**	
Durbin Watson	**1.742**		**1.733**	

Source: authors' own data

*Note: Letters in the upper index refer to significance: ***: 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.*

Table 3. Results of the linear regression models for the self-assessment

Dependent variable:	**OVEREST**			
	Model 1		**Model 2**	
	β	***W***	***β***	***W***
CONSTANT	**7.068*****	97.896	**7.084*****	120.083
FINALSC	**-0.319*****	107.510	**-0.321*****	117.174
SEX	0.107	0.199		
TIME	0.333	0.729		
FAILED	0.256	1.046		
MAJOR-SFM	-0.706	0.611	-	
MAJOR-PPPT	0.498	1.117	-	
MAJOR-AM	-0.048	0.012	-	
MAJOR-EM	-0.196	0.126	-	
MAJOR-MRD	- 0.424	0.710	-	
MAJOR-BM	-0.039	0.008	-	
MAJOR-IB	-0.207	0.248	-	
MAJOR-FA	-0.629	2.264	-	
MAJOR-TH	-0.185	0.209	-	
N	**508**		**508**	
Cox&Snell R^2	**0.349**		**0.343**	
Nagelkerke R^2	**0.467**		**0.458**	
HL χ^2 test	**11.614**		**16.313**	

Source: authors' own data

*Note: Letters in the upper index refer to significance: ***: 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. HL: Hosmer and Lemeshow χ^2test.*

In addition, we found that students, who failed the exam, or who are on part time courses, tend to overestimate their examination results more than students who have not failed, or who are on full-time courses.
However, there are several studies that could not identify any gender related effects of over-estimation, such as Kruger and Dunning (1999); O'Neill et al. (2006) and Hobohm et al. (2012) etc. We have also paid particular attention to variations in gender. According to our results, in Model 1 and Model 2 of overestimation, gender (SEX) has not significant effect on accuracy. H4 hypotheses can be rejected.

5. Conclusion

In this study the first objective was to analyse the self-assessment behaviour and efficiency among advanced level vocational training students which is the lowest level of higher education. This analysis provides new empirical results for the literature from a sample of Hungarian advanced level vocational training students. Using various statistical methods, the results confirm the hypothesis that high-achieving students are more accurate in their examination self-assessment. This result is in accordance with the conclusion of Boud and Falchikov, 1989; Kruger and Dunning, 1999; Dunning et al., 2003; Karnilowicz, 2012; Tejeiro et al., 2012; Kun, 2015a; Máté et al., 2016.
A further conclusion is that higher-achieving students are less likely to overestimate their performance, which are supporting the results of Boud and Falchikov, 1989; Kruger and Dunning, 1999; Hodges et al. 2001; Edwards et al., 2003; Karnilowicz, 2012 ; Kun, 2016a; Máté et al., 2016.
This study could not find a difference between the two sexes. Edwards et al. (2003) and McDonald (2004) identified a higher tendency to self-overassessment in the case of male students, but Kun (2016a) and Máté et al. (2016) do not support these findings.
An overall tendency among low achieving students to over-rate their own examination performance is also explored in papers by Kruger and Dunning, 1999; Basnet et al, 2012; Tejeiro et al., 2012; Kun, 2016a etc.
Appropriate self-assessment plays an important role in the future of students, because in their work they will be confronted with acquiring new skills, they need to understand new technologies and processes and correct self-assessment can help to allocate accordingly their efforts, resources.
Since the analysed sample of students is from one year of a given university, sitting an examination in a given undergraduate subject, any generalization of the results should be approached with caution. However, most of the findings are supported by some element of the previous studies, thus taken in context, the results of this paper can contribute to better understanding of the wider picture of students' self-assessment. Moreover, we expect to implement further analyses in the coming years to explore and expand the extent to which other determinants may explain and make comparable the self-assessment of students, including for example learning time, frequency of exams, previous experiences, demographic variables, academic area, and ethnicity.

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SOME THEORETICAL PERSPECTIVES ON THE ORGANIZATIONAL INNOVATIVE CULTURE

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Abstract: *We start from the premise that the organization and the management of the organization are significantly influenced by the organizational culture. A strong culture, with crisp and clear-cut values, along with the beliefs, the expectations and the values of the members ensure the premises of a collective identity setup and last but not least, of the organizational performance. Studies show that there is a synergy between the organizational culture and the management culture and its quality has a decisive role and effectiveness in the organizational success. In this context, the innovative organizational culture is a unique system, a default culture phenomenon and a collective value system lived by the community. Being the result of a continuous process of learning, the innovative culture provides a model value and a principle of action, together with guidelines in the internal and external plan of the organization. We emphasize that the innovative culture is required by the multiple value exchanges of the society and last but not least by the competitive market requirements. Thus, we will analyze the innovative organizational culture in terms of the degree of orientation towards the creativity, the overcoming of the limiting organizational culture, with an important impact on the functioning of the organization as an open system with a focus on the adequacy and the performance.*

Keywords: *Organizational culture; management culture; innovative management culture; organization; innovation.*

JEL Classification: *J5; L1; L2.*

1. Theoretical Assumptions

The organizational culture represents the social energy that gives life to an organization, which in significant manner determines the people to act. The individual is trained in organizational actions and centred on achieving the organizational objectives in harmony with the personal goals.

We can talk about the organizational culture as the invisible force that exists and manifests itself behind the conspicuous things in an organization.

"The organizational culture represents a set of symbols, beliefs and behavior patterns learned, produced and recreated by people who dedicate their energy and work life to an organization. It is expressed in the design of the organization and work, in the built manifestations of the culture and in the services produced by the organization". (Strati A., 1992, p. 578)

Schein E. (1992) considers the organizational culture as "a system of material elements, values, norms and beliefs shared by the members of a group", while Puiu Al. (2007, p.66) defines the organizational culture as "a structured overview of the material and spiritual results of the organization, integrating a system of values and beliefs which is systematically cultivated and transmitted among its members and outside of the unit concerned".

After Hofstede G. (1996, p.208), the organizational culture can be defined as "a collective mental programming, which distinguishes the members of an organization from the members of another organization".

In the paper "The Search of the Excellence", the authors Peters T. J. and R.H. Waterman define the organizational culture as "a dominant and consistent set of values shared by the members of the organization, determined by symbolic means" (apud Gănescu, 2011, p. 17).

Supported by analysis of concrete situations, the above mentioned authors have demonstrated that there is a link between the determination of the dimensions of organizational culture and performance of organizations.
The eight characteristics of high-performing organizations are:

1. *The unity of action and decision-making;*
2. *The openness to the client, ensuring quality and reliability;*
3. *The atmosphere that encourages creative thinking and innovation;*
4. *The respect and focusing on the contribution of each employee;*
5. *Maintaining the basic philosophy of the company;*
6. *The activation in areas such as business management and familiar organization;*
7. *Keeping the number of top management functions at a minimum;*
8. *The decentralization and centralization of certain functions.*

At the same time, it is considered that "the peak performers create a broad, shared culture, a coherent framework in which people look for an appropriate adaptation. Their ability to obtain extraordinary contributions from a large number of people is turning into the ability to create a sense of high purpose and treasured. Such purposes come from love, from the supply of services of high quality and from innovation and compliance for all contributions" (Ionescu Gh., Gh., Toma A., 2001, p. 178)
Peters T.J. and Waterman R.H. reveal that *the organizations that have an organizational cultures centred primarily on the domestic policy, and not on the product or on the human resources of the organization, have weaker performance.*
The organizational culture is regarded by many specialists as a form of social development of an enterprise. Thus, the organizational culture is growing, a promoter of measure performance of innovation within organizations. Peters T.J. and Waterman R.H. (1982), in their research are proving that there is a correlation between organizational culture and performance of the organization. They also underline, that a great importance in the evolution of the Organization is of the *soft* side of it (how the specifics work, style of work etc.).
So are numerous studies on the capacity of legitimate potentiating performance by organizational culture, as with practical values.
From a psychological point of view, the culture describes the behavior of the individual, the levers of motivation of the members of the organization, management style, organizational environment, ways of rewarding the reporting and the implementation of work tasks, the specific elements of the organization, required to comply.
From functional point of view "the culture is seen as a variable, or from the perspective of integration, where the undertaking in whole defines a culture" (Heinen, Dill, 1986). Therefore, from a functional point of view, the organization, which is constantly changing, promotes a culture that supports the coordination approach, while integrating and motivating the members of the organization.
The quality of work in an organization and the performance obtained from it are covered by the following factors: the organizational culture, the leadership and the strength (Dygert, C., Jacobs, R., 2006).
The organizational culture of success includes: "a high level of trust among employees, and secondly, it is necessary for individuals who are part of an organization to be shown their personal integrity. Together, these conditions constitute a lot. A culture of success could be created only when the individuals who work in an organization accept the principle of shared fate"(idem, p. 22).
There is a determination relationship between *the organizational culture and the quality of activity* in any organization, and this involves the priority in obtaining the involvement of members of the organizational culture, which is based on the members' integrity, the sense of belonging to the organization and the agreement on a common vision regarding the evolution of the organization, and last but not least, the social relationships based on the mutual trust.

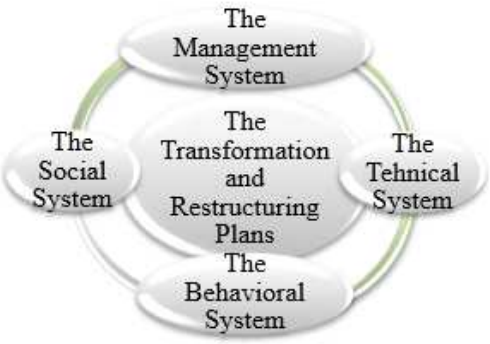

Fig.1. The organizational and process transformation - Edosomwan's Model
(Source: Dygert, C., Jacobs, R., 2006)

Edosomwan Johnson's model brings to analysis the determination relationship that is configured between the four systems:

1. **The management system** - which refers to the organizational policies, the quality leadership, the mission and vision of the organization, the set of values that orients the activity of the organization;
2. **The social system** - refers to the characteristics of the organizational culture, the organizational structure, the teams that work on the team, the close collaboration network, the values and creativity of the organization's members, the rewarding system used;
3. **The technical system** - comprises the work plans of the organization, the products, the instruments, the methods and the working techniques, the processes and the decision-making process, the job description of the employees;
4. **The behavioural system** - refers to the types of behavior agreed upon at the level of the organization, the habits, the attitudes, the perceptions.

Each of these systems individually, respectively the synergistic relationship between these four systems ensures the premises of the evolution of the organization, the quality of synergy having a decisive role and the effectiveness in the organizational success.
We consider as very important to emphasize that the management system has the most significant influence on the social, technical system and on the behavior.
Between organizational culture and the organizational change set up by the management, there is **a relationship of cause and effect type.**
The organizational culture of success represents **a way of life**, i.e. more than the implementation of plans for the achievement of organizational objectives. In addition, an organizational culture of success must bring in a common area managers and members of the organization, so that it is **the feeling of shared fate**, the common purpose achieved through joint effort.
Therefore**, the total cooperation and involvement of employees in the decision-making acts** inside the organization must stand in attention of the management team. This idea is supported by Barnard, C. (1938, p. 233-234), who speaks of the concern relating to cooperative systems "doctrine in employees row insufflating a general feeling of purpose and possibility of taking important decisions."
An interesting point in the sense of implementing a culture of organizational success expresses Dyert, C., Jacobs, R., (2006, p. 32), considering the vital coordination of the "four C's", which are typically perceived as conflicting forces:

1. Change - is one of those aspects of life that you can count that will take place in an organization, the people are struggling with changing and among themselves, because of the change;

2. Competition, internal or external, has an impact on how people interact or on power (or lack thereof) of those people in a given situation;

3. Cooperation it is often seen as the flip side of the competition, and can be an internal or an external force that aims the aims of an individual or a team/company. Cooperation can be a powerful force for good, in an organization, as well as on the market.

4. Control and how it is granted may show the power of what unites or divides an organization.

2. Renewing and innovation – the management culture elements

The very process of knowledge is based on the **innovation process**, approached from *the procedural perspective and on the perspective centred on the results.* The innovation refers to a product, service, process or method. In terms of the innovation processes, they can manifest in any field, being demanded by the orientation of the firms, the organizations, achieving successes.

Only if the receptivity to environmental challenges and by virtue of the ability to adapt to change, organizations are able to configure the lines of development and organizational development.

In the context of the knowledge-based society we have the fundamental objectives, centred on the production of knowledge, its transmission and the use of innovation.

Given that, the knowledge becomes an important capital, the organizations are challenged to raise standards of quality, to invest in the performance approach, one of the levers for action being to stimulate the process of innovation. Thus, innovation becomes one of the important elements of ensuring sustainability, performance, suitability to the environment; the innovation generates positive effects in shaping the organizational models.

The innovation is "The overall process of the technological and commercial creativity, the transfer of new ideas or new concept up to the final stage of a new product, process or service, accepted by the market." (Oslo Manual, 2005)

After Drucker P. (1993, p.19), the innovation is "a change that creates a new dimension in performance". From the perspective of other approaches, we can identify the product innovation, the process innovation, the marketing innovation and the organizational innovation (Rânea, C., coord., 2012, p. 12).

According to the Oslo Manual (2005), **the product innovation** involves the development of a new product or a product improved, so as to present the technical and functional features, the superior materials in relation to the original state.

The innovation process involves the development of the production technologies, the delivery technologies, in new or improved forms in terms of the methods used, the resources and the equipment used.

The marketing innovation is another form of innovation, which is materialized in the elements for changing of the marketing methods, the methods of the presentation and the product routing.

In terms of the organizational innovation, it manifests itself through the implementation of the new methods of the management, the organization, the management of the resources of the organization, with the impact on the internal and external processes of the organization.

The author Hamel (2006) welcomes the inclusion of the innovation of management in this classification.

"Every organization - not just the business ones - needs a core competency: the **innovation**." (Drucker P., 1993, p.32). The innovation is associated naturally with the introduction of the new in the society, generally in life, influencing the organizations significantly the evolution and the social development at all levels and in all types of the organizations that function as an open system.

If we relate to innovation at the organizational level, we can consider it as: “the developing and the implementation of the new ideas, by the people committed them over time, in transactions with others in an institutional context” (Van de Ven, Andrew H., 1986, p. 590).
In this approach, innovation refers to the four fundamental elements: the new ideas, the individuals, the transactions and the institutional context.
Thom N. and Ettienne M. (2000) suggest as a typology of the innovations as follows: the *innovation as a process, as a product innovation, as a social innovation.*
If the *innovative culture* manifests itself throughout the entire organization and all of its members, we can talk about the premise of the existence of a management of the ideas (Macharzina, 2002; Arnold, 1997), the kind of culture to be supported by an *innovation strategy.*
Which are, however, the characteristics of an organization that develops and promotes innovative the organizational culture?
The characteristics of the innovative culture are configured in the context of the implementation of the exchange of values in the society and the requirements on the competitive market. The very evolution of the society brings the challenge of the organizational culture, the reconfiguration based on the potential of the knowledge society and the information society.

1. The innovative culture is the result of the learning process. The organizational learning constitutes the source and resource for the development of the organizational culture. It involves the development of the effective and accountable valorisation by each organization of the gained experience, as the foundation for the registry value, based on the work of the present and the future, for the lines of action and the development of the Organization, based on the “lessons learned”.

2. The organizational culture is organized and functions as a single system, and the innovative organizational culture, as a result of the learning process, has the status of a default phenomenon, learned and accepted by the members of the organization.

3. The innovative organizational culture is part of the tradition; it is supported by the members and transmitted to new employees, being a sustainable part of the organizational culture, in particular those focused on fitness and performance.

In this context, the organizational culture is configured within the relationship to the cultural management background. A strong management culture brings the identity and the style of your organization, identifying the actions and the general evolution of an organization in a competitive environment.
Just a managerial culture carefully configured can impose a new direction of the efforts of the members of the organization. It is important to emphasize **the synergistic relationship between the culture management and the organizational performance.** In essence, the management culture directs efforts toward achieving the objectives, prioritized and endorsed by the complex processes.
The management culture is an integral part in the organizational culture. The managers share a set of values, norms, and behaviors through which underpins and orients the activity of the organization leaded by them. The set of cultural managers shall be exercised by the members of the organization and it is expressed in some formal and non-formal frameworks.
We must emphasize that a significant degree the dimensions of the managerial culture are of different sizes and can be found in a significant manner and in the organizational culture. The management culture greatly influences the organizational culture and it has implications in its configuration.
When we look at an organization, we cannot observe the relationship between *the elements of the management system and the management of informal culture,* each of them having an accentuate effect.
We presented the dimensions of the managerial culture from the perspective of some certain specialists, but we must emphasize that no culture can fit in the same measure, in the proposed typologies, because each has notes of specificity which make them unique.

An interesting point, supported by Nicolescu and Verboncu (2008) is that there is a direct relationship of determination between the organizational culture and the management culture, in the context of the professionalization of management.
Although the management culture refers to managers, it should be stressed that it has a significant influence on the organizational culture. After Nicolescu and Verboncu (2008) "the management culture acts as a **mechanism of modelling the exogenous and endogenous influences of the variables** affecting the organization, in terms of the specifics of the labor management and the managers in every organization".
In 1962, Tom Watson Jr. declared in a speech at Colombia University: "Philosophy, the spirit and emotions of an organization have a lot more influence than its achievements on the economic and technological resources, the organizational structure, or synchronizing their innovations. All of them have a large impact on the success of a company. But they are overshadowed by the extent to which employees believe in the present, the core values and how honest and involved are in their application" (apud Năstase, M., 2004, p. 19).
Therefore, *the management culture and the organizational culture* support the organization, and if each of them is realized by the manager or each individual, their synergy would ensure the organizational prerequisites to success. The management culture, however, is the relationship of interdependence with the elements or features of the organization's internal and external ones.
There is a clear relationship between the self-determination, the organizational performance and the management culture. Thus, a clear-cut and strong managerial culture will boost the performance and the efficiency of the organization. We must emphasize, however, that a stable organization, centred on the results, will enhance the positive image of the manager. We can identify the situations where the management and the organizational culture does not take into account the external factors, the elements of the competitive environment, imposing and guiding the Organization after its eigenvalues, influencing negatively the development of the organization.
From another perspective, however, the organization that does not operate as an open system, responsive to change, may oppose even a strong managerial culture, generating negative effects.
In fact, the management culture develops the specific behavior patterns, the result of a coherent process of integrating the members of the organization's actions and decisions, so as to ensure the attainment of organizational premises. A specific crop management will generate a specific model of leadership and management style.

3. Conclusions

The organization which has a strong managerial and organizational culture, and is keen to implement the policies and the strategies focused on fitness and performance, will be an innovative organizational culture well configured, with a great incidence upon life of the organization and on the evolution of it. Only an organization that functions as an open system promotes and manifests a supportive attitude towards renewing and innovation, in the context in which the collective identity constructs its set.
The innovative management culture is the result of a collective effort, implemented through collective scenarios, in which members of the organization are aware of, understand and assume the values of the organization, including valuing the creativity as a source in the preparation of the performance.
It is not enough however, as an organization to be open to innovation and creativity, it is necessary to set up a series of innovative organizational cultures, accompanied by the appropriate innovation strategies.

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ESTABLISHING UNIVERSITY MISSION IN THE TRIPLE HELIX CONTEXT

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Abstract: *Universities have multiple roles in economic development: educating students and developing competences useful for young employees struggling to adapt to the increasing demands of the industry, researching and providing research results to the industry and providing services in public-private partnerships with government agencies and industry. They can be perceived as sources of economic development, while the traditional university has transformed in time from a simple provider of education and research into an organization that combines education, research and industry related activities. Although this new paradigm can generate a certain level of tension to the faculty, the three directions coexist in all modern universities because this coexistence is both productive and profitable. The article aims to present how universities should formulate and adapt their mission and strategy to the current economic environment, characterized by competitiveness, dynamism and permanent change. The research presented in this paper is theoretical and provides a framework that clarifies how the new mission – industry – the third mission of the university - not only fits, but also improves the performance of education and research activities of universities around the world, contributing to fulfilling their mission. The paper includes recommendations useful for formulating the mission of the university, presents the path from stating a clear mission to developing the strategy of selective excellence and, in this context, presents an overview on the places the university has taken in time in relation to government and industry, using the Triple Helix model. The conclusions and discussions presented at the end of the paper underline the role of universities in education, research and industry in the current economy.*

Keywords: *university mission; university strategy; selective excellence; Triple Helix.*

JEL classification: *I23; I25; O30.*

Introduction

Traditionally, universities have evolved in time from single mission to two missions. In the past, the main sources of education were the universities. Education is their first mission. As new discoveries were made, a second university mission is that of research, one that was generally accepted by universities around the world. The second mission is absolutely necessary due to the fact that good education should mean the transfer of recent discoveries to the students. Professors should be also good researchers in order to deliver good quality to the students. These two missions supplement each other and ensure the success of universities.

In the current economic environment, characterized by competitiveness, dynamism and permanent change, but also by economic crisis and almost free access to knowledge, the place of the university in the society has changed. Education itself can be made online, research is no longer financed by the state as it was before. The question is whether

universities should implement a third mission for themselves: community engagement. This third mission, named in different ways, this community engagement or activities related to the industry, or to the practice, seems as a different path universities should consider. It can ensure the increased usage of research results, it can increase the incomes one university has – a possible source for research financing, and it can improve education services attractiveness due to the industry related image.
The goal of this article is to present how this third mission should be included in the strategy each university has. In the first section of the paper, based on a comprehensive literature review, are presented recommendations useful for formulating the mission of the university in any context, without considering the three missions. Selecting and detailing university's strategies must be preceded by its mission statement and goal setting. A clear stated mission is mandatory for developing the strategy. In the second section of the paper, the focus is on the strategy of selective excellence and its importance in the current economic environment. The third section of the paper focuses on the place universities have taken within society considering the Triple Helix Model, considering the important process universities perform in order to adapt to the requirements the world has now for them. The paper ends with conclusions and discussions regarding the role of universities in education, research and industry.

1. The formulation of university mission

Many research studies have been performed in advanced economies on the mission of organizations providing services, especially in the non-profit sector. It was found that most of them neglect the task to develop and communicate a clear mission. In many of them, the mission is general; the wording is vague, inadequate, and less distinctive, with insufficient driving force. The same conclusions are valid for the higher education system. Naturally, a well-articulated and accepted mission defines the direction of action of the higher education institution on long term. It should not be very often changed, reformulated or replaced due to phenomena and processes that appear inside or outside the organization. Redefining applies in two situations: if the mission has lost credibility and/ or if it no longer expresses the optimal direction of organization's action (Kotler et al, 1998).
The communication of the mission is performed inside and outside the organization. In practice, different methods are used: reproduction on posters placed on the walls inside and outside of the institution; reproduction on laminated sheets of paper and displaying them on boards; mission presentation in meetings, congresses, conferences etc. In general, any situation should be used to support the mission. Each approach must:

- contribute to the acceptance of the mission's core values;
- train staff and give a broad overview of the university in which they operate;
- have a positive impact on the organizational behavior;
- improve commitment;
- focus on key objectives of the company;
- support internal marketing effort (Payne, 1993).

The mission's value may be confirmed or refuted by practice only. If a mission is valuable and has been properly communicated, the staff of the institution trusts it and acts correctly translating it into practice. Campbell (1999) and his collaborators undertook a comprehensive research on the value of the mission and concluded that a mission should contain at least four features:

- purpose: why does the institution exist?
- strategy: competitive and distinctive position,
- the values: in what do all members of the institution believe?
- standards and behaviors: methods and models of conduct that promote competence and system of values.

A mission incorrectly formulated and insufficiently clear, which expresses ambiguously the overall objective of the university, its intentions and concerns, creates confusion both among staff and students (actual "customers") and candidates (potential "customers"), brings prejudices, difficulties in following the same goal and in coordinating the efforts. To achieve a correct wording, the mission should answer several questions (Kotler et al, 1998), (Payne, 1993), as presented below.

A first question can be: *How concise does the wording should be?* Some universities manage to express their mission in a paragraph, others develop it over several pages. According to Payne (1993) the mission shouldn't exceed one page. If necessary, it can be attached to a larger document, which presents some specific issues of the mission. This document is particularly useful to managers who present and discuss the mission with different groups of employees, in order to be assimilated and to motivate the staff. Often, the mission cannot be made very concise, as this may not give sufficient clarity to the overall purpose and intentions of the university. The wording should be ample enough to describe the mission as clearly and compelling as possible, the statement has to reflect the values and beliefs of the organization, how it will interact with lead markets, with beneficiaries and partners, with the labor market, and the attitude towards the environment. Structurally, a general wording is used, which highlights the general framework of the activity. The following is a statement of what should be achieved and a set of benchmarks for the tasks to be performed.

Another question refers to: *Who are the intended users of the mission and what are their expectations?* The wording may vary considerably depending on the type of addressees: senior managers, managers on other levels (medium and low), employees, students, local and central authorities, potential candidates etc. It is particularly important to have a clear and compelling mission for different categories of staff, in order to ensure their proper motivation and awareness about their role in translating the mission into practice.

It should also be taken into consideration: *In what activities is the university involved in and in what activities it might be involved in the future?* Activities are defined by market segments and target markets (existing markets, new markets, existing educational services, new services).

Next, is recommended to answer whether: *Is the definition of the mission unequivocal?* The wording must be unambiguous and should allow differentiation from other competing universities. Achieving this requirement can be checked using the substitution test. Gerald Ross, Gangel and Anders (2002: 99) consider that if we replace the name of the institution with the name of other institutions in the text, and the mission remains valid, if it still has meaning, then the wording is too general, insufficiently concrete and it does not sufficiently distinguish the university. The wording of the mission should not use technical complex terms, misunderstood by most of the consumers or by other categories of recipients. Avoid foreign expressions and expressions with multiple meanings, which may be confusing. The mission must emphasize the advantages and benefits that can be acquired.

In the end, focus on the question: *Is it a market-oriented mission?* The mission must be formulated in such a way as to reflect the needs of consumers and less the features and attributes of the offered service. Being in the field of services, defining the mission and the purpose of activities undertaken by a university can be subtle than in other areas. Universities should consider the needs of all stakeholders (high school graduates, employees already employed, employers and society in general) with extreme caution and use this knowledge in developing service packages to be offered.

Based on the results of an empirical research, David (1999) concludes that a correct formulation of the mission must include at least nine components:

- consumers - who are they?
- services - which are the basic services offered by the university?
- positioning - where and with whom does the institution compete?

- technology - which is the uptake of technology in the delivery of the institution's core business?
- concern for survival - which are the economic objectives of the university?
- philosophy - which are the fundamental beliefs, values, aspirations and philosophical priorities of the institution?
- own concept - which are the strengths and competitive advantages?
- concern for the image of the market - which are the public responsibilities of the educational organization and which is the desired image?
- commitment to employees - which is the attitude of the university towards its employees?

A correctly formulated mission is characterized by the following:

- it defines the scope of the organization;
- it identifies relevant target groups and services;
- it supports current and future (in perspective) revival of strategic options;
- it creates a balance between short and wide wording;
- it highlights the specific of the institution;
- it is realistic, real and flexible;
- it distinguishes the university from other organizations in the same industry or field of activity;
- it is oriented towards the needs of consumers and their satisfaction;
- it reflects the essence of organizational skills;
- it allows a close integration with common goals and this can be appreciated in achieving mission success;
- it is easy to understand, to learn and broadcast;
- it brings motivation;
- it is based on company specific skills (Payne, 1993), (Kotler et al, 1998).

2. The selective excellence university strategy

Despite continuous disjunctions between general economic planning of the country, and the plans for higher education, higher education master plans begin to refine the traditional mission of the university on three axes (Barrow, 1996):

- Education - educating and developing competences, both in new fields of knowledge and in terms of interdisciplinary;
- Research - providing results, development, information and technical support for both government and industry;
- Services - engaging in public-private partnerships with government agencies and industry.

Under the pressure of the global economic crisis, more universities tend to abandon the diversity characterized by a wide range of graduate and postgraduate programs, and focus on adopting the strategy of selective excellence (Grassmuck, 1990). The strategy of selective excellence has as starting point a clarification of the institutional mission, followed by the identification of study programs more oriented towards the mission, and of less attractive academic programs for students. Once this latter type of programs is identified, they are reduced to a rather symbolic role, relying more on the availability and openness of teachers, or they are even excluded, so that financial resources can be reallocated to balance the rising institutional costs and to maintain the quality of academic programs in a smaller number of academic fields.

In addition, governments and state authorities adopt changes in the structure and criteria of research support, which further encourage higher education institutions to pursue a strategy of selective excellence and individual incentives to adopt an entrepreneurial approach in terms of research. In recent decades, the development of research in major universities

worldwide has been fuelled by government subsidies, and also through a series of tools for setting up and strengthening infrastructure and research facilities. Following the adoption of special laws, public funds for university research have almost tripled worldwide in the last 30 years. Senior leaders from the business environment, analysts on the labor market, and policy makers understand and agree on core competencies that are essential to create a workforce of highest quality, and to provide to labor market generations of specialists as flexible as possible in this respect. Thus, there is a strong political consensus, according to which university study programs must begin to define and emphasize symbolic skills (conceptual, mathematical or visual), research skills and communication skills (oral and written), as the flexible specialist is mainly engaged in assembling ideas (rather than things, objects) or in transferring ideas from one context to another, with the purpose to solve various problems (Bailey, 1990; Carnevale et al, 1988; Rodriquez et al, 1992). There is an increasing support from the government and business environment to apply the concept of interdisciplinary programs of study, focusing on areas with substantive and structural issues, and solve them rather than solving disciplinary paradigms and intellectual games.
The shortage of budgetary resources for universities, the recent national policies related to higher education, and the pressure on diversification of the academic offer, has forced universities to implement four interrelated structural reforms (Barrow, 1996):

- when it comes to innovation - switching from institutional rivalry to differentiation;
- the transition from fundamental research to applied research, more valuable in the progress of society;
- the transition from monodisciplinary to multidisciplinary and interdisciplinary studies;
- the transition of research activities conducted at department level to research units as complex and integrated as possible, such as centers or institutes.

3. The new place of universities in the society – the Triple Helix Model

The Triple Helix approach (Etzkowitz and Leydesdorff, 1995) considers that the university can play a greater role in innovation and in society, based on the knowledge it provides. The model is conceptually different from classical national innovation systems (Lundvall, 1988, Nelson, 1993), which consider the society as having the lead in innovation, or from Sabato model (1975), where the state is considered as lead. The Triple Helix model proposes an overlap of reflective communications that remodelled the network (Etzkowitz and Leydesdorff, 1997). Not surprisingly, the effects of these changes are subject to international debate on the appropriate role of the university in technology and knowledge transfer. For example, in Sweden, Research Report 2000 recommended the withdrawal of universities from the so-called "third mission", the relation to the industry (Etzkowitz and Leydesdorff, 2000). Instead, the university should return to education and research, a traditionally conceptualized profile. However, it is expected that the supporters of the third mission for universities, who based their research programs on these premises, to further support their cause. Science and technology have become important for regional development. Both R&D and higher education may be analyzed in market terms (Dasgupta and David, 1994).
The evolution of innovation systems and the ongoing conflict regarding the relations between universities and industry are reflected in the different institutional arrangements of university-industry-government relations. A first generation of this triad is further presented. In this configuration, the state encompasses academia and industry, directing and coordinating the relations between them (Figure 1). Basically, the best representation of this version of the model could be seen in former communist countries, but also in Japan. However, weaker versions were made in policies of some countries in Latin America and to some extent in European countries such as Norway.

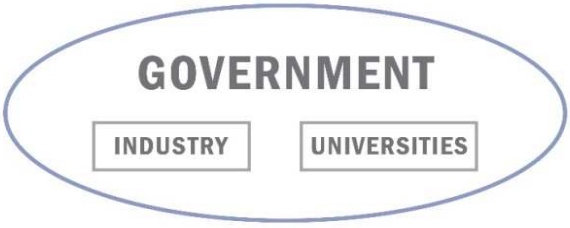

Figure 1: The state - control model of the government-industry-university relationship
Source: Etzkowitz, 2000.

A second policy model places the three entities as separate institutional spheres, with clear boundaries and formalized relationships between these spheres (examples found in Sweden and the USA) (MacLane, 1996).

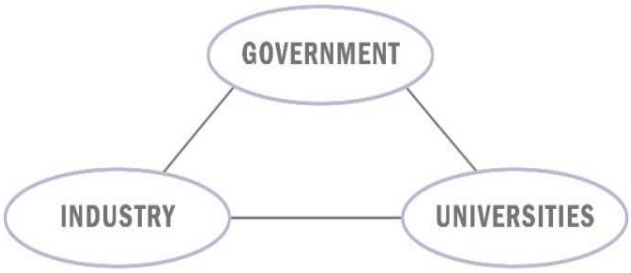

Figure 2: The independent model of the government-university-industry relationship
Source: MacLane, 1996.

Finally, the third generation of the triad suggests an architecture in terms of knowledge transfer, in which the institutional spheres partially overlap, each one being able to assume sometimes, partially, the role of the other, and to launch emerging hybrid organizations (Figure 3).

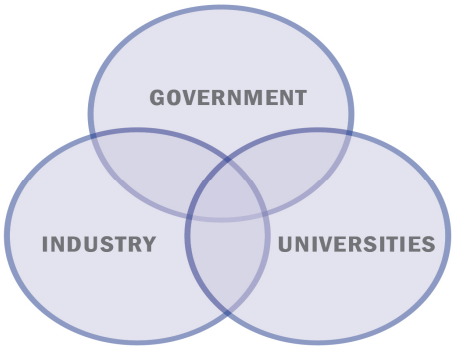

Figure 3. The integrative model of the government-university-industry relationship
Source: Etzkowitz, 2000.

The differences between the last two versions of this triad currently generate a broad interest in regulations, and constant concerns to obtain successful practices. The third model shows

not only the strict relationship developed between university, industry and government, but also focuses on internal changes within each of these entities.

Discussions and Conclusions

The university has evolved from a simple provider of education and research into a modern organization which combines education, research and industry related activities. This revolution is still in progress in many countries around the world, including Romania.

There are multiple issues that should be considered when it comes to establishing the mission and the strategy of the modern university:

- Collaboration between industry and government should not be conceptualized as the exclusive preserve of national governments in relation to specific industry sectors. In the current economic environment strategic alliances are reflected locally, sometimes in a cross-sectoral manner. Governments can act at national and regional level and, increasingly, more internationally. Corporations adopt global roles either within a formal corporate structure or through alliances and trading blocs, such as the EU, provide new options for removing any obstacles without losing competitive advantages resulting from previous collaborations.
- The driving force of interactions between the three sectors mentioned above can be specified as pending profits. "Profit" can mean different things to different stakeholders. A technological advance, for example, rewards companies and engineers with a form of glory when it comes to product lines and next generation applications. Thus, opportunities for improvement and trajectories of problem solving can be defined. We must say that, analytically, news is no longer conceptualized as ex ante causes, but in terms of expectations which can only be assessed ex post. From the evolutionary point of view, the ex-post selection structurally determined, while the variation may be random (Arthur, 1988, Leydesdorff and Van den Besselaar, 1998).
- The essence of the Triple Helix Model in terms of expectations leaves room for uncertainty and random processes. It is expected that the good practices of vanguard institutions be replicated to the extent to which they were functional, but there is place for developing new experiments which can also be subsequently institutionalized. Thus, a phase of innovation model can be defined. The stages of this model should not, however, match the product life cycle theory. Barras (1990), for example, noted that in ICT, the "reverse evolution" from the product to the theory is increasingly more likely to be dominant. On the other hand, Bruckner et al. (1994) proposed the concept of creative niche as a potential mechanism of individualization, identification, in the case of competing technologies. A successful innovation changes the context of a sector, and it is an opportunity for institutional actors involved. Structural changes that inevitably follow are expected to change the dynamics of the organization.
- The development of higher education and academia research should be related to the society in real time. Different representations of products can be maintained or recombined in a systematic way. Kaghan and Barnett (1997) used in this context the term "office innovation" as a model different from the laboratory model (Etzkowitz, 1999). Intensive knowledge economies can no longer rely on simple measures such as profit maximization; utility functions for society should match opportunity structures. Over time, opportunity structures are recursively led by dominant technological generations. As this model operates, human capital is developed further along the learning curve and it becomes an antidote to the risk of technological unemployment (Pasinetti, 1981).

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BRAND EQUITY IN RURAL MARKETS

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Abstract: *"Perhaps the most salient factor for the most successful brands is the promise of consistent quality. Whether it's a business or a consumer making a purchasing decision, they want to be sure in this world of endless choice that their decision is the right one."–Rosi McMurray, executive director of strategy, The Brand Union. The word "brand" derives from the Old Norse "brandr" meaning "to burn" - recalling the practice of producers burning their mark (or brand) onto their products. A brand has many accepted definitions according to each researcher associated. A brand can be defined as " a distinguishing symbol, mark, logo, name, word, sentence or a combination of these items that companies use to distinguish their product from others in the market". Most of the under developed and the developing nations have much of the geographical area as rural areas where typically poor people live. For example, in Indian scenario, India has a rural population of 70% who live in near about 620,000 villages across the nation. Though having such a huge population and geographical advantage the rural markets is sharing as least as just 6.6% which is just 8 billion rupees out of 120 billion rupee pool of the total Indian market which clearly shows that the rural markets are to a far extent untouched and also could be understood that there are extreme opportunities the rural India provides to those who understand the market well. Though rural markets are not the most promising area and one cannot have their good market share until the brand is well set into the market and a high equity, once if it's done rural market has got so much of business to handle. Brand equity plays an important role in marketing as it facilitates the effectiveness of brand extensions and brand introductions. The adoption of a brand is dependent on the trust and loyalty of the customers towards the brand. Branding in rural markets is a difficult task as it is a mass market with diversified emotions and meeting all of them is a critical job. The present article aims at elaborating the brand and the brand equity of products/services with a focus on the rural customers/markets.*

Keywords: *branding; rural markets; rural customers; brand equity.*

JEL Classification: *M3.*

1. Introduction:

The word "brand" derives from the Old Norse "brandr" meaning "to burn" - recalling the practice of producers burning their mark (or brand) onto their products. A brand has many accepted definitions according to each researcher associated. Philip Kotler in his book principles of marketing published in the year 1991 has defined a brand as " a distinguishing symbol, mark, logo, name, word, sentence or a combination of these items that companies use to distinguish their product from others in the market. (Kotler, 1991). Keller after working to understand the power of the brand he has come up with an understanding that "the power of the brand lies in what customers have learned, felt, seen, and heard about the brand as a result of their experiences over time (Keller, 2003)."

American Marketing Association defines a brand as "a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors". Simply, a brand is any symbolic, tangible, intangible or rational thing which is targeted to make a difference between the

products or service with which it is associated and the other products which serve the same purpose.
Pradhan along with Misra (2014) says “brands represent enormously valuable pieces of legal property, capable of influencing consumer behavior, being bought and sold, and providing the security of sustained future revenues to their owner. Keller (1993) defined the customer based brand equity as “Customer-based brand equity is defined as the differential effect of brand knowledge on consumer response to the marketing of the brand. A brand is said to have positive (negative) customer-based brand equity.”
Brand knowledge plays a key role in customer based brand equity. Brand knowledge is nothing but the awareness and image of the brand among the customers. The first dimension distinguishing brand knowledge is brand awareness. It is related to the strength of the brand node or trace in memory, as reflected by consumers' ability to identify the brand under different conditions Rossiter and Percy (1987). Brand image is defined as perceptions about a brand as reflected by the brand associations held in consumer memory.
Brand Equity is defined as the commercial value that derives from consumer perception of the brand name of a particular product or service, rather than from the product or service itself. It can also be defined as "brand equity is the quantifiable sum of a brand’s worth and is validated by assessing the effectiveness of these branding components". In a frequently changing market in which the conventional linear models of business are being swapped by more radical interconnected models, brand equity is one significant marketing technique that remains firmly rooted in prosperity. Somewhere around 80s was when the term brand equity has flared its popularity and since then the many researchers like David Aaker and Keller researched and made significant development in the concept of brand equity.
Rural marketing has certain hurdles. “Few of the main issues faced by marketers to distribute their products in rural markets are connectivity, communication feasibility, retailer’s size, media access”- Kale (2016). By a common understanding the literacy rate of the rural areas is comparatively much low which results is communication hurdles and promotion problems for the marketers. Another issue in rural markets is, the purchase power of the rural customers is fluctuating as most of the rural population is dependent on agriculture, and they get income once or twice in a year.
“Approximately half of the world’s population lives in rural areas” (World Bank report 2015). Although appreciable progress has been achieved in rural poverty eradication in many nations over the last couple of decades, available statistics indicate that there is still much more to be done in order to further lessen the poverty, especially in developing countries. According to IFAD (2011), “rural people comprise about 72% of the people living in extreme poverty (less than US$1.25 per day) in these countries, down from about 80% ten years ago. About 51% of all the people in these countries live in poverty (less than US$2/day); while 27% live in extreme poverty. Absolute poverty levels are generally low in the developed countries. For instance, about 37 out of 42 European countries have less than 2% of their population leaving in poverty.”

2. Brand, Brand Equity, Rural markets

Kotler (1991) has given a clear definition of a brand in his book Principles of Marketing as "a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors (Kotler, 1991)." Rossiter and Percy in their international edition “Advertising and Promotion Management” has mentioned that the “first dimension distinguishing brand knowledge is brand awareness. It is related to the strength of the brand node or trace in memory, as reflected by consumers' ability to identify the brand under different conditions” (Rossiter and Percy 1987). Strategic brand management book of Keller bears a statement “ the power of the brand lies in what customers have learned, felt, seen, and heard about the brand as a result of their experiences over time (Keller, 2003).

Brand Equity is previously defined and is still being defined by many of the researchers across the world, while most of them are appropriate the definition given by the brand expert Aaker in the year 1991 as “A set of assets and liabilities linked to a brand, its name and symbol, that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm's customers” seems to be perfect to the authors. American Marketing Association has offered the definition of the brand equity as “The value of a brand. From a consumer perspective, brand equity is based on consumer attitudes about positive brand attributes and favourable consequences of brand use.” Keller in his fourth edition of Strategic Brand Management has mentioned that “We formally define customer-based brand equity as the differential effect that brand knowledge has on consumer response to the marketing of that brand.” The concept of brand equity has gained its popularity since the 1980s. The field has undergone significant development, and an increasing number of empirical models (Yoo and Donthu, 2000; Netemeyer et al. 2004; Erdem et al. 2006) succeed the conceptual models (Aaker 1991; Keller 1993). 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). According to Kapferer (2008) “the concept of consumer-based brand equity has become a central marketing concept due to the increasing scientific and business interest in brands, since the approach according to which brands constitute one of the most valuable intangible assets of companies is becoming increasingly widespread” (Kapferer 2008). “Brand awareness is a key determinant of brand equity” (Aaker, 1996; Keller, 2003; Mackay, 2001; Yoo and Donthu, 2001; Washburn and Plank, 2002; Pappu et al., 2005).

The brand equity according to Lassar, Mittal and Sharma (1995), consists of two basic components

1. Brand Value
2. Brand Strength

Brand value is the financial performance of a brand that is calculated to understand the profitability of a company. The financial performance is calculated based on the sector and the region analysis in which the sector analysis is about the sector in which the brand belongs to and the region analysis includes the performance of it in a specific region. These analysis give a good insight of the performance of brand and one can understand easily if the brand is not appropriate according to the sector or the region in which it is supposed to make the business. The brand strength is how well the brand is associated with the customers.

Ahmed (1991) mentioned in his work that “With the increasing disposable income with rural population, their per-capita consumption is also increasing. They deserve best quality products, correct information about the product and a door step delivery”. In his statement Ahmed has made it very clear that the rural population is now finding new opportunities to adapt new brands and now the games left for the brands to play the smartest to grab the opportunity. Rural market no more seem to be seeking and satisfying to the low levels and they now are really ready for the best quality products and it is now time to introduce the modern promotion strategies and to build the brand equity in the rural markets. Kannan (2001) had come up with an observation that “For successful marketing in rural areas, an integration of traditional and modern methods of selling is required. To communicate effectively with the prospective rural consumers and to ensure effective distribution and prompt delivery, organizations must understand the specific requirements and needs of the villagers and then plan their strategy to convert the prospective consumers into active consumers. According to Bhattacharya (1998, p.17) the multinationals are focussing to tap an untapped opportunities in the rural markets, and he says this would result in high volume-high value market.

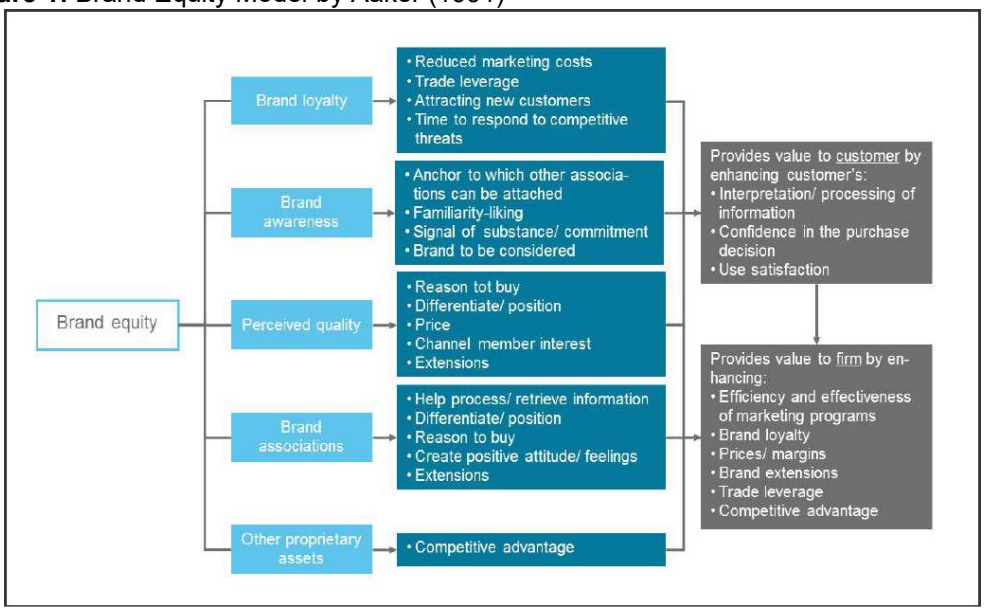
2.1 Brand Equity model

According to Aaker (1991) brand equity has been considered a multi-dimensional construct which is composed of a variety of factors; viz:

a) Brand awareness
b) Brand association
c) Brand loyalty
d) Perceived quality

Aaker has defied all these dimensions which were also supported by Bakert (1996), Keller (1993), Kim et al (2008), and Yoo et al (2000). He has defined the brand awareness as "the strength of the trace of a brand in consumer memory, as reflected by the consumers' ability to identify the brand under different conditions". Making your target customers aware of the brand is of utmost importance because until it is built no further dimensions could be possible. The brand association is defined by Aaker as "Anything, including attributes of a product/service, reputation of a company, and characteristics of product /service users, which linked in consumer memory to a brand". Now when the brand is associated to the target customers the brand starts to make the customers stick to the brand and they start understanding the quality of the product or service and this is how the reputation of certain brand increases resulting in the customer retention. Brand loyalty is defined as "A deeply held long-term commitment to consistently repurchase or re-patronize a product/service of the same brand, free from the effects of situational factors and marketing efforts that have the potential to result in switching behaviours". Customers start buying and using the products or services of the same brand whenever they need and soon these customers evolve to be the loyal customers of the brand. So the association of brand and building the loyal customers is very important. After all the retention of customers is as important as the building of the brand itself. A brand must always focus on customer loyalty and the brand must take care of the precedence of its customers. The promises made while selling the product or service should be kept and also the after sale services should be taken care of. The customers evaluation of the product or service, the feedback about the product or service and evaluation of the customer's experience is very important to hold the customer loyalty the same is explained by Aaker as "A consumer's evaluation of a recent consumption experience regarding a product's overall excellence".

Figure 1: Brand Equity Model by Aaker (1991)



Source: Aaker (1991)

2.2 Branding in rural markets

A brand should always possess its own fame. The target of a brand is to connect to the customers in a way that they tend to stick to the product or the service and so there is a booming contribution towards the brand equity and also a competitive advantage. For example, India is a land of religious people and the brand Nandi milk is famous in most of the rural areas as it connects to the religious emotions of the customers and gives an impression of purity. Same is the case with the jersy milk which is famous worldwide and the branding helps in the maximization of the equity of the product.

National Council of Applied Economic Research says that more than half of India's 'Consuming Classes' are rural consumers and this pie of population has become the prime target market for the consumer durable and non-durable, food, construction, electrical, electronics, automobiles, banks and other sectors. Rural market accounts for almost hundred percent consumption of agri - input products such as seeds, fertilizers, pesticides, farm machinery etc. and is fast growing for both, agri and consumer products.

There is an argument that the brands in the rural markets/bottom of the pyramid market segment are identified in the context of the packaging. A study revealed that the better packaging attracts more rural customers when compared to the same product with normal packing. The thought of better packaging contains better products and also the idea of future storage facilities influences the choice of that particular product. Sherawat and Kundu (2007) has also mentioned that easy to carry size of package, gross weight, simplicity, transparency and similarity of packaging have also emerged as critical brand identity factors among the consumers of BoP market segments in urban areas. In his book Marketing Decision Making and the Management of Pricing : Successful Business Tools, Rajgopal mentioned truly that the individual incomes of the bottom of pyramid people might be considerably low but still the aggregate buying power of these people is quiet high which makes it a substantial market

2.3 Brand preference of the rural customers

Those marketers who believe that the rural customers are less intelligent and has a less brand preference than their urban counter parts, can never make a good place in the rural markets. Often the rural customers are more clever than their urban counter parts pertaining to the financial constrains they usually have. They always try not to be wrong with their choices and they very particularly analyse the choices in all the possible ways to make sure they but the best product/service.

Rural customers are usually not monthly wage earners like the urban customers, so the smaller packets of their daily durables is the best idea. In India chick shampoo has started the sachets packing targeting the rural customers and that was a huge success. Sachets with best utility options may have the best response from the rural customers.

3. Conclusion

Rural markets is a huge market for all the sectors and is of utmost importance. Many multinational companies around the globe are now focusing on the rural markets. The consumer and market research in the area of rural markets is the need of the hour to understand many aspects of rural markets. Markets, products, services, brands – all are for customers. Brands must be as per the requirement of the customer. Customers are of different types, actually, every customer will have his/her own perspective or behaviour towards a brand. The peculiar task a company has is how to make the strategies to attract all of these targeted group of customers.

Media plays a vital role in promoting a brand in both rural and urban places. Selecting an appropriate media for the promotion of the particular brand is highly important. The time of advertising also plays a key role in building of the brand strength and so the brand equity.

The conventional mass media techniques may not work well in all of the rural areas so the brands should come up with other out of box techniques to reach out the rural customers.
Using of different innovative advertising strategies has always proved to be best for the rural markets. The advertisings like village fairs, demonstration centres, test use or test drive centres never went wrong.
A brand can be and is said to be successful when a customer choses its product or service over the other brands which satisfy the same need. Experiences play an important role in the decision making of the customer towards a brand and the trust he/she builds on that particular brand. Though brands in the rural markets and the bottom of the pyramid segment of markets is growing rapidly, the response towards the branding is sensed to be very sensitive and is dependent on many factors such as region, religion, social status, traditional beliefs, etc. But on a whole the trust of the customers, quality of the product/service are the two basic understood aspects which can increase the equity of a brand.

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THE EFFECT OF MERCHANDISING ON FOOD PRODUCTS IN THE ROMANIAN RETAIL MARKET

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Abstract: *The retail market progress in the Romanian market and the massive number of assortments developed by international producers and brand owners has incremented the importance of merchandising and trade marketing compared to advertising and other promotion means, more effective in the past. This article is a literature review on the importance and effect of merchandising in the food retail industry specifically in the Romanian market. The chosen market is significant for the study due to its young nature, international retailers only recently having entered the country. The article analyses the most important factors taken into consideration by international retailers as compared to traditional shops. Each type of format follows its specific strategies in order to push consumers into buying the more profitable or beneficial products. The final part of this paper will analyze the push strategies effect, more specifically the effect of merchandising on sales of a canned food brand in Romania, in the traditional market. All the information presented in the market findings have been taken from secondary sources directly from a food and drinks distribution company located in the Romanian city of Cluj-Napoca. Results will show the strong impact on sales of a three months period of merchandising activities and trade promotions. More interestingly is the fact that many brands have a higher awareness level and still the product with the better presentation on the shelf is chosen. Another significant conclusion is the long term consequence of the merchandising campaign and the benefits of prolonging such direct trade campaigns. This paper contains very useful information for marketing managers, who want to increase the medium and long term awareness and value of their brand while not having a significant budget for advertising and communication, while taking into consideration the sales departments requirements of short term activities in order to increase sales.*

Keywords: *merchandising; retail; food retail; Romania; modern trade; traditional trade.*

JEL classification: *M31; M21; M30.*

1. Introduction

The development of free trade, globalization and the fast expansion of international retail chains has highly increased the importance of visual image of merchandise in front of the consumer and is having a more and more powerful effect on the acquisition process. In the field of food products market, the most important contact between the consumer and the product happens at the point of sale, significantly influencing the turnover of that certain product (Safeway International SRL, 2013).

At the same time the increase of fast moving consumer goods assortments and number of retail units, advertising is having a lower influence on the buyers' behaviour compared to other promotion means (Assmus, Farley, & Lehman, 1984; Ailawadi, et al., 2010). A decade ago the advertising-promotion ratio was 60:40. However, these days, for convenient and retail products, promotions represent over 75% (50% promotions for trade, meaning distributors and retailers and 25% for consumers) (Kotler & Keller, 2009, p. 557). Therefore the elasticity, or the influence of promotion at the point of sale is lower than the influence of price, but it is much higher than the influence of advertising, as we will see in the rest of the document in analyzing the market of Cluj-Napoca, Romania.

Point of sale is the essence of retail trade, since it is not just a simple space, but a value adder, to the products waiting to be sold, because it offers the consumer and service over the one offered by the producer. When coming at the same store, the consumer saves time, effort, not being necessary to contact every producer for covering his consumption needs (Devlin, Birtwistle, & Macedo, 2003). More than ever the consumer now chooses, from a designated selling space or a certain store the product based on its attractiveness, it's positioning, or more exactly based on its merchandising. It is the first element to enter into contact with the consumer, being followed afterwards by the other more complex elements, such as packaging, information on the label, product attributes and functionalities.
Marius Pop (2002) has positioned merchandising between advertising and promotions. The message of merchandising and promotions is based on an acquisition advantage, while advertising has a wider field to cover and is referred to a massive audience, and direct sales target a small number of consumers. Promotions and merchandising are available for any product, in general, but are adopted more frequently for fast moving consumer goods.

2. Merchandising

Merchandising consists of all methods and techniques used for the presentation and enhancement of the products at points of sale. Retailers undertake all sorts of distinctive visual merchandising strategies to provide customers with a positive mood, aiming to increase purchase intention, store loyalty and repeat purchase (Law, Wong, & Yip, 2012; Donovan & Rossiter, 1982). In Assmus et al. meta-analysis (1984) we can see a number of researches on different categories of products evaluating the elasticity of advertising. Results have shown that the elasticity of advertising is 0.15, which is an average of the result between 0.26 for new brands and 0.05 for established brands... At the same time the meta-analysis shows that the influence of price and promotion has an elasticity which is 20 times higher (Ailawadi, et al., 2010).
Thus merchandising a product represents the following decisions (Pop M. D., 2002; Mouton & Paris, 2009; Nita & Corodeanu, 2008):

- Choosing the position in the store where the product will be sold;
- Size of sales area that will be assigned;
- The quantity of the certain product on the shelves;
- The layout of the products on the shelves;
- Presentation materials used: shelves, boxes, pallets etc. to the ground;
- Signalling materials to be used: "Shelf-stopper", wobblers

Linear foot shelving (Cheryl, 2007) is the total length at the shelf equalling the sales surface on the ground, multiplied with the number of levels at the shelf (Pop M. D., 2002, p. 29). The linears' role is to passively support the products so that consumers can see them helping premeditated buying behaviour, first of all, and actively support sales, increasing the products attractiveness in order to facilitate impulse buying. The space allocated to a product produces the following effects (Nita & Corodeanu, 2008; Reyes & Fraizer, 2005):
a) All products with a larger space will have bigger sales.
b) The shelf space has a minimum and a maximum influence on the product. Mainly, the minimum effect is just placing the product with a limited facing, which will provoke sales based on premeditated behaviour. The maximum limit is when the sales stop increasing despite the more space allocated on the shelf. This is called linear elasticity (Pop M. D., 2002, p. 29).
Marius Pop (2002, p. 29) has presented in his book the below graph the relation between the product linear and sales. As we can see the graph passes through three points. Before point A, the facing is too small to attract the attention of consumers and to let them know that the product is available. Between the points A and B the product captivates the consumers' attention and provokes impulse buying. After point B sales are no longer influenced by facing strategies and space allocated.

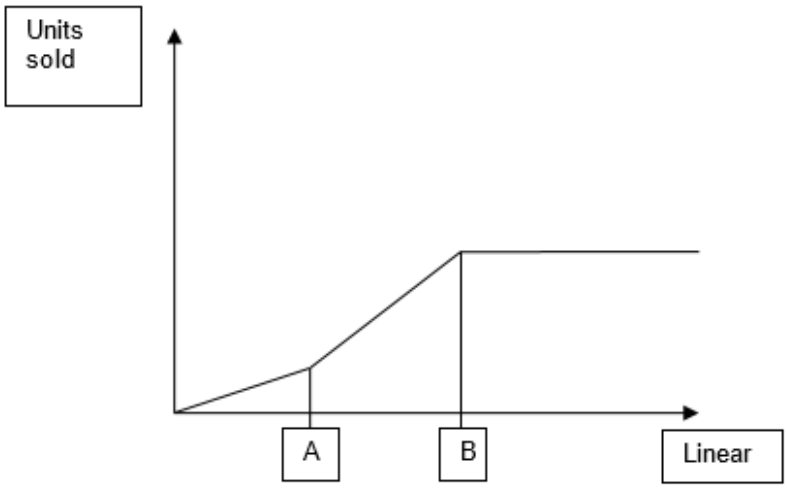

Figure 1: Relation between linear and sales at the shelf level
Source: (Pop M. , 2002, p. 29).

Different products are have different minimum and saturation points. For example products like bread, oil or primary goods aren't influenced highly when a larger space is allocated to the product, because consumers do not buy these goods more than they need. Commodity products, representing most of the goods present in the retail market, are more strongly affected by the linear (biscuits, cans etc.). The most influenced category consists of occasional purchase products, where the sales increase is low with small shelf allocation, but when the linear and number of product faces increases the line abruptly goes up (Kotler & Armstrong, 2005; Nita & Corodeanu, 2003).

Layout and shelf performance

There are several types of layout used by stores in order to present goods in the way which brings the highest sales. There is the horizontal presentation of products, as we can see in figure 2, and the vertical presentation of products, which can be seen in figure 3.

Dish washing liquid	Level 5
Soaps	Level 4
Textile whiteners	Level 3
Floor wash solutions	Level 2
Detergents	Level 1

Figure 2: Horizontal presentation
Source: (Pop M. , 2002, p. 29)

Dish washing liquid	Soaps	Textile whiteners	Detergents	Level 5
				Level 4
				Level 3
				Level 2
				Level 1

Figure 3: Vertical presentation
Source: (Pop M. , 2002, p. 29)

Vertical presentation is preferred because it stops the consumer in a focused area and increases the profitability and efficiency of the shelf, since shop owners can position more interesting and beneficial products at the more performing levels (Pop M. D., 2002; Nita & Corodeanu, 2003).
Performance of levels is considered to be positioned between 1m and 1,6m above the ground, where the eye and hand levels are. The below figures shows the most productive levels.

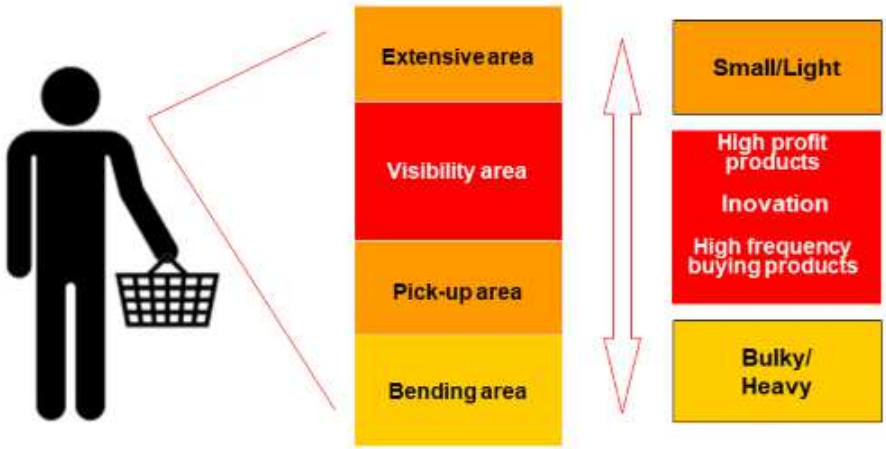

Figure 4: Structure of commerce on sales channels on a national level in Romania
Source: (CMG Media Solutions, 2012)

Mainly, the Visibility area, in the above figure, positioned 15 degrees below the eye level, is where the products most interesting to the retailer are placed.
The development of merchandising in the food industry has been a direct consequence of the expansion self-service retail stores. When there is no personnel to guide the customers, products must be able to attract the attention and provoke the desire to buy. Therefore with

the development of supermarkets and hypermarkets food merchandising has gained a lot of importance gained.
Due to the fact that the time spent in retail shops has decreased significantly in the last 10 years (Nita & Corodeanu, 2008; Nita & Corodeanu, 2003), the point of sale has become of much higher interest for producers and for salespersons having their brands on the retailers' shelves. Here comes the development of the point of sale (POS).
There are numerous purposes of the point of sale. Its main target is to attract attention either with its positioning and product display, or through different POS materials. POS materials are designed to attract attention and to enhance brand images. On another level, they are used to convey the ''presence'' of the brand to consumers, to create the perceived popularity of brands. The target is to differentiate brand from each other and lower the influence of price competition between different brands. The main aim of POS materials and promotion is to sell primarily and promote the brand.
Richard Pollay (2007) presents the functional purposes of POS materials (in a 1979 British American Tobacco document) below: (1) to notify the consumer of the existence of the brand; (2) to promote brand recognition; (3) to generate interest and excitement about the brand; and (4) to stimulate trial purchase and re-purchase.

3. Food products merchandising in Romania

Product merchandising in Romania has an even higher influence on sales and branding than it does on other more developed markets, such as the United States or Western Europe. The first reason is the still significant number of traditional shops owned by local entrepreneurs and not international chains. Still over 40% of the retail market is held by small shop owners and local chains.

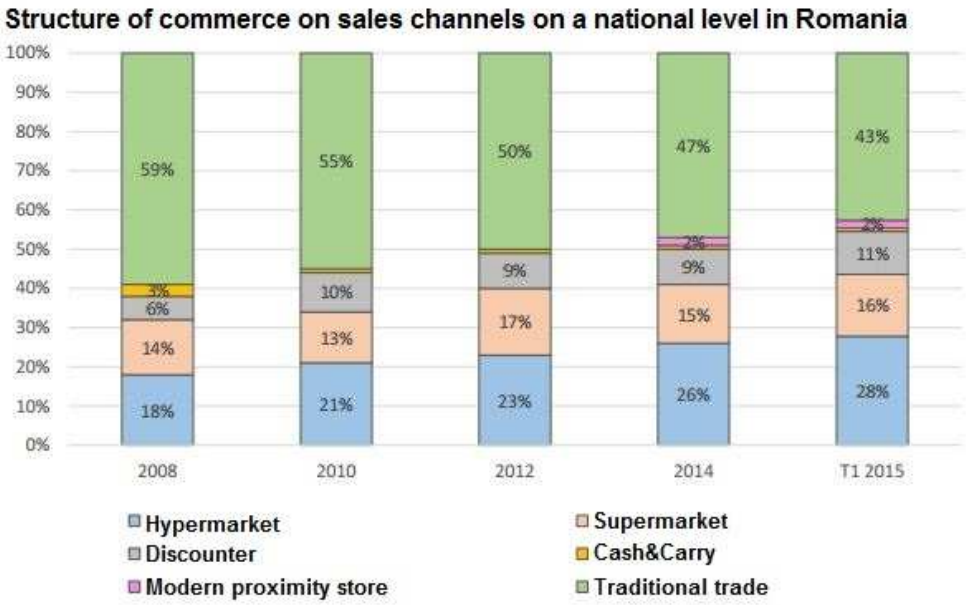

Figure 5: Structure of commerce on sales channels on a national level in Romania
Source: (CMG Media Solutions, 2012)

The high percentage of traditional trade in Romania favours merchandising effectiveness since small shops don't have the same complicated regulation regarding product facing, display and especially POS materials. Therefore the result on sales are immediate and

visible. The problem with traditional trade is that it is losing ground fast due to the fast expansion of modern trade. We shall see an actual example tested in Romania in the following chapters.
Figure 5 presents the fast increase of modern trade (international key accounts) at the expense of traditional trade (small shops and local supermarkets owned by local individuals). With the rapid expansion of modern trade and the bankruptcy and closure of many small shops it has become harder to implement merchandising techniques at the point of sale.
We can see in figure 5 that traditional trade has gone down, from a market share of 59% in 2008 to a 43% share of the retail trade in 2015. Usually when international chains open a store in a certain location, all the small shops in the area suffer and either become specialized shops selling a limited number of products or change their entire activity.

3.1. Merchandising in the modern trade

As far as modern trade goes, due to the fact that the Romanian market is a relatively young and new market, compared to the markets of Western Europe and USA, or other capitalist countries. Here, the market has only recently opened to foreign companies and assortments from outside of the country are still developing slowly. Consequently, international key accounts are developing at a very fast pace. We can see an example in the below figure.

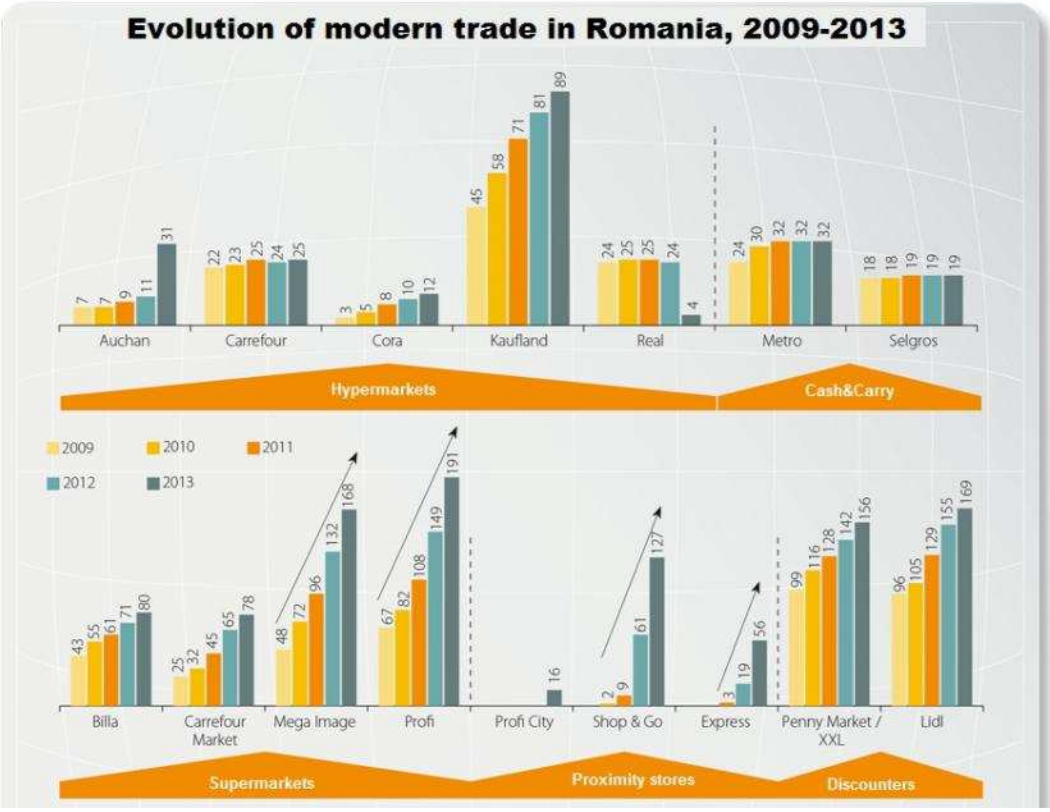

Figure 6: Evolution of modern trade in Romania 2009-2013
Source: (CMG Media Solutions, 2012)

We can see the rapid expansion of these shops, and especially observe the rate of growth for each category, based on the market development. At first, Cash and Carry locations entered the market, due to the significant traditional market. The next category to develop in time was the Hypermarkets sector. Between 2006 and 2009 their number used to grow

yearly by over 20%. Recently, in the last 4-5 years we have seen a rapid expansion of smaller sized stores, such as supermarkets and express stores. We can see, in the figure above, the accelerated development of retail chains Mega Image and Profi, who, from the beginning, have chosen a supermarket format. Even this year these retail chains are expected to have the fastest development and expansion into other regions of the country than their standard area. In 2017 Profi has announced their plans to open an extra 200 shops in the country reaching over 700 shops (Mediafax Group - Ziarul Financiar, 2017), while Mega Image has announced plans to extend their covered area, entering a new market, the north-western part of Romania (Mediafax Group - Ziarul Financiar, 2017).
In big retail chains merchandising is performed based on clearly set parameters and rules and most attractive shelves (end of the shelf, called endcap or close to the cashier) are allocated based on several criteria which follow the retailers profitability (Reyes & Fraizer, 2005). Products are put at endcaps, where the highest traffic is because of:

- Paying a preset tax to the retailer for using the special display, also known as promotional fees (Dulsrud & Jacobsen, 2009)
- Being a highly profitable product for the key account
- Being a product with a high turnover, and it attracts clients to the store
- There is a very strong promotion at a certain product with high turnover and profitability

Figure 7: Hypermarket endcap in Cluj-Napoca
Source: (Safeway International SRL, 2013)

3.2 Merchandising in the traditional market

The situation in the traditional market shops is different when discussing merchandising since the space is much more limited, therefore a significant importance is given to the flow of consumers and promotion shelves.
Unlike international retailers, traditional shops do not impose clear merchandising rules, they only rely on grouping together the product categories. There is no elaborated study on the profitability of space occupied by the products, and it is very much influenced by the traditional shop owner.
This is one of the reasons why modern commerce managed to enter so easily on the market and gain market share over traditional retail, the most important argument being the financial

capability and negotiation power with suppliers (Dulsrud & Jacobsen, 2009; Cheryl, 2007; CMG Media Solutions, 2012).
The traditional store is limited as space and that is why it has to provide its customers with basic products (bread, vegetable-fruit, dairy, sausage, eggs, oil, sugar, etc.) and increasing its turnover, it has to manage its sales area very well.
To be successful, a store must comply with certain conditions, as we can see in the figure below. Specifically, a traditional shop must be sure it is situated in good location, must choose an appropriate range of goods and services for its customers and have a pleasant ambiance and interior design (Metro Group - Mircea Coman, 2008).

Figure 8: Factors influencing shops' profitability
Source: (Metro Group - Mircea Coman, 2008)

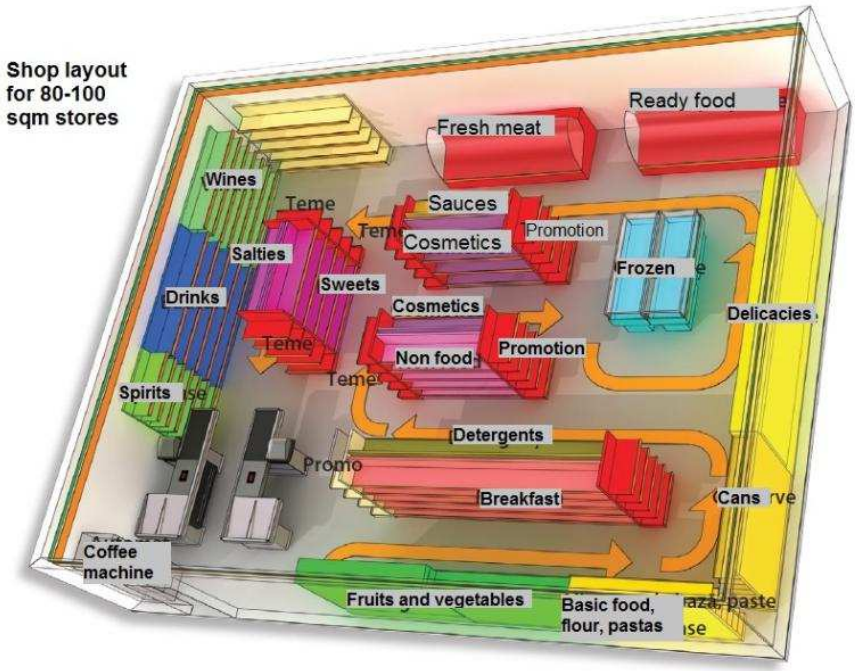

Figure 9: Local market layout
Source: (CMG Media Solutions, 2012).

From the merchandising point of view the traditional store must adapt its assortment so that it serves the local consumers' needs. From the beginning the store must imagine the clients' movement in the store and arrange the store so that the most profitable products are chosen. The first step is to establish the segments of products. Products with a higher rotation are positioned at the end of the shop, so that the client goes through the whole store and pass by as many products as possible. PL

Planning the sales area and layout of the store depend on the products sold and the location construction. The below figure is an example presented by a specialized retail magazine, Magazinul Progresiv (CMG Media Solutions, 2012)

Shary Waters proposes the following types of lay-outs (Mouton & Paris, 2009) :

- Straight line lay-out - the most economical and easiest type of design
- Diagonal lay-out - it is an optimal layout for self-service shops and offer visibility to cashiers
- Cornered lay-out - usually used in specialized or premium shops
- Geometric lay-out - specially used for apparel and clothes stores
- Mixed lay-out

4. Merchandising effect on sales in the Romanian market

The following figures will show the results of merchandising activities on a canned food brand in shops belonging to the traditional market of Cluj-Napoca, Romania. In a market research performed in 2008, the following outcomes have occurred.

Figure 10: Research period compared to Home Garden sales in 2007, 2008 and 2009
Source: (Shakhshir, 2009)

In 2008, a food and drinks distribution company, Safeway International Impex SRL has run for a period of 3 months an aggressive merchandising campaign for its private label, Home Garden, a canned food brand. The focus period is marked in red

We can see the visible effects this has had on sales in these three months (August to October). Sales have increased over 100% in the last 3 months of the campaign. The most important effect is even after the campaign ended, the new level of sales are situated at a stable level of over 30% above the previous year. This clearly shows the results of merchandising in long term.

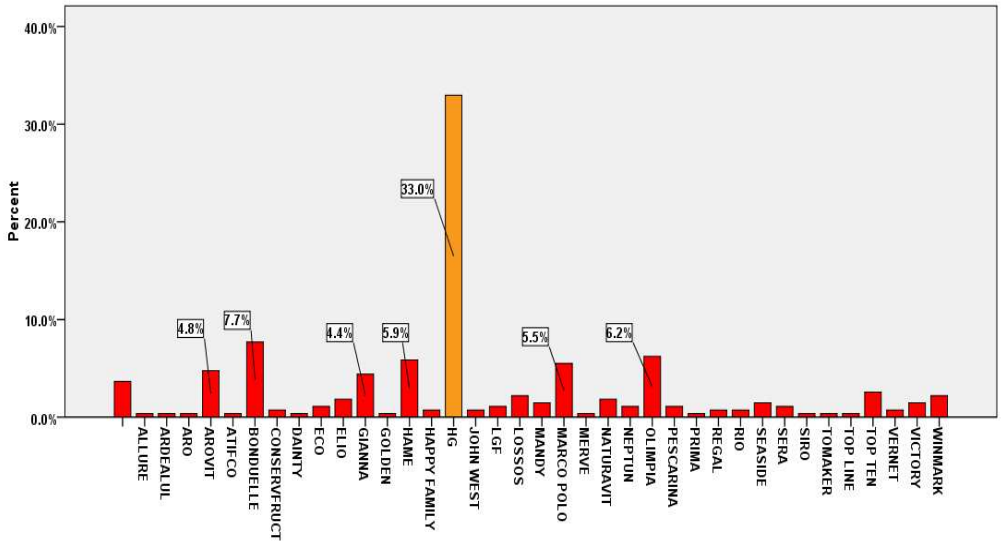

Figure 11: Canned food brand bought by consumer
Source: (Shakhshir, 2009).

The above figure clearly shows the market leader position, Home Garden, the brand which has enjoyed an extensive session of merchandising for some months of months. This is how, as can be seen on the above figure Home Garden has a market share of 33%, followed by Bonduelle (7,7%), Olimpya (6,2%), Hame (5,9%) and Marco Polo (5,5%).
Although many of the other brands have a greater level of awareness, as we can see in the below figure, in Romania and globally and have a greater communication budget, they have a lower presence on the shelf due to the lack of focus on merchandising and trade marketing. In the below graph we can see the top-of-mind awareness. Clearly many other brands are more popular and known by the consumer, but performance in the shop is much more affected by merchandising and shelf management.

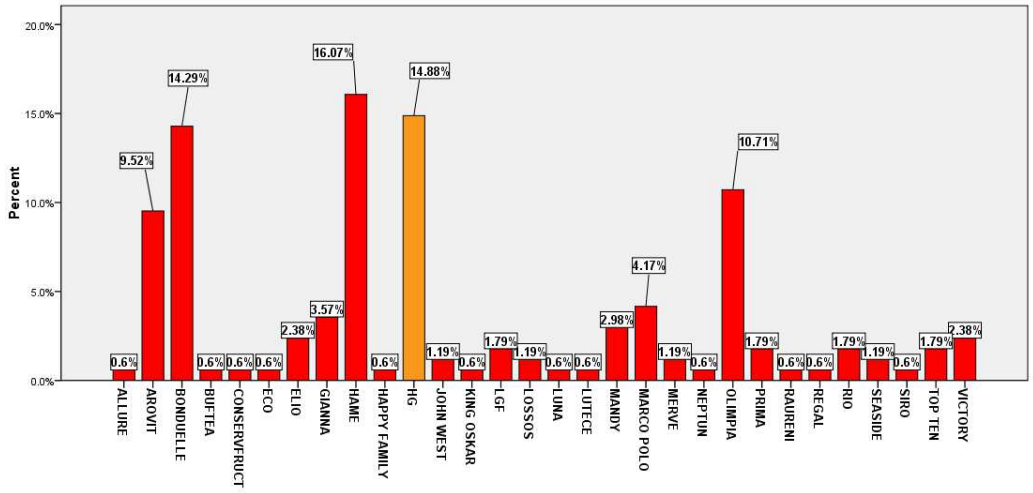

Figure 12: Canned food brands top-of-mind awareness
Source: (Shakhshir, 2009)

5. Conclusions

Merchandising is a type of activity that pushes sales with a major short-term impact and a significant one on medium and long term as we can see in Figure no. X.

In Romania, most food categories have well-established brands, but the market is still developing, and there is a strong chance that new brands will emerge to gain a significant share of the market. Also being a market influenced by traditional trade, brands can practice merchandising at a much more developed level and at lower costs than in a country where the market is already stable and thus for several years until retail trade matures, marketers in the Romanian retail industry will have the chance to practice all merchandising techniques at the product, shelf, and store level.

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CUSTOMER SATISFACTION AND TRUST – ARE THEY RELATED WITH BUYING FREQUENCY AND THE LENGTH OF THE RELATION?

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Abstract: *The purpose of this research is to investigate the connection between the buying behavior and the level of customer trust and general satisfaction. The buying behavior was measured by two variables: the length of the relation between the customer and the company and the buying frequency. In order to measure trust, we explored two dimensions of this construct: trust in the salesperson and trust in the company brand. Research objectives: (1) To identify the connection between the length of the customer - company relation and clients' general satisfaction; (2) To identify the connection between the length of the customer - company relation and trust; (3) To identify the connection between buying frequency and clients' general satisfaction; (4) To identify the connection between buying frequency and trust. We conducted a quantitative survey on a sample of 807 young buyers of cosmetic products. The respondents were only female students, 19-25 years who brought cosmetic products from direct selling companies. We created two groups of buyers, using as a variable the length of the relation between the clients and the company: first group includes the clients who buy from the company from less than 2 years; the second group includes the clients who buy from the company from more than 2 years. We also created two groups of buyers, using as a variable the frequency of buying cosmetic products from direct selling companies: first group is represented by the clients buy from the company every month or once every 2 months; the second group is represented by the clients buy from the company once every 3 months or less. The questionnaire was build based on a previous exploratory research. The results of the present study indicated that the clients who buy from the company from less than 2 years are more satisfied of the company and have more trust in the brand than the old clients.*

Keywords: *satisfaction; trust in salesperson; brand trust; buying frequency.*

JEL classification: *M31.*

1. Introduction

Satisfaction and trust are two of the most important determinants of customer loyalty ((Li et al., 2015; Veloutsou, 2015; Gretr et al., 2017). In order to increase the profit shares, companies must understand the importance of having satisfied customers who trust the products and the sellers. It is not enough to have satisfied customers for make them loyal; they have to trust the company enough to repeat the purchase (Ranaweera and Prabhu, 2003).

General satisfaction in direct sales is conceptualized as a set formed by satisfaction with seller, product, company and perceived value (Musa, 2005). The perceived value includes the benefits gained through direct purchase, related to perceived sacrifices, both economic and non-economic.

A key factor in the success of relational marketing is the buyer's confidence in the seller (Too, et al., 2001, p. 293). Trust is very important in direct selling and acts as a supplement to satisfaction in consolidating loyalty (Young and Albaum, 2003). Trust is defined as "the belief that the promise of a party is serious and the other party fulfils its obligations in the exchange relationship" (Schurr and Ozanne 1985, p. 940). Morgan and Hunt (1994, p. 22)

believe that trust is generated by sharing common values between seller and buyer through communication and lack of opportunistic behavior. Trust is a positive determinant of loyalty, which has been carefully investigated in recent years, being appreciated by some authors as a better predictor of loyalty than satisfaction (Pirc, 2008, p. 40). It is defined as "customer expectations regarding the validity of the supplier and the certainty that it will fulfil its promises" (Morgan and Hunt, 1994, p. 22). In direct sales studies, trust is investigated as a general construct (Alturas and Santos, 2009) or a distinction is made between trust in the company and trust in the seller (Musa, 2005). It is not very clear though to what extent the purchase decision by direct sale is due to the seller or the company he represents (Young and Albaum, 2003). The interaction of the salesperson with the customer is very important for building trust (Keeling et al., 2010). Another component of trust is brand trust, an aggregate construct (Li et al., 2015) representing “the perceived predictability of the brand's behavior” (Gretry et al, 2017, p. 78). Trusting a specific brand, consumers reduce the level of risk associated with buying and using the products and believe that the brand is reliable and will keep its promises (Srivastava et al., 2015).
The purpose of this research is to investigate the connection between the buying behavior and the level of customer trust and general satisfaction.
The buying behavior was measured by two variables: the length of the relation between the customer and the company and the buying frequency. In order to measure trust, we explored two dimensions of this construct: trust in the salesperson and trust in the company brand.
Research objectives:
1. To identify the connection between the length of the customer - company relation and clients’ general satisfaction
2. To identify the connection between the length of the customer - company relation and trust
3. To identify the connection between buying frequency and clients’ general satisfaction
4. To identify the connection between buying frequency and trust

2. Research methodology

We conducted a quantitative survey on a sample of 807 young buyers of cosmetic products. The respondents were only female students, 19-25 years who brought cosmetic products from direct selling companies.
The questionnaire was build using the results of other studies and after a qualitative research based on three focus groups with 18 persons.
The scales for the constructs we work with in this paper (customer general satisfaction, trust in the salesperson, brand trust) were validated using common factors analysis with SPSS 17.0 and the detailed results were presented in previous studies (Bobalca, 2011; Bobalca, 2014).
The customer general satisfaction was measured with 4 items and we computed a new variable representing the mean of these items. The first three items were rated using a seven item point scale, from 1 (not at all satisfied) to 7 (very satisfied). The last item was also rated on a seven item point scale, from 1 (very far) to 7 (very closed). The items for customer general satisfaction scale were build based on the research of Gustafsson and Johnson (2004) and Söderlund (2006) but also on the results of previous qualitative research (Bobalca, 2011; Bobalca, 2014):
How satisfied are you with this company?
How satisfied are you with the experience of buying the company's products?
How satisfied are you with the degree to which your expectations have been met?
Imagine a perfect cosmetic firm in all its aspects. How close or far from this ideal is the selected firm?

Having the scale of Young and Albaum (2003) as a starting point, we measured the construct "trust in the sales person" with 6 items and we computed a new variable representing the mean of these items. All items were rated on a seven item point Likert scale, from 1 (strongly agree) to 7 (strongly disagree):

I trust the salesperson to quickly resolve the issues that arise
I trust the correctness of the information received from the salesperson
I trust the honesty of the salesperson
I always rely on the salesperson to inform me of the new products I might be interested in
I trust the salesperson.
The salesperson has the desire and the ability to maintain a good relationship with me

For measuring brand trust, we used a 4 items scale (Chaudhuri and Hoibrook, 2001; Matzler, 2008) and we computed a new variable representing the mean of these items. All items were rated on a seven item point Likert scale, from 1 (strongly agree) to 7 (strongly disagree).

I trust this brand
I rely on this brand
This brand respects its promises
This brand gives me safety

We created two groups of buyers, using as a variable the length of the relation between the clients and the company. The first group is represented by the clients who buy from the company from less than 2 years. The second group includes the other customers, who buy from the company from more than 2 years. We also created two groups of buyers, depending on the variable "the frequency of buying" cosmetic products from direct selling companies. The first category of clients is represented by those who buy from the company every month or once every 2 months. The second category includes the clients buy from the company once every 3 months or less.

3. Research results

Objective 1: To identify the connection between the length of the customer - company relation and clients' satisfaction.

Table 1 presents the results for Independent Samples Test on the two groups of clients, depending on the length of their relation with the company: less than 2 years and more than 2 years. Young customers are more satisfied (with the mean value of 5.38) than old customers (with the mean value of 5.1).

Table 1: Independent Samples Test – Satisfaction and Length of the relation

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Satisfaction	Equal variances assumed	.007	.931	**3.468**	**803**	**.001**	**.27897**	**.08044**	**.12107**	**.43686**
	Equal variances not assumed			3.435	274.506	.001	.27897	.08122	.11908	.43885

As we notice in Table 1, Sig value for the F test (F= 0.007) is 0.931. As this value is bigger than 0.05, the variances are assumed to be equal. The t value is 3.468 and the Sig value is

0.001 (< 0.05), indicating that we can reject the null hypothesis. There is a significant difference between the levels of general satisfaction of the two groups of customers: the clients who buy from the company from less than 2 years are more satisfied of the company than the old clients.

Objective 2: To identify the connection between the length of the customer - company relation and trust

In order to measure trust, we investigated two of its main dimensions: trust in the salesperson and brand trust. For a client who buys cosmetic products from a direct selling company, the level of trust in that company is influenced by the seller and the brand. The mean values for the construct "trust in the seller", for the two groups, depending on the length of the relation are 5.29 (for group 1 – clients who buy from the company less than 2 years) and 5.38 (for group 2 - clients who buy from the company from more than 2 years). According to these values, old customers (who buy from the company more than 2 years) trust more the salesperson, comparing with young customers (who buy from the company less than 2 years).

Using the Independent Sample T Test, we investigate the significance of these differences. The results are presented in Table 2.

Sig value for the F test (F= 1.222) is 0.269. As this value is bigger than 0.05, the variances are assumed to be equal. The t value is -0.82 and the Sig value is 0.413 (> 0.05), indicating that we can accept the null hypothesis. There is not a significant difference between the levels of trust in the salesperson of the two groups of customers. The trust in the seller is not influenced by the length of the relation with the company. On the other hand, the customers might have worked with different sellers from the same company over the time.

Table 2: Independent Samples Test – Trust in the salesperson and Length of the relation

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Trust in the salesperson	Equal variances assumed	1.222	.269	**-.820**	**803**	**.413**	**-.08823**	**.10763**	**-.29950**	**.12303**
	Equal variances not assumed			-.796	267.421	.427	-.08823	.11083	-.30644	.12998

The second section of the results investigates the relation between the relation length and brand trust. The mean values for the construct "brand trust", for the two groups, depending on the length of the relation, are 5.15 (for group 1) and 4.86 (for group 2). According to these values, young customers (who buy from the company less than 2 years) have more trust in the brand, comparing with old customers (who buy from the company more than 2 years). The significance of this result is tested using Independent Sample T test, as Table 3 indicates.

Table 3: Independent Samples Test – Brand trust and Length of the relation

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Brand trust	Equal variances assumed	.397	.529	2.641	803	.008	.28566	.10818	.07332	.49801
	Equal variances not assumed			2.602	272.666	.010	.28566	.10977	.06956	.50176

According to the results presented in Table 3, Sig value for the F test (F= 0.397) is 0.529. As this value is bigger than 0.05, the variances are assumed to be equal. The t value is 2.641 and the Sig value is 0.008 (< 0.05), indicating that we can reject the null hypothesis. There is a significant difference between the levels of brand trust of the two groups of customers. The clients who buy from the company from less than 2 years have more trust in the brand than the old clients.

Objective 3: To identify the connection between buying frequency and clients' satisfaction

The mean values for general satisfaction on the two groups of clients, depending on the variable "buying frequency" are 5.24 (for group 1 - clients who buy monthly or once every 2 months) and 5.00 (for group 2- clients who buy only once every 3 months or less). Clients who buy more often are more satisfied than the others.

In order to see if this difference is a significant one, we run an Independent Samples Test, whose results are presented in Table 4.

Table 4: Independent Samples Test – Satisfaction and buying frequency

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Satisfaction	Equal variances assumed	1.473	.225	**3.417**	**804**	**.001**	**.24412**	**.07145**	**.10388**	**.38437**
	Equal variances not assumed			3.397	481.775	.001	.24412	.07187	.10291	.38533

Sig value for the F test (F= 1.473) is 0.225. As this value is bigger than 0.05, the variances are assumed to be equal. The t value is 3.417 and the Sig value is 0.001 (< 0.05), indicating that we can reject the null hypothesis. There is a significant difference between the level of general satisfaction of the two groups of customers: the clients who buy more often (monthly or once every 2 months) are clearly more satisfied of the company than the clients who buy less (once every 3 months or less). We can conclude that satisfaction influence the buying frequency, which is a logical results and a confirmation of the importance of customer satisfaction.

Objective 4: To identify the connection between buying frequency and trust

In order to see if there are significant differences between the mean values for the level of trust in the seller, computed on the two groups, depending on the buying frequency variable, we run an Independent Samples Test, whose results are presented in Table 5. The mean value for group 1 (buying monthly or once every 2 months) is 5.48 while the mean value for group 2 (buying once every 3 months or less) is 5.11. The results show that clients who buy more often have more trust in the seller person than the other clients. This correlation might be an indicator for the influence of trust in the salesperson on buying frequency. The more a client trusts the person he buys from, the more often he will be encouraged to order cosmetic products.

Table 5: Independent Samples Test – Trust in the salesperson and buying frequency

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Trust in the salesperson	Equal variances assumed	.171	.679	**3.871**	**804**	**.000**	**.36674**	**.09473**	**.18079**	**.55269**
	Equal variances not assumed			3.877	490.342	.000	.36674	.09459	.18088	.55260

According to the results of the Independent Samples Test, Sig value for the F test (F= 0.171) is 0.679. As this value is bigger than 0.05, the variances are assumed to be equal. The t value is 3.871 and the Sig value is 0.000 (< 0.05), indicating that we can reject the null hypothesis. There is a significant difference between the level of trust in the salesperson of the two groups of customers: the clients who buy more often (monthly or once every 2 months) have more trust in the salesperson than the clients who buy less (once every 3 months or less).

Regarding brand trust, the mean value for group 1 (buying monthly or once every 2 months) is 5.06 while the mean value for group 2 (buying once every 3 months or less) is 4.63. In order to see if the difference between two means is a significant one, we run an Independent Samples Test**.**

Table 6 presents the results of the Independent Samples Test. Sig value for the F test (F= 0.337) is 0.562. As this value is bigger than 0.05, the variances are assumed to be equal. The t value is 4.455 and the Sig value is 0.000 (< 0.05), indicating that we can reject the null hypothesis. There is a significant difference between the level of brand trust of the two groups of customers: the clients who buy more often (monthly or once every 2 months) have more trust in the company brand than the clients who buy less (once every 3 months or less).

Table 6: Independent Samples Test – Brand trust and buying frequency

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Brand trust	Equal variances assumed	.337	.562	**4.479**	**804**	**.000**	**.42673**	**.09527**	**.23973**	**.61373**
	Equal variances not assumed			4.455	482.086	.000	.42673	.09580	.23850	.61496

4. Conclusions

The goal of this paper was to investigate the connection between the buying behavior (measured by buying frequency and the duration of the relation between the customer and the company) and the level of customer trust and general satisfaction. The research results indicated that the clients who buy from the company from less than 2 years are more satisfied of the company and have more trust in the brand than the old clients. If the levels of satisfaction and trust tend to decrease in time, the company should focus more on loyal old clients, investigating the determinants affecting satisfaction and trust, in order to improve those factors. There are indicators that satisfaction influences the buying frequency, which is a logical results and a confirmation of the importance of customer satisfaction.

Also, trust in the salesperson influence buying frequency. The more a client trusts the person he buys from, the more often he will be encouraged to order cosmetic products. The clients who buy more often (monthly or once every 2 months) have more trust in the company brand than the clients who buy less (once every 3 months or less). In order to increase the buying frequency in direct selling, companies must be aware of the importance of satisfaction and customer level of trust in the brand and in the seller.

As research limitations, we mention the sample structure, as the respondents are only young women, students at the University of Alexandru Ioan Cuza of Iasi. As a future research direction, we intend to analyse other factors influencing purchase behaviour, besides satisfaction and trust. One example is the habit of buying. The results of this study are important for direct selling companies, in order to build and implement customer relationship management strategies, in order to increase their profits.

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THE IMPACT OF SOCIAL MEDIA ON THE RELATIONSHIP BETWEEN BUSINESSES AND CUSTOMERS

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Abstract: *The progress of technology is imminent and fast so the speed of the changes impacts every area of our life both professional and personal, in the role of customer or manager. Social media is one of the biggest innovation of the XXI century and keeps evolving. Social media is not only a sum of websites for entertainment and interaction between users but a collection of platforms which engage businesses and customers in the same place beyond e-mail and telephone. Before the rise of social media, customers were forced to write e-mails in order to receive an answer to their requests or complaints from the companies. Never before the boundaries between clients and companies were so low, the interaction so close and the access in real time to the customer's favourite brand. All types of businesses can find directly what their clients want, their opinions about current and future products for free. Likewise, clients can address directly to their favourite companies as to those which disappointed them. This paper aims to provide insights from literature review relating to the impact that social media platforms have on the relationship between businesses and their customers. Questionless, it's interesting and important to present first of all what is social media, why these platforms are important for businesses and show the risks and benefits in the management of the customers. Social media has an ugly face too. Businesses are exposed to the criticism or individuals who want to harm the image of the brand and not all the business which are engaged in social media are successful. The statement that social media is trendy is true as the fact that social media is not a panacea. At the end of the paper is presented a general conclusion after balancing the risks and benefits of social media for the relationship between businesses and customers.*

Keywords: *social media; customer relationship; interaction; business development; collaboration.*

JEL classification: *L14; M31.*

1. Introduction

Nowadays, companies face tremendous challenges, such as the high competitive rivalry among existing firms, the unpredictable changes in consumption trends, and more sophisticated customer demands (Porter, 2008). The channels of communication changed but the needs of the customers are the same and social media has the power to offer a medium where business can be closer to their customers. According to Kaplan and Haenlein (2010), social media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content. According to Bloomberg (2010), social media is a relevant marketing tool because of the rogue approach it offers to the communication process. Specifically, it allows for rich, relevant consumer experiences that can grow strategically. Erdogmus and Çiçek (2012) define Social Media as the activities, practices and behavior met in the communities which gather to share information, knowledge and opinions by means of conversational environments.

2. Social media revolution

From ancient times, communication was essential for the relationships between people, whether we refer to family, commercial or political relationships. Nowadays we face unbelievable possibilities of communicating with others. According to Oxford Dictionaries (2017), to communicate means ,,*the imparting or exchanging of information by speaking, writing, or using some other medium*". If the traditional media channels are fading away, where are all the people going? The *social web*. Social media platforms like Facebook, Twitter and Pinterest are becoming the new town squares to exchange news, photos, videos, and our personal events (Schaefer, 2014: 11). Below, in Table 1 are shown the main differences between traditional media and social media.

Table 1. Differences between media and social media

Social media	Traditional Media
Two-way conversation	*One-way* conversation
Open system	*Closed* system
Transparent	Opaque
One-on-one marketing	Mass marketing
About you	About ME
Brand and User-generated Content	Professional content
Authentic content	Polished content
Metric: Engagement	Metric: Reach/ frequency
Actors: Users/ Influencers	Actors/ Celebrities
Community decision-making	Economic decision-making
Unstructured communication	Controlled communication
Real time creation	Pre-produced/ scheduled
Bottom-up strategy	Top-down strategy
Informal language	Formal language
Active involvement	Passive involvement
Deep Analytics	Poor analytics
Paid, Owned, Earned	Paid

Source: Haufman, 2012

Social media is built of content, communities and Web 2.0 technologies. Social media refers to applications that are either completely based on user generated content or in which user generated content and the actions of users play a substantial role in increasing the value of the application or service. (Kangas et al., 2007). Facebook is by far the largest media entity in the history. (Schaefer, 2014). Another definition is that *social media are web-based communication tools that enable people to interact with each other by both sharing and consuming information (Nations, 2017).* Aceto (2010) mentioned that social media is nothing new; it is a *dialogue* and a form of *engagement*. Mayfield (2008) defined social media "*to be a group of new kinds of online media, which share most or all of the following characteristics: participation, openness, conversation, community, and connectedness. A good way to think about Social Media is that all of this is actually just about being human beings sharing ideas, cooperating and collaborating to create, art, thinking and commerce, vigorous debate and discourse, finding people who might be good friends, allies and lovers*". Ahlqvist et al. (2008) defined social media as the means of *interactions* among people in which they create, share, and exchange information and ideas in virtual communities and networks. Throwbridge (2013) synthesized 5 characteristics of social media from the literature:

(1) *Social media is technology-enabled*. Through web-based applications that are accessible through personal computers as well as mobile devices, social media is dependent upon Internet technology.

(2) *Social media is communication-driven.* The exchange of information and the sharing of content, including opinions, insights, experiences, and perspectives among users is a dominant characteristics of social media.
(3) *Social media is user-controlled*. Unlike traditional mass media where content is controlled through a structured hierarchy of publishers and producers, social media provides each user with the general ability to make decisions to personalize the media content they consume.
(4) *Social media is user-generated content*. Unlike traditional mass media where the content is created and distributed by authorized representatives of the media institution, social media provides a publishing and broadcast platform for original content from any user. As a result, users are able to produce, as well as consume, content.
(5) *Social media is relationship-centred.* Building and maintaining the connections among individuals who interact through social media is a primary focus.
In Table 2, Kaplan and Haenlein (2010) present a classification of social media. The authors rely on the social presence theory (Short, Wiliams & Christie, 1976) which claims that media differ in their degree of social presence (acoustic, visual, physical contact). The higher the social presence, the stronger the social influence the communication partners have on each other's behaviour. Concerning media richness, the authors refer to media richness theory by Daft and Lengel (1986) which sustains that media differ in the degree of richness they possess (amount of information provided in a given time interval). Self-presentation refers to people's desire to present themselves and control other's opinion of them, and self-disclosure refers to the conscious or unconscious revelation of personal information (Kaplan and Haenlein, 2010: 62).

Table 2. Social media classification

Social presence/ Media richness				
		Low	Medium	High
Self-presentation/ Self-disclosure	High	Blogs	Social networking sites (e.g., Facebook)	Virtual social worlds (Second Life)
	Low	Collaborative projects (Wikipedia)	Content communities (Slideshare, Youtube)	Virtual game worlds (e.g., World of Warcraft)

Source: Kaplan and Haenlein, 2010: 59-68

Another perspective over the types of social media is offered by Safko (2012) in his book entitled *The Social Media Bible.* He splits social media into 15 categories: *Social Networking, Photo Sharing, Audio, Video, Microblogging, Livecasting, Virtual Worlds, Gaming, RSS, Aggregators, Search, Mobile, Interpersonal, Publications, Productivity applications* (Safko&Brake, 2012). In their report, Radicati and Levenstein (2013) concluded that Social Networking will grow from about 3.2 billion accounts in 2013 to over 4.8 billion accounts by the end of 2017. The majority of social networking accounts still come from the Consumer space, however, business-oriented Enterprise Social Networks are also showing strong adoption. If business owners argue, "Why would my business need to use social media, or why would this make sense for me?" the answer would be; "*because, that is where the money is*" (Bottolfsen, 2012). Even if we live in a digitalized world humans buy from humans (Schaefer, 2014). Altimeter conducted a research entitled *Social Business Survey* in 2016, with 523 respondents from organisations with more than 500 employees. To meet customer experience objectives, the social business team's role is shifting from an innovator to a multi-business practice integrator. After all, while the social team may have been the first to test social platform innovations, they were infrequently in a position to scale them (Terpening and Littleton, 2016).

Table 3. Customer experience replaces other business objectives

	Very important	Somewhat important	Neither important nor unimportant	Unimportant
Customer experience. Improvement in relationships with customers, experience with the brand	**40%**	**42%**	**16%**	**2%**
Innovation. Increase in product R&D and innovation	**38%**	**43%**	**15%**	**4%**
Operational Efficiency: Reduction in company expenses, e.g., customer service	**36%**	**44%**	**17%**	**3%**
Brand Health: Improvement in attitudes, conversation, and behavior toward our brand**.**	**36%**	**43%**	**16%**	**5%**
Revenue Generation: Increase in actual product revenue, leads, conversions	**34%**	**43%**	**20%**	**3%**
Marketing Optimization: Improvement in effectiveness of marketing programs	**32%**	**46%**	**19%**	**3%**

Source: Terpening and Littleton, 2016

3. The ugly face of social media in business-customer relationship

There are conversations taking place about companies or brand 24 hours a day, seven days a week in social media so a business should be there. Shih and Shalett (2013) sustain that a business which is a social media holdout risks:

1. ***Having the business reputation defined by others:*** People are talking about the company and brand, and stakeholders expect companies to pay attention in real time, especially when they have a customer service complaint or positive feedback to give.

2. ***Being invisible and less credible:*** The social Web is changing how people communicate and access information. People are increasingly turning to social networks as the easiest way to get their questions answered. Potential buyers are going online to research products or services before they purchase them, or new contacts before they meet them.

3. ***Being perceived as behind the curve:*** As consumers embrace new technologies, they expect businesses to do the same. Companies (and their representatives) that aren't using social networks will not be perceived as forward-thinking and, in the long term, will risk losing

customers who want business partners who speak their language. Social Media provides the average person with 4 factors empowering bad behavior, particularly against companies.
No Guilt. There is no remorse about bullying a brand. It's much easier to do because no one gets "hurt".
The Mob. Lots of other people are doing it. Whether they are the instigator with a real story or a troll making them up, it's easy to find others who will join you.
Relative Anonymity. Anonymity strips many people of fear. "No one will know if I say this" is the common feeling and easily overwhelms any feelings of restraint a person might normally have.
No Accountability. Probably the most significant factor is the sheer lack of accountability in anything said in social media. Without accountability as a "natural check" on actions, you get an environment devoid of any punishment (Wilson, 2012)
On the same topic, Popescul and Georgescu (2013) mention possible dangers once with an online presence such as:

- Creating fake profiles – which might lead to identity theft;
- Rummaging Facebook posts to find out information such as phone number, email and other sensitive data and information;
- Attacking on Facebook chat;
- Click jacking – a type of attack conceived to make the users click on links which lead to pages from where the hackers are able to obtain confidential information or compromise privacy;
- Unrequired posts on the wall, sending messages in Inbox or chat, invite users to join groups or community pages promising to offer prizes or enter competitions. Also, some messages created by spammers aim to take compassion on counterfeit medical or social cases, so that money would be sent to the fake victims.
- Games on Facebook which might hide spyware applications behind an apparently legitimate interface

4. Benefits from business-customer relationships

Besides these danger, today's focus on customer centricity is translating into increased use of social data for innovation. Additionally, it is important for companies to foster innovation. Overcoming barriers to social media adoption and use will require leaders to continuously balance potential risks with benefits, keeping a finger on the pulse both inside and outside the company, and building business cases for social media across their organizations (Bradley & McDonald, 2011; De Hertogh, Viane & Dedene, 2011).
The Social Media revolution is a consumer revolution. The *democratization* of media has shifted power away from corporations and media owners and into the hands of the general public. Today, brands are *co-owned* by consumers. A social organization, as defined by Anthony J. Bradley and Mark P. MsDonald (2011), is the one that strategically applies mass collaboration to address important business challenges and opportunities. Its leaders recognize that becoming a social enterprise is not about incremental improvement. They know it demands a new way of thinking, and so they're moving beyond tactical, one-time grass-roots efforts and pushing for greater business impact through a thoughtful, planned approach to applying social media. (Logofatu, 2012). Levitt (2006) explained that it has become increasingly necessary for companies to understand how their customers view them and what they have to offer.
Vargo and Lusch (2011) have argued that people should be the focal point of and active participants in a service-centred model, based on a relationship between the business entity and its customers that goes beyond a simple marketing exchange. Deepening the relationship with the consumer base is perhaps the most discussed and the most significant contribution of social media to marketing efforts (Brogan, 2009). Social media tools can provide businesses with the means to listen to the needs of customers. Social media tools

can effectively engage the audience, as well as empower a group of fans to promote the products for free through their social networks. Referrals are crucial elements to a company's generation of new sales, a marketing strategy that can be built around taking care of existing customers (Alameddine, 2013). This can be done by increasing what Vemuri (2010) called "*the stickiness of the brand*", whereby consumers instantly recall, prefer, and patronize a brand. According to Vemuri (2010), social media channels are a market researcher's dream come true, as users provide critiques, new ideas, and suggestions for improving products. Social consumers are king and clever, willing to pay and participate. (Paniagua and Sapena, 2014). Active social customers set social trends and agendas in a varied range of topics, from economics to environment and entertainment industry (Shirky, 2011). Conversation, sharing and presence resources are conveyed into financial capabilities through the revealed preferences channel. Through sites like Twitter or Facebook, potential customers express their "likes" or the tastes that rationalize an agent's observed actions (Beshears, Choi, Laibson & Madrian, 2008). Through "*likes*" and "*follows*" companies pulse the market and anticipate demand for product and services. Costa (2010) stated that the building of closed groups provides valuable insights for marketing campaigns. Retailers always have recognized the need to invest in the right marketing approaches to remain competitive. While, traditionally, companies have invested a lot of effort and money into reaching their audience, this personal referral approach can be achieved through a minimal financial investment (Brogan, 2009). After all, social media marketing needs to help increase sales and revenue. That's why it's called social media marketing and not simply social media public relations. The ability to target particular audiences is one of the greatest benefits of social media marketing. Social networks know a lot about consumer interests and demographics, so even though there are hundreds of millions of fans, marketers can accurately target the right people with the right message (Roesler, 2014).

5. Conclusions

In this digital age, innovation and open innovation management present significant challenges to managers due to dynamically changing customer demands, individualized consumer requirements, market uncertainties and fierce competition in the global markets (Li&Li, 2014). The impact of social media can't be denied anymore. Even if there are risks for businesses to be exposed and harmed, the benefits of adopting social media in the business strategy are overcoming any attempt made before to improve the relationship between businesses and customers.

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IS INCOME CORRELATED TO ASSESSMENT OF CREDIBILITY DIMENSIONS OF COMMERCIAL WEBSITES?

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Abstract: *The purpose of this research is to understand if young Internet users' income has any connection with their manner to appreciate credibility dimensions of online acquisition websites. The hypotheses are: (H1) - Among the credibility dimensions identified there will be Ease of use, Framing Adverts, Real World Feel, Expertise; (H2) - The income is correlated with the dimensions of credibility of online acquisition websites. (H3) - Certain credibility dimensions are predictors of the income level of the young Internet user. The objectives of this research are: (1) to identify the dimensions of credibility of online acquisition websites;(2) to identify potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites;(3) to understand if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users. The research method was a quantitative survey based on a questionnaire and the sample consisted of 276 young Internet shoppers. Seven credibility dimensions were identified in this research: Ease of Use/Professionalism, Transparency, Expertise, Real World Feel, Product Support, Framing Adverts and Online Order. The income level has connection with the manner Internet users appreciate a part of credibility dimensions of online acquisition websites. The dimensions correlated with the income level are: Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts and Online Order. Expertise and Product Support are not correlated with the income level of the young Internet user. Ease of Use/Professionalism and Transparency may be used as predictors of income level of young Internet users. This research is original because it investigates the correlation of income levels and the scores of credibility dimensions of online acquisition websites. There are studies investigating the connection between the income level of participants and the rating of the dimensions of credibility. The novelty brought by this research is that dimensions are computed as factor score in SPSS. The investigated correlations involved the factor scores and the income levels. The results of this research are useful to managers, when planning to build a credible website for various income level targets.*

Keywords: *Internet; credibility; online shopping; reasons to buy; reasons not to buy; income.*

JEL classification: *M31; M39.*

1. Introduction

Credibility has been widely studied by researchers in social sciences (Țugulea, 2014). The literature in business administration is rich in studies on this topic. Credibility was studied as a general concept, for any type of source or as a concept applied for specific sources such as types of media, personal sales, marketing messages, etc.

The construct of credibility applied in the online context received a great attention from researches all over the world. The concept was studied for websites, in general, and for specific types of websites, such as personal web pages, online newspapers, blogs, online communities, commercial websites, health websites, finance websites, etc. Some researchers (Fogg et. al., 2001) analysed the dimensions of credibility of websites in more depths, depending on sex, educational level and income of participant. The purpose of this

research is to understand if young Internet users' income has any connection with their manner to appreciate credibility dimensions of online acquisition websites. The hypotheses are: (H1): Among the credibility dimensions identified there will be Ease of use, Framing Adverts, Real World Feel and Expertise; (H2): The income is correlated with the dimensions of credibility of online acquisition websites; (H3): Certain credibility dimensions are predictors of the income level of the young Internet user. The objectives of this research are: (1) to identify the dimensions of credibility of online acquisition websites; (2) to identify potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites; (3) to understand if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users.

2. Literature review

The concept of credibility has a long history in the human communication process (Ceobanu and Anton, 2009). A definition of the concept of "credible information" that is often used in the literature is the information that can be trusted (Fong and Tseng, 1999). In his research, Eisend (2006) examined various other credibility studies with the purpose to deliver a general concept of credibility of communication sources in marketing. His results deliver three dimensions of credibility: (1) inclination toward truth („will tell the truth"), (2) potential of truth („knows the truth") and (3) presentation of truth (appears to tell the truth"). The online environment received great attention from credibility researchers in the past years. For example, Rieh and Danielson (2007) made a distinction of assessment levels on web credibility: assessment of Web as a type of media, assessment of websites as sources of information and assessment of information from the Web. Different types of web pages were studied by researchers from this perspective. Johnson and Kay (2004) state that blogs are perceived to be more credible than traditional sources of information, as information is presented in more details. The credibility of eWOM (online communities such as forums) is influenced by the strengths of reasoning, source credibility and validation of the receptor's opinion (Cheung et. al., 2009). The credibility of online reviews in tourism was analysed by Ayeh et. al. (2013), using a construct with the dimensions of trust and expertise in order to check the model's relevance. In their research, Chung et. al. (2010) underline that online independent newspapers represent the least credible type of online newspapers. Web credibility researchers studied the construct of credibility in various contexts. These studies delivered dimensions of credibility. For example, Morrison (2005) analysed the credibility of an online source using eight dimensions: (1) sufficiency, (2) decision, (3) liked, (4) confident, (5) complete, (6) trust, (7) bias and (8) accurate. Fogg et. al. (2001) delivered seven dimensions of the credibility of a web page: (1) real world feel, (2) ease of use, (3) expertise, (4) trustworthiness, (5) tailoring, (6) commercial implications and (7) amateurism. Web credibility was also studied on comparison between different demographic data. For example, Fogg et. al. (2001) study also concluded that men are more critical than women when evaluating the credibility dimensions of websites. Flanagin and Metzger (2003) studied the comparison of credibility of personal web pages from the same perspective: men and women. Fogg et. al. (2001) also studied differences in credibility perception of websites from the educational level and income perspective. In his research, differences from the income point of view are identified for one dimension only. Studies on commercial type of websites were conducted as well. In the research of Ciobanu (2015), commercial websites are split into two categories of websites: (1) commercial presentation websites and (2) online acquisition websites. Factor analysis was used in order to determine the dimensions of credibility of these two types of commercial websites.

3. Purpose and hypotheses

The purpose of this research is to understand if income has any connection with the manner that young Internet users appreciate credibility dimensions of online acquisition websites. The hypotheses are:

H1: Among the credibility dimensions identified there will be Ease of use, Framing Adverts, Real World Feel and Expertise. These dimensions were identified in previous studies on dimensions of online acquisition websites, on different samples (Ciobanu, 2011; Ciobanu, 2015). The dimension Real World Feel, in particular, was also identified by Fogg et. al. (2001) in his research on credibility dimension of websites, in general.

H2: The income is correlated with the dimensions of credibility of online acquisition websites. This hypothesis relies on the fact that users with higher income levels spend less time on acquisitions, in general. Most probably, they use the Internet more often to make online purchases. This aspect makes the online users with higher income levels be more experienced and assess credibility dimensions in a different manner comparing to young users with smaller income levels.

H3: Certain credibility dimensions are predictors of the income level of the young Internet user. This hypothesis relies on the previous hypothesis.

The objectives of this research are: (1) to identify the dimensions of credibility of online acquisition websites; (2) to identify potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites; (3) to understand if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users.

4. Methodology

This research relies on a previous research (Ciobanu, 2014). The previous research investigated the construct of credibility of commercial websites, split into two categories of websites: presentation and online acquisitions websites. This research only investigates online acquisition websites category. The previous research initially involved 76 items. The items represented affirmation on aspect about credibility of online acquisition of websites. Each affirmation had a 7 point credibility scale, from 1 (criterion is not accomplished) to 7 (criterion is very accomplished). After successive factor analyses, 44 items were removed. 32 items remained in the analysis. Data was collected using a quantitative survey based on a reduced instrument of the 32 items (Ciobanu-Tugulea, 2015).

5. Population and sample

Young Internet shoppers represent the investigated population. Participants in this research were included with a condition: to have made at least one online acquisition in the past year. The sample consisted of 276 students from Faculty of Economics and Business Administration, “Alexandru Ioan-Cuza” University of Iasi, Romania. This is a convenience sample, with randomly selected groups of students, from various majors of the faculty, bachelor and master degree students.

Although the consistency of the sample excluded online shoppers that are not students, the sample is a valid one for the purpose of this research, as students are very familiar with Internet activity, online shopping included (Oakes, 1972; James and Sonner, 2001, Miyazaki and Fernandez, 2001, Sexton et. al., 2002; Kwak et. al., 2002). Ethical aspects of a social science research were approached. Participants were asked for their verbal consent to participate in the study, after being informed on the purpose of this research. Participating at this study was not correlated to any evaluation criteria. There was used no kind of force to convince participants to fill in the questionnaire. All questionnaires were anonymous.

As for income levels distribution (in Ron), 26.8% of the students have an income less than 300 Ron while 25% of the students have an income higher than 900 Ron. 18,8% of the respondents have the level of income between 300 and 500 Ron, 14,1% of them have the income level between 501 and 700 Ron while 10,5% have the income level between 701 and 900 Ron

6. Results

Objective 1: identifying the dimensions of credibility of online acquisition websites.

The exploratory factor analysis was conducted, Principal Axis Factoring method and Promax rotation in SPSS. There are many opinions in the literature regarding the sample size for a factor analysis procedure. For example, according to Hutcheson and Sofroniou (1999), the number of cases should not be less than 150. Hatcher (1994) stats that the number of cases should be five times larger than the number of variables included in the analysis. There are 32 items included in this research and 276 cases. This number of cases exceeds Hutcheson and Sofroniou (1999) and Hatcher (1994) recommendation (32 items x 5 = 160 cases minimum). In the first run, two items that loaded < 0.3 in the Factor Matrix were eliminated. Week factor loads are below 0.3, moderate factor loads are between 0.3 and 0.6 and strong factor loads are over 0.6 (DeCoster, 2004). In the second run of the analysis, all items loaded > 0.3 in the Factor matrix. Four items loaded similar in the Pattern Matrix and they were eliminated from the analysis. The value of the KMO and Bartlett's Test is 0.830 (> 0.6), sig. < 0.05. The factor analysis is valid. The dimensions of credibility of online acquisition websites are synthetically presented in the Table 1. The dimensions presented in Table 1 explain approximate 50% of the total variance. According to Malhotra (1996), it is recommended that factors explain at least 60% of the total variance. As the purpose of this analysis is to explain the variance by a small number of factors, the minimum variance accepted may be 50%. The first dimension, *Ease of Use/Professionalism*, explains 21.16% of the total variance. The second dimension, *Transparency*, explains 12.16 % of the total variance. The third dimension, *Expertise*, explains 4.16 % of the total variance. The fourth dimension, *Real World Feel*, explains 3.42 % of the total variance. The dimension, *Product Support*, explains 3.37 % of the total variance. The dimension, *Framing Adverts*, explains 2.88 % of the total variance. The last dimension, *Online Order*, explains 2.31 % of the total variance.

Objective 2: identifying potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites.

The dimension *Ease of Use/Professionalism* is correlated with income levels. The value of Pearson coefficient is -0.194, with sig = 0.003. The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the least is the value of the dimension's score computed by SPSS.

The dimension *Transparency* is correlated with income levels. The value of Pearson coefficient is 0.139, with sig = 0.036. The correlation is positive, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the higher is the value of the dimension's score computed by SPSS.

The dimension *Expertise* is not correlated with income levels (sig > 0.05). The value of Pearson coefficient is -0.033, with sig = 0.623.

The dimension *Real World Feel* is correlated with income levels. The value of Pearson coefficient is -0.157, with sig = 0.018.

The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the lower is the value of the dimension's score computed by SPSS.

The dimension *Product Support* is not correlated with income levels (sig > 0.05). The value of Pearson coefficient is 0.035, with sig = 0.597.

The dimension *Framing Adverts* is correlated with income levels. The value of Pearson coefficient is 0.141, with sig = 0.033.
The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the lower is the value of the dimension's score computed by SPSS.
The dimension *Online Order* is correlated with income levels. The value of Pearson coefficient is 0.153, with sig = 0.021. The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the lever of income; the lower is the value of the dimension's score computed by SPSS.
Except for *Expertise* and *Product Support*, all factors are correlated with the income levels. The correlations are both negative and positive, for various situations. Yet, the Pearson Coefficient for each situation does not exceed 0.3. This means the correlations are not intensive.

Table 1: Dimensions resulted from the factor analysis procedure

Dimension	Items
Ease of use/ Professionalism	The site loads rapidly
	All the links posted on the site are functional
	The site is easy to navigate
	The site presents no access errors
	The site makes possible to search information posted in the past
	Products are attentively presented (nice graphics, touched up photos)
Transparency	The site offers details about the manufacturing process and about the products
	The company is the producer of the products promoted by the site
	The site posts links to competitors' sites
	The site offers the names and e-mails of the authors of the articles included in the page
	The presentation of the products also underlines weaknesses/secondary effects of their use
	The company answers fast to my customer support questions
Expertise	The company is a prestigious/respected/serious one
	The company has experience in the commercial field
	The site makes aggressive advertising (such as spam, many pop-up windows, etc.)
Real World Feel	The site offers a phone number for contact.
	The site offers an e-mail address for contact.
Product Support	The site promotes products with services included
	The site promotes products that have warranty
	The site or the products it promotes are promoted by other types of media as well
	Delivery is free
Framing Adverts	The site structure clearly distinguishes the presented information by the adverts
	The site contains adverts that fit the presented information
Online Order	The structure of the site does not insist on ordering
	The site has a comfortable order system
	The company frequently updates data on the site

Objective 3: understanding if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users.
Linear regression was conducted, Enter method. The independent dimensions inserted in the model were the five dimensions correlated with the income level: *Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts, Online Order* (Table 2).

Table 2: Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
REGR factor score for analysis 1		B	Std. Error	Beta		
1	(Constant)	2,909	,102		28,510	,000
	REGR factor score 1	-,310	,150	-,180	-2,072	,039
	REGR factor score 2	,309	,128	,179	2,406	,017
	REGR factor score 4	-,064	,126	-,040	-,513	,608
	REGR factor score 6	-,155	,148	-,086	-1,049	,295
	REGR factor score 7	,078	,161	,043	,482	,630

a Dependent Variable: Income level

Only two factors are important to predict the income level: *Ease of Use/Professionalism* and *Transparenc*y. For these two predictors, sig. < 0.05 and t value > +2 or <-2.

7. Conclusions

This research has the purpose to understand if income had any connection with the manner that young Internet users appreciate credibility dimensions of online acquisition websites. As a general conclusion, the income level has connection with the manner Internet users appreciate a part of credibility dimensions of online acquisition websites.
Hypotheses confirmation and disconfirmation
H1 hypothesis was validated. The dimensions identified in this research are: Ease of Use/Professionalism, Transparency, Expertise, Real World Feel, Product Support, Framing Adverts, Online Order. H2 hypothesis was partially validated. Only five out of seven dimensions are correlated with the income level: Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts, Online Order. Expertise and Product Support are aspects assessed by young Internet users in a similar manner, from the income point of view. H3 hypothesis was also partially validated. Only two dimensions may be used as predictors of income level of young Internet users: Ease of Use/Professionalism and Transparency.
Research implications. This research is original because it investigates the correlation of income levels and the scores of credibility dimensions of online acquisition websites. There are studies investigating the connection between the income level of participants and the rating of the dimensions of credibility. The novelty brought by this research is that dimensions are computed as factor score in SPSS. The investigated correlations involved the factor scores and the income levels.
Managerial implications. The results of this research are useful to managers, when planning to build a credible website for various income level targets. Aspects composing dimensions of Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts and

Online Order should be carefully considered for various types on income level targets. Managers should test various site designs on various income levels from the perspective of the dimensions listed above.

Limitations of the research. This sample is a convenience one. Students from the Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iași, Romania, were included only. The generalisation of the findings of this research may be affected by the fact that young Internet users, that are not students, and students from other faculties and universities, were not included in the sample. It is well known that students are very familiar with the Internet. This makes the limitation acceptable for the research.

Future research. Although there are five factors correlated with the income level - Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts, Online Order – only two dimensions may be used as predictors of income level of young Internet users: Ease of Use/Professionalism and Transparency. The possible explanation may be correlated with the experience in online shopping. This study leads to a new hypothesis: the higher the income level is, the more experienced an Internet user is in assessing Ease of Use/Professionalism and Transparency of an online acquisition website.

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MANAGEMENT SKILLS ASSESMENT

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Abstract: *The paper presents a theme of great relevance, because the managerial performances have a significant influence as regards the socio-economic activity and the organizational climate in the company. In the introduction of this paper, we have presented some theoretical aspects regarding Performance Management, steps for performance appraisal of human resources and methods of assessment. In the second part of the paper we presented the study designed to assess the skills, abilities and skills manager, which we believe are essential and significant for performance management. We analyzed the skills management model CM by TA- Ability teamwork ,LS- leadership style and - personality traits. We determined the influence of independent variables of the model of managerial skills using statistical regression. Without a doubt, organizational performance is greatly influenced by the skills and abilities of managers, for this reason it is imperative for them to possess not only technical capabilities, but also excellent communication of strategic goals and responsibilities, good motivational skills or the capacity to synthesize and analyze a large amount of data. For this reason, organizations need to constantly evaluate managers' skills and to determine those areas that need improvement that will later dictate the specific of professional training programs.*

Keywords: *performance evaluation; skills; manager skills.*

JEL classification: *J24; M12.*

1. Theoretical Aspects of Human Resources Performance Evaluation

"Performance evaluation is the core business of HR management held to determine the extent to which employees of an organization to effectively fulfil their responsibilities or duties." ***Performance management*** is a way to achieve individual and organizational results much better by understanding and managing performance in a unitary framework and context of business generally, or predetermined objectives and standards, in particular. This means that performance management approach or concept is based on the philosophy of management by objectives (Manolescu, 2001).

Performance evaluation provides a basis to support the system of rewarding employees according to their contribution to the objectives of each organization, the only coherent framework for implementation plans at individual motivation (Chișu, 2005).

Evaluating management performance has a significant influence in terms of economic and social activity and organizational climate of each economic unit. Performance management is a systematic approach to human resources management in general, and performance evaluation, particularly using objectives, performance, assessments and feedback as a means to motivate employees to understand and fully exploit their potential creator.

Performance appraisal represents the process of determining the manner and the extent to which the employee carries out his duties and responsibilities of the position held, compared with standards set and the results communicated to employees (Rotaru & Prodan, 2006).

The first step in performance appraisal is represented by defining goals and setting performance evaluation policies. Based on the objectives of the organization and of the

individuals, taking into account the responsibilities set out in the job description, the evaluation criteria is established. The next step is choosing methods of assessment, establish evaluators and performance standards necessary for the evaluation. The last stage is the evaluation of human resource performance based on all the elements and systems previously formulated.
Based on evaluation of employee performance, analysis of the results will be carried out for staff development planning and analysis staff, in order to meet the demands of the job they hold, identify ways to improve performance, advice and support to underperforming (Mathis *et al.,* 1997).
Measuring human performance can be both objective and subjective. Objective measurements are expressed in volume of a product that a worker produces, the number of defective products, the production time in which an employee can manufacture a product or provide a service (Moldovan-Scholz, 2000). This method should be used to measure performance only when it can establish a clear link between the current measurement and efficiency of the station. Benchmarks are used when it is difficult to collect performance data comparable or influenced by a certain factor. Evaluation is marking incident observed during the work activity to one who is noted. It is used to assess business leaders and diagnose creativity (Moldovan-Scholz, 2000).

2. Evaluation of management skills

The type of research carried out in the case study is qualitative, following main skills, qualities, skills of managers at 10 companies' representative of Maramures County in Northern Romania. This paper assumes that there is a correlation between the skills, qualities and managerial skills and performance management. Managerial skills were determined by a complex methodology, which include three dimensions of research, teamwork ability, leadership style and personality of the manager.
The manager's performance management skills were analyzed. Managerial skills mediate the relationship between variables related to teamwork ability, leadership style, managers and managerial performance. Objectives we sought were: assessing the ability of teamwork, the leadership style of managers, personality traits as determinants of performance management, analysis and interpretation of assessment results to identify their influence on managerial performance.
The assessment tool used was a questionnaire containing 35 questions to evaluate three dimensions: the ability of teamwork, leadership style and personality. This questionnaire contains statements that manager expressed views on a scale from 1-5. Using the factors discussed in the questionnaire, we measured personality traits of managers who have a great influence on managerial performance.
The statements in the questionnaire assessing management performance using the following factors: emotional stability, sociability, energy, independence, leadership, decision-making ability, empathy, reliability, capacity, responsibilities, teamwork skills, stress resistance, innovative spirit.
The questionnaire contains 35 questions and each is given a score on a scale from 1 to 5 for each statement. The total score is obtained by summing points. A total score ranging from 140.1 to 175 shows excellent teamwork skills, an efficient driving style and a very strong personality, capacities from 105.1 to 140 very good, good capacities from 70.1 to 105, 35.1 1-35 -70 capabilities satisfactory and unsatisfactory capacities.

3. Analysis model management skills

We proposed a model of managerial skills analysis

CM(TA;LS;PT)

We chose as independent variables of the model:

TA- teamwork ability
LS- leadership style
PT- personality traits

CM(TA;LS;PT)
CM- management skills
TA- teamwork ability
LS- leadership style
PT- personality traits

CM	TA	LS	PT
170,00	60,00	45,00	65,00
150,00	50,00	50,00	50,00
140,00	50,00	40,00	50,00
175,00	65,00	45,00	65,00
150,00	50,00	50,00	50,00
145,00	45,00	50,00	50,00
150,00	50,00	50,00	50,00
130,00	40,00	50,00	40,00
140,00	50,00	40,00	50,00
150,00	50,00	50,00	50,00
145,00	45,00	50,00	50,00
135,00	40,00	50,00	45,00
150,00	50,00	50,00	50,00
140,00	50,00	40,00	50,00
150,00	50,00	50,00	50,00
140,00	40,00	50,00	50,00
175,00	65,00	45,00	65,00
140,00	50,00	40,00	50,00
175,00	65,00	45,00	65,00

Table No. 1 Regression Statistics

Regression Statistics	
Multiple R	1
R Square	1
Adjusted R Square	1
Standard Error	1,676E-15
Observations	19

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	3450	1150	4,09E+32	1,4571E-239
Residual	15	4,21548E-29	2,81E-30		
Total	18	3450			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0	6,45195E-15	0	1	-1,3752E-14	1,3752E-14
TA	1	1,4337E-16	6,97E+15	3E-230	1	1
LS	1	1,05053E-16	9,52E+15	2,8E-232	1	1
PT	1	1,5234E-16	6,56E+15	7,4E-230	1	1

The analysis ANOVA table follows a strong connection between the variable CM-management skills and independent variables of the model: TA- Ability teamwork, leadership style and PT-LS- personality traits.
Figure number 1, we present the influence of model variables: ability teamwork, leadership style and personality traits on management skills.

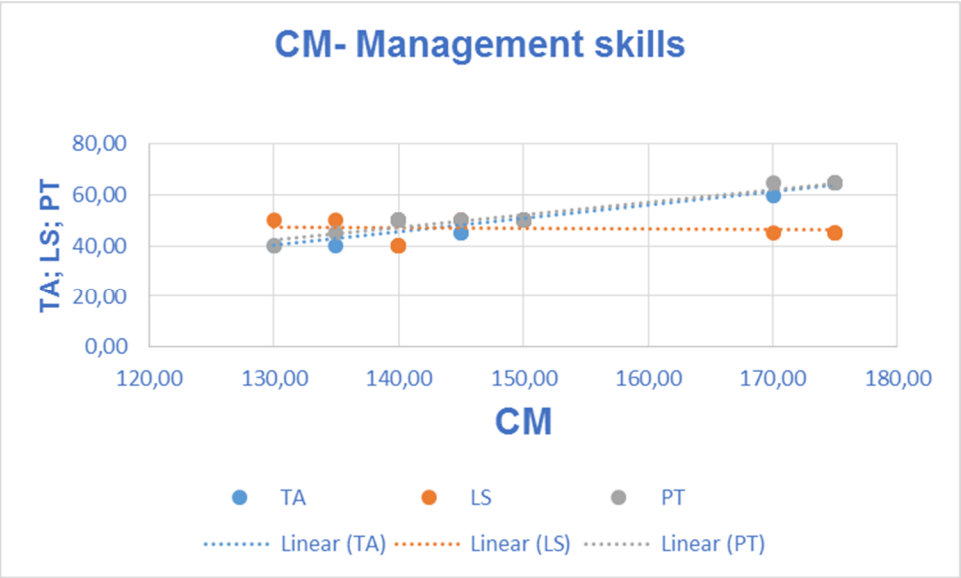

Figure 1. Management skills analysis
Source: self – representation

The analysis of responses to the questionnaire revealed that the 20 managers interviewed very good managerial skills: TA-ability teamwork, LS-leadership style and PT-personality traits.

Conclusions

Performance management is closely related to the quality, personality and temperament managers. Skills and leadership qualities will generate superior management performance. Managers that were surveyed to determine their managerial skills, have a good planning capacity and efficient organization of activities and integration of creative values in order to generate performance management.
The study has revealed that managers interviewed by leadership style are registering high managerial performance, especially because they: have initiative, good decisional capacity, the ability to communicate effectively, assume their responsibilities, their capacity for analysis and synthesis, capacity to motivate employees.

The analysis of managerial skills can be applied in practice management. Variables model ability teamwork, leadership style and personality traits have a big influence on managerial performance.

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THE RELATIONSHIP BETWEEN TRANSACTION COSTS AND FLEXIBILITY IN OUTSOURCING: A CONCEPTUAL FRAMEWORK

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Abstract: *Companies face endless anxiety to ensure they deliver goods and services of the best quality in perfect time to their customers, so they have to find the best and most flexible outsourcing firms to contract with. However, this will lead to high transaction costs which arise because of the of company's activities in the market. The aim of this paper is to shed light on the relationship between transaction costs and flexibility in outsourcing, and then to determine the equilibrium point between them. Various publications, including (articles and research reports) have been used to explain the notions of transaction costs, outsourcing, flexibility in outsourcing, and related theoretical issues. As a result of a review of the literature it emerges that, transactions costs and outsourcing flexibility are the main challenges facing companies (operating as an anvil and a hammer. Transaction costs are costs which arise because of the company's activities in the market, and include (fees, commission and taxes) and which are paid by the firm to provide a service or produce a good, either to external parties or as internal costs. Companies must determine the equilibrium point which meets the optimal level of flexibility required in outsourcing for the best performance, and which allows them to cover transaction costs which arise because of uncertainty. The equilibrium point explains the extent to which the company is willing to bear high transaction costs in order to get benefits from applying outsourcing flexibility. We can use the terms outsourcing flexibility or supplier flexibility to express the way firms meet their needs in the light of uncertainties caused by demand fluctuations and market circumstances.*

Keywords: *Transaction Costs; Outsourcing; Supplier Flexibility; Flexibility in Outsourcing.*

JEL classification: *D23; M1; L14.*

1. Introduction

In the light of changes in the work environment and the increasing growth of businesses, firms face risks because of uncertainty, especially when they deal with external units in order to fulfil their needs. Hence two main challenges appear, the first is finding the best outsourcing, and the second is reducing transaction costs. According to Scott and Thompsonn (2011) outsourcing means the process of moving aspects of the company to another supplier. Transaction costs are mainly concerned with finding and negotiating with a proper partner and monitoring this partner's performance (Brouthers, 2002). According to Vasiliauskiene and Snieska, (2009:1018), when a company decides to outsource as an element of supply or production, it is important to determine which risks should be allocated between the parties to the contract – the principal and the agent. In the same sense, Williamson (2008) noted that the main cause of transaction costs, may be mainly connected to maladaptation, and flexibility or the ability to adapt is required to cope with the changes and disturbances arising from transaction costs. From this perspective we can ask the following question: to what extent can flexibility in outsourcing help a company to reduce transaction costs (flexibility here means the ability to vary as you wish, according to your needs)? Furthermore, flexibility is the ability to adapt without excessive costs (Grigore,

2007). Consequently, flexibility helps companies to cope with uncertainty and may reduce transaction costs which arise because of uncertainty). Supply flexibility means flexibility in relationships with partners. Companies may contract with outsourcing providers by choosing to solicit short-term bids, entering into long-term contracts and strategic supplier relationships, forming joint ventures, forming consortiums, creating problem-solving councils or vertically integrating (Grigore, 2007), and as a result, this leads to an increase in transaction costs.

2. Literature review

2.1 Outsourcing

Companies are under continuous pressure to ensure they can deliver goods and services with reliable quality and in perfect time to their customers at a competitive cost. Therefore, they have to find the best sources to ensure that production processes will go smoothly at all times, by looking for outsourcing providers for their needs. According to Scott and Thompsonn (2011), outsourcing is consider when a company cannot achieve a specific task by itself, so it seeks another partner or another company to do the task better, and in supply chain management, outsourcing occurs when functions such as buying, manufacturing, warehousing and transportation are given to another supplier. Many studies have examined the motivations for and benefits of outsourcing. Abraham and Taylor (1993) identified three reasons for outsourcing: first, savings on wage and benefit payments. Second, transfer of demand uncertainty to the outside contractor, and third, access to specialized skills and inputs that the organization cannot itself possess. In the same area, Kakabadse and Kakabadse (2000) reported that the main reasons for outsourcing are: First, *economic*—greater specialization in the provision of services, as outsourcing allows economies of scale and the longevity of demand for the activity; second, *quality*—access to skills, the competency and focus of potential suppliers and geographical coverage is increased; and lastly, innovation—improvements in quality through innovation, and the development of new service products, can lead to new demands. Samuel (1998) also emphasized that outsourcing provides a certain capacity that is not available within an organization's internal departments. According to Aranda et al, (2011) outsourcing success depends on the distribution, processing, and exchange of information between both parties and the correct choice of outsourcing provider enables the company to achieve competitive advantage. As a result, flexibility in these tasks generates faster responses to potential environmental changes.

2.2 Transaction Costs

Transaction costs theory might be one of the most important organizational theories because of the studies that it has encouraged (Williamson 2007); it also is one of the main perspectives in organizational studies (David and Han 2004). Moreover, transaction cost economics theory is frequently viewed as a subset of new institutional economics. The new trend in transaction costs is to describe firms from a new perspective based on organizational terms, as governance structures, rather than in neoclassical terms, as production functions (Macher and Richman 2008). Evidence has emerged that the performance of firms which take transaction costs into consideration is better than that firms which do not consider it (Brouthers et al, 2003). Furthermore it was found that companies that follow the basic transaction cost hypothesis, (i.e. the high costs of finding and negotiating with partners), tend to use a higher degree of control (Brouthers, 2002). In addition, transaction costs economics has recognized that the productivity of a value chain is a function of both production costs and transaction costs (cited by Dyer& Chu, 2003). In the same area, transaction costs are significant and have a major impact on economic efficiency (Williamson, 1991) (cited by Dyer& Chu, 2003). The hybrid mechanisms

introduced (Williamson, 1985) are specified more precisely as supply management, supply chain management and the virtual enterprise. From a global sourcing perspective companies obtain their intermediate products from outside suppliers if the transaction costs of external purchases are lower than those arising from domestic purchases. In other words, transaction costs determine the governance structure of a supply chain. So, in the light of globalization, a firm has to decide if it will follow a domestic or global source to supply its needs.

2.2.1 Market transaction costs decisions

Figure 1 shows how the demand for market transaction changes according to price. The vertical axis is the price of a market transaction *Pb, the* horizontal axis is the number of market transactions.

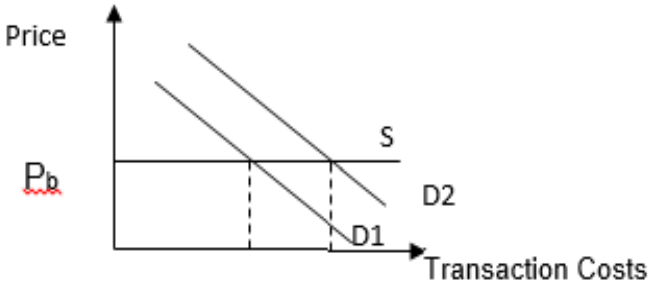

Figure 1: Demand for market transactions
(Alston and Gillespie, 1989)

According to the previous diagram, increasing dependence on market transactions leads to a reduction in production by the firm. Moreover, demand for market transactions depends on the price of transactions and the production of the firm.
When the number of market transactions goes down, the demand for internal transactions increases directly; in contrast, an increase in both internal transactions and production costs leads to an increase demand for market transactions. At point P_b the supply of market transactions is completely elastic; at this point the price includes the cost of market transactions which represents the limitation line between the selling price and total costs of the buyer. The greatest proportion of market transaction costs is the greatest limit between the supplier price and the price which the buyer is ready to pay to ensure the transaction. On the basis of above, we can draw the transaction costs demand curve as follows:

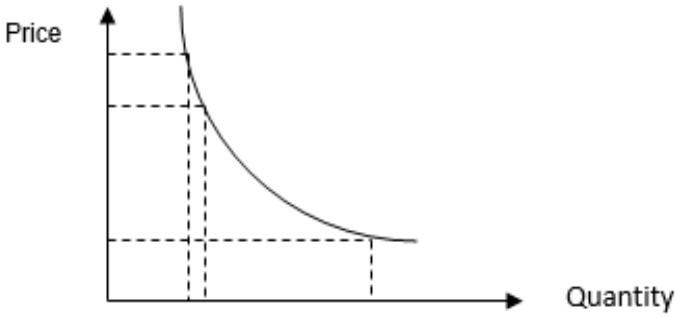

Figure 2: Transaction costs demand
Source: Authors' own research

2.3 Outsourcing and Transaction costs:

Vasiliauskiene and Snieska, (2009:1023) determined the structure of transaction cost factors that influence outsourcing contracts as follows:

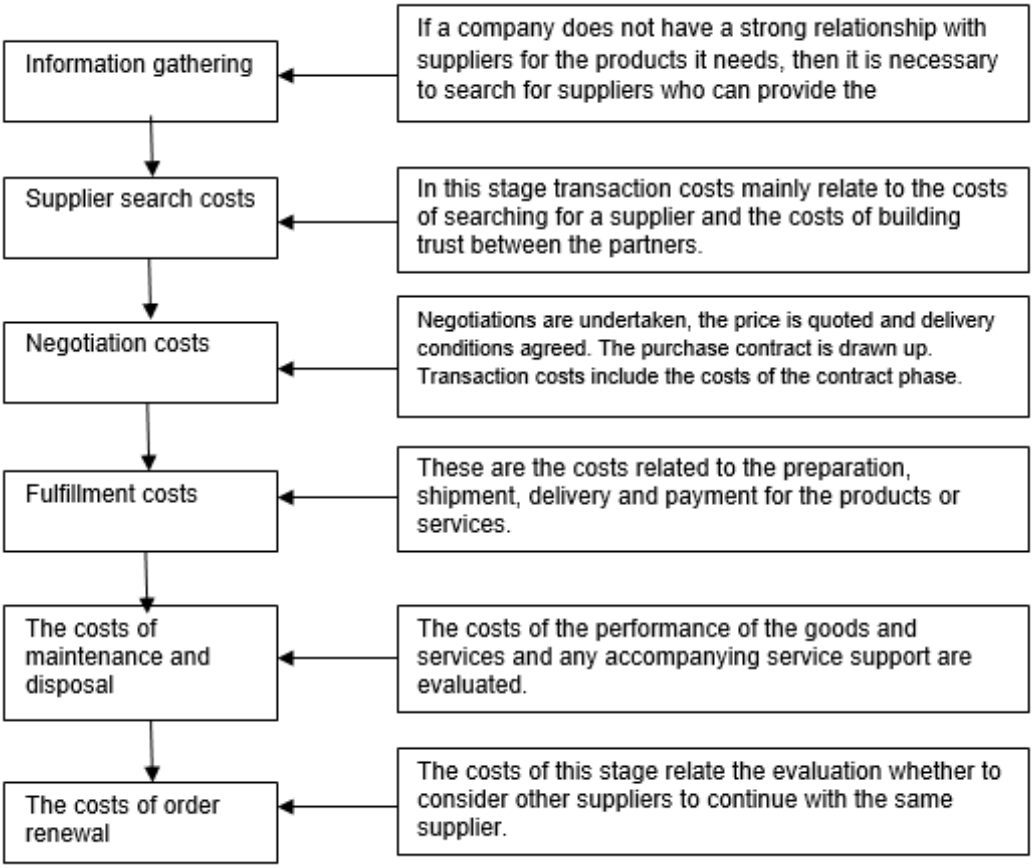

Figure 3. The structure of transaction cost factors for outsourcing contracts 2009
Source: Vasiliauskiene and Snieska, (2009: 1023)

From the previous diagram we can notice that supplier search costs account for a part of transaction costs, and this relates to the costs of order renewal (i.e. considering other suppliers or continuing with the same supplier); therefore, if we consider that suppliers are similar to outsourcing, this means that is a significant relationship between outsourcing as suppliers and transaction costs. As a result, companies have to take into consideration that transaction costs which arise from dealing with suppliers as outsourcing as a way to enhance profitability. According to Bremen et al, (2010) transaction costs determine the governance structure of a supply chain (obtaining intermediate products from outside suppliers); So this must be take into consideration when configuring the relationship with suppliers who are considering outsourcing.

2.4 Supplier Flexibility:

In the supply chain management literature, both the high speed and low cost of supply chains have been important drivers for companies (Kopecka et al, 2010), and the question which may arise is, how companies can cope with changes in demand fluctuations and unexpected

changes which may confront supply chains in uncertain conditions. According to Giannoccaro et al, (2003), changes in market demand, differing supplier lead times, product quality and information delay are sources of uncertainty that create a need to build a 'flexible' approach, and supply chains can deal with these issues through this flexibility, which gives them a competitive advantage. Furthermore, Kopecka et al (2010:4) referred to the fact that changing circumstances also emphasize the importance of the dyadic relationships between the focal company and its clients in the buyer-supplier relationships, which can be described as 'sourcing' and 'supply'. The concept of supplier flexibility covers a wide range of supplier information on involvement at different levels (Kayis and Kara, 2005). According to Chan et al, (2009:965), in a supply chain, suppliers' flexibility is considered as a tool to cope with the environmental uncertainties, and reducing uncertainty through better control is considered one of the objectives when a cluster of suppliers is being developed. In general, supply flexibility refers to the ability of a supplier to increase suppliers' responsiveness (Tachizawa and Gimenez, 2005), the ability to efficiently change schedules on a frequent basis (Krajewski et al., 2005) or a supplier's ability to produce efficiently in small quantities (Fisher et al, 1997). Although the importance of dealing with many outsourcing vendors (suppliers) to reduce dependency and create competition between them is clear, there are also disadvantages, including difficulties in coordination between suppliers, high cost and communication problems (Tan and Sia, 2006). The primary risk is the difficulty in managing work and relationships with several suppliers (Lacity et al, 1995). Hence, the role of flexibility appears as a capability to cope with risks and adapt to uncertainty in the work environment. According to Chung et al, (2010:623), if one supplier offers a quantity flexibility (QF) contract to the buyer, while the other offers the a cheaper price, then a company should determine where flexibility and cheaper price have an advantage, one against the other and companies can get significant benefits from having multiple sources of supply. Furthermore, multi supplier systems may be better than single-suppliers in the supply chain under certain conditions. Supplier flexibility lead to improved profitability, Avittathur and Swamidass (2007:717) found, for example, that profitability is above average when a flexible plant uses flexible small suppliers. So supplier flexibility is consider one of three criteria for choosing a supplier, alongside Just-In-Time (JIT) capability, and the technological competence of suppliers. According to Chan et al,(2009), high levels of supplier flexibility need high cost investments in real-time information systems, and there is no need for a cost intensive real-time information system when supplier flexibility levels are lower. Consequently, the relationship between supplier flexibility and costs can be illustrated below (figure 4).

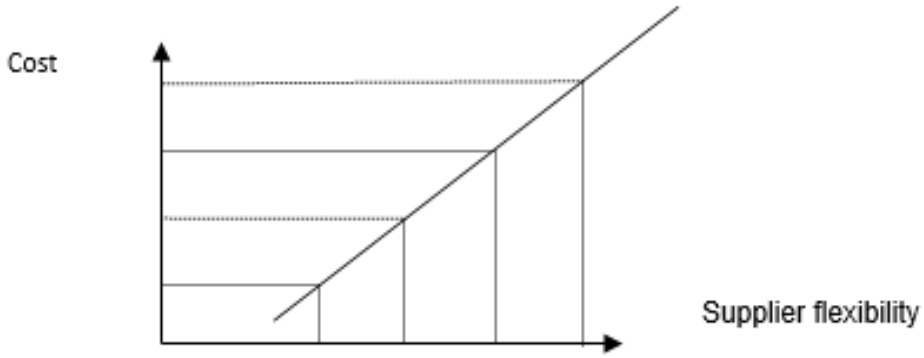

Figure 4. Degree and cost of supplier flexibility
Source: Authors' own research

Therefore, decision-maker can reach a trade-off between the benefits obtained from supplier flexibility and the costs which accrue as an element of suppliers search costs, also considered an important part of transaction costs. So, high levels of supplier flexibility lead to high transaction costs.

3. Outsourcing flexibility and transaction costs

Flexibility, or the ability to adapt, is required to cope with the changes and disturbances arising from transaction costs (Williamson, 2008). The relationship between outsourcing and transaction costs has been investigated by many researchers (Vasiliauskiene and Snieska, 2009؛ Williamson, 2008), as has the flexibility of outsourcing (Chung et al, 2010؛ *Grigore*, 2012؛ Tan and Sia, 2006). However, we also have to consider the relationship between transaction costs and flexibility, in order to know how companies can find the balance between them, because some researchers, such as Tan and Sia (2006), have highlighted the fact that strategic manoeuvres to apply flexibility in outsourcing are costly, and have suggested there is a positive moderating impact on outsourcing success only in high environmental uncertainty; i.e. they have emphasized the importance of flexibility in outsourcing despite the high costs of applying strategic manoeuvres for flexibility in out sourcing. Consequently, we can ask the following question: Does flexibility in outsourcing reduce the cost of transactions which arise from uncertainty?

The cost of flexibility is discussed by Häberle et al, (2005:4), if flexibility is justified and valuable in a specific context, the question arises of, how to price the flexibility provided?

According to Häberle et al. (2005), pricing flexibility means finding a balance between value and risk; in other words value and uncertainty. In the same context, Vasiliauskienė and Snieška (2010) argued that, when a company decides to outsource a supply service, it is necessary to outline how the risk should be allocated between the contracting parties (a customer and a supplier). Aranda et al, (2011), explained that there is a strong relationship between flexibility and outsourcing, in addition to the magnitude of the impact of short- and long-term flexibility dimensions with the benefits of outsourcing. Most outsourcing decisions should lead to increased performance and productivity. Outsourcing clearly supports both types of flexibility in threatening, risky, and complex environments (McGee and Rubach, 1996). Regarding long-term flexibility, the expansion dimension-when implicitly related to outsourcing implementation-allows the firm to achieve additional capacities in the system due to these activities being carried out by companies with a greater specialization within their organization, while firm itself focuses on core activities (Quinn and Hilmer, 1994).

We can state that supplier flexibility or outsourcing flexibility is the ability to switch between suppliers when their performance is not good enough, or because of market circumstances. Hence transaction costs appear and increase because, because Brouthers (2002) noted that transaction costs are mainly incurred when finding and negotiating with an appropriate partner and monitoring this partner‘s performance.

4. The decision about flexibility in outsourcing and transaction costs

The following diagram (figure 4) shows the equilibrium between transaction costs demand and suppler flexibility (outsourcing flexibility), i.e. the extent to which a company can opt for supplier flexibility and bear transaction costs. Above the red point the benefits of supplier flexibility will be less than transaction costs, and greater suppler will lead to higher transaction costs, so the firm cannot depend on more outsourcing, because after this point dependence on outsourcing (suppliers) increases transaction costs. The red point indicates where the benefits of supplier flexibility equal transaction costs, and the degree of supplier flexibility fits the level of transaction costs, so firm can still depend on outsourcing , because depending on outsourcing (suppliers) at this point will not lead to higher transaction costs. Below the red point, the benefits of supplier flexibility are less than transaction costs, and

the degree of suppler flexibility is not enough for the company, so the company can increase its dependence on more suppliers to obtain its needs and the transaction costs will still be within acceptable levels; consequently, the firm can depend on outsourcing, because dependence on outsourcing (suppliers) will not lead to higher transaction costs at this stage. Finally, figure (5) expresses the integration between the three concepts: transaction costs (TC), outsourcing (OS) and flexibility (F).

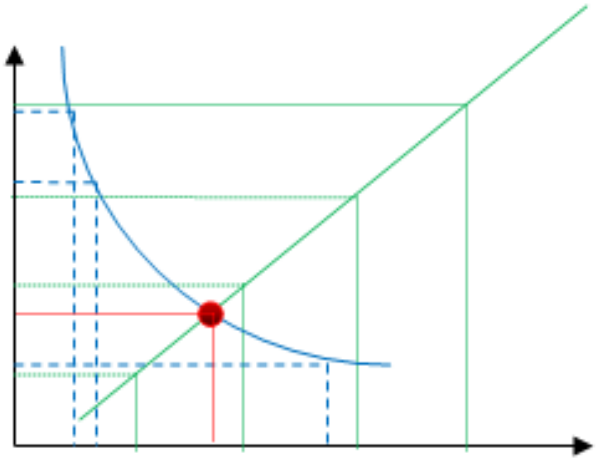

Figure (4) Equilibrium between TC and SF
TC: transaction costs, SF; supplier flexibility
Source: Authors' own research

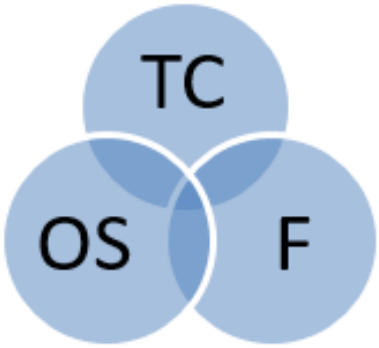

Figure (5) integration between (TC, OS, F)
TC: transaction costs, OS: outsourcing, F: flexibility
Source: Authors' own research

5. Conclusion

Transactions costs and outsourcing flexibility are the main challenges (operating like an anvil and a hammer) facing companies working in an environment characterized by uncertainty. Transaction costs are costs arising because of the of company's activities in the market, including (fees, commission and taxes) paid by the firm to provide a service or produce a good. They arise because of the relationships between the company and its suppliers (when a firm is unable to provide these itself), who are consider outsourcing providers and are responsible for providing the required needs for the company's activities in the best quality at the perfect time, which means they have to be characterized by flexibility. Companies have to reduce transaction costs to a minimum to gain more profit and competitive advantage, by determining the required (perfect - optimal) level of flexibility in outsourcing,

and also making comparison between the benefits which they will obtain from flexibility in outsourcing and the transaction costs incurred, if the expected benefits are greater than the transaction costs, then they will be willing to pay more and bear higher transaction costs (because more flexible outsourcing means higher transaction costs). Companies have to find the equilibrium point between flexibility in outsourcing and transaction costs, which mean the extent to which the company is willing to bear higher transactions cost in return for the benefits it receives from applying outsourcing flexibility, and they should attempt to integrate outsourcing, flexibility and transaction costs. We also have to take into consideration the sector in which the company operates, because flexibility in outsourcing in service companies will not lead to high transaction costs as it will in industrial companies.

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DO CONFLICT AND BALANCE BETWEEN WORK AND FAMILY EFFECT ORGANIZATIONAL CITIZENSHIP BEHAVIOR? COMPARATIVE STUDY OF SINGLE AND DUAL EARNER COUPLES

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Abstract: *Modern organizations define a good employee as one who performs more than the required duties and responsibilities that are identified in the job description Thus, employees are expected not merely to concentrate on in-role behaviors, but also emphasize on extra-role behaviors that lead towards increasing organizational effectiveness. These extra-role behaviors are commonly termed as organizational citizenship behavior. But when employees are expected to perform more than what is part of their job description one should not forget the challenges associated with balancing work and home responsibilities. This debate is more relevant, especially in the context when the trend of professional women getting married to professional men is increasing which is contributing to the increase in dual-earner couples. These changing traditional roles of men and women has increased the likelihood of work-family conflict for dual earner couples. In order to balance the conflicting requirements of work and family roles, employee and organizations develop different strategies that are termed as work-life balance strategies. This research is intended to extend this discussion by serving two objectives: 1) study the how the conflict and balance between work and family are related to organizational citizenship behavior and 2) compare how these relationships vary across the single and dual-earner couples. This research is descriptive and analytical in nature. The present study is carried out in a survey design. Participants of this study were the married academics of various universities across Rawalpindi and Islamabad. 250 questionnaires were distributed among participants randomly, 200 of which were properly filled and were employed in the concluding analysis. Multiple regression analysis was conducted to test the association among the variables and Independent Sample T-Test was conducted to test the differences among the single and dual-earner couples. The findings of the study revealed that work-family conflict negatively and work-life balance positively predicted organizational citizenship behavior. Whereas single earner couples reported the more balance and less conflict in work and family roles and show more participation in organizational citizenship behavior as compare to dual-earner couples.*

Keywords: *Organizational citizenship behavior (OCB); Single/Dual-Earner Couples; Work-Family Conflict (WFC); Work-Life Balance (WLB).*

JEL Classification: *J12; D23; D74.*

1. Introduction:

Modern technology, globalization, and virtual workplaces have changed life styles of the people, the way they use to live life and execute work, e.g. mobile phones and laptops have made employees available 24 hours (O'Toole & Lawler, 2006). The definition of “good employee” in the organization has also evolved and now modern organizations define good employees as one who performs more than their mandatory duties and responsibilities that are identified in their job description. Therefore, organizations expect employees not only to focus on in-role behaviors, but also emphasize on the extra-role behaviors. Interestingly, it’s not only the work role that has evolved; traditional family role of employees has also evolved in the past few decades. Moreover the tendency of the working women getting married to

the working men has increased and led to a change in the family structures (Tziner and Gil Sharoni, 2015). Changing work and family roles of employees have increased the likelihood of work-family conflict (WFC).
WFC is an intra-role conflict which arises when the work and family roles are irreconcilable with each other due to conflicting demands. This incompatibility of demands can occur both ways: family to work and vice versa. Furthermore work-family conflict has three types 1) Time-based conflict: it arises when the time spent in one role cannot be devoted to the other role, 2) Strain-based conflict: it arises when the strain of one role influence the efficiency of the individual in the other role, 3) Behavior-based conflict: it occurs when specific behavioural patterns of one role are unreasonably applied to the other role (Greenhaus and Beutell, 1985).
This debate on evolving work and family roles and resulting WFC has been extended to finding the ways through which the balance between work and family roles can be created. In this regard, the term work-life balance has gained popularity which can be defined as "satisfaction and good functioning at work and at home with a minimum of role conflict" (Clark, 2000). Employers are expected to come up to this challenge by facilitating the employees and introduce policies and practices that help employees create a balance between both work and family domains (Bragger et.al, 2005).
Previous research has addressed the issues of WFC, WLB and their respective outcomes, but little research has addressed these issues in the context of couple status (Allen, French, Dumani, Shockley, 2015). Thus the motivation of the current work is to expand this debate on OCB, WFC, and WLB in the context of single and dual-earner couples by examining the sample of academics in Pakistan. This study is intended to serve two objectives: 1) study the connection between WFC, WLB and OCB and 2) compare how these relationships vary across the single and dual-earner couples.

2. Literature Review:

Nearly five decades ago, Katz (1964) highlighted the importance of behaviors that are officially not part of the job description but can positively affect organizational effectiveness. Later on, Smith, Organ, and near (1983), termed these behaviors as "organizational citizenship behavior" (OCB). Organ more precisely defined these behaviors as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the overall organizational effectiveness".
There are five forms of OCB. 1) Altruism is defined as helping behaviors that are directed towards individuals and are beneficial for the organization. 2) Conscientious is the personal characteristics of employees such as punctuality, dependability and hard-working. 3) Sportsmanship behaviors refer to tolerating small problems in the workplace. 4) Courtesy refers to the work-related behaviors of checking with others before taking action. 5) Civic virtue is the type of OCB where employee display the positive image of the organization (Organ 1988).
Past research in a great deal has investigated the antecedents and outcomes of OCB. Researchers have found job satisfaction and organizational commitment as most popular antecedents of OCB. At the individual level, these outcomes can be in the form of the increase in salary, higher organizational commitment, promotion, lower turnover and reduced potential for burnout. At the organizational level OCB can lead to increased organizational effectiveness and efficiency, high group and unit performance (Garma, Bove & Bratton, 2007).
In the recent years, the debate on OCB has taken into account the fact that the changing role expectation of employees at the workplace and family domains can affect their engagement in OCB (Beham, 2011). Multiple roles and responsibilities can make employees more vulnerable to work-family conflict (Yang & Hawkins, 2004). The situation has become more intense due to increase in dual-earner couples. Due to the increased tendency of

employees occupying both work and family roles simultaneously, cause interference in both roles in such a way that work role imposes demands that affect the performance of the employee in family roles and vice versa (Doumas, Margolin, & John, 2008).
Perrone and Worthington (2001) studied 52 men and 55 women of dual-earner couples and found that demands of both domains are often incompatible with each other and the participation in one role is more likely to get affected due to the demand of the other role for the members of dual-earner couples. On the contrary; single earner couples have more sense of supportiveness from their spouse in the family domain. The support that the individuals receive from their spouse in the family role enables them to invest more time and energy in the work role.
Allen and Finkelstein (2014) studied dual-earner couples to examine the relationship of age, gender, and WFC. They reported that males face more WFC due to increased interference of work role with the family role, but this is more severe for women due to more interference of family role with work role. One potential explanation for this can be that according to the traditional bread earner model, the male is perceived to be solely responsible for the work having no family responsibilities or other non-work involvements in his personal life (Feldberg and Glenn 1979). On the other hand, according to the traditional homemaker model, the female is perceived to be chiefly responsible for domestic life, so most of the community activities, schools, and medical services are prepared with reference to the females. Yet for women, housework and childcare remain the primary responsibility (Brines, 1994). When both spouses have paid jobs they feel more squeezed and face interference from family to work; which is likely to reduce their engagement in OCB and is especially common in females (Beham, 2011).
To deal with these conflicting demands of the multiple roles, employees and organizations can develop different strategies that can help them successfully combine these dual roles. An example of such strategies is flexible work hours, child care and outsourcing of family tasks. Various studies have identified the positive effects of such strategies for balancing work and family roles (Tausig & Fenwick, 2001). Lambert (2000) argued that when an organization supports their workforce to balance the dual roles of work and family; the workers, in this situation, are more willing to go beyond their duties and responsibilities.
The situation becomes tougher for the dual-earner couples if they have children. Work-family conflict is normally higher for parents as compared to non-parents. Supportive work-family culture in the organization can be a one motivating factor for dual-earner couples to engage in OCB specifically if they have children since it can help them reduce work-family conflict (Bragger, Rodriguez-Srednicki, Kutcher, Indoviro, and Rosner, 2005).
According to social exchange theory perspective, work-family strategies are perceived as a social exchange mechanism which endorses norms of reciprocity from employees. Lambert (2000) explained that employees are motivated to give back more to the organization in return of the WLB strategies in terms of higher loyalty or organizational citizenship behaviors. She found that when employees perceive work-life policies offered by the organization being more useful they tend to increase their engagement in OCB by engaging in behaviors such as putting forward suggestions for organizational improvement, attending meetings that are not needed, and supporting and assisting others with their job responsibilities. Thus, it can be concluded that if employees are granted “an inch of work-family living,” they will return organizations back a mile of productivity (Kossek & Friede, 2006).
Based on the above discussion, following hypothesis are proposed:
Hypothesis1: Work-family conflict will negatively influence Organizational Citizenship Behavior
Hypothesis2: Work life balance will positively influence Organizational Citizenship Behavior.
Hypothesis3: Dual Earner Couples will score high on Work-Family Conflict as compared to Single Earner Couples.

Hypothesis4: Single Earner Couples will score high on Work Life Balance as compare to Dual-Earner Couples.
Hypothesis5: Single Earner Couples will score high on Organizational Citizenship Behavior as compare to Dual-Earner Couples.

3. Methodology

3.1 Participants

The respondents of the current study were the married faculty members from grade 17 to 21 employed in all the Departments of the four major public sector Universities located in the twin cities (Islamabad and Rawalpindi) of Pakistan (International Islamic University, Fatima Jinnah Women University, Air University and Bahria University). The sample consisted of 200 married teachers who were randomly chosen. Data was collected from 250 respondents; however, 200 questionnaires were selected for final analysis and the rest were dropped due to incomplete information. The study was having the response rate of 80%.

3.2 Procedure

In order to collect the data the self -reported survey method was used. The questionnaires were given out to the participants in their workplaces. A cover letter stating the details about the purpose of the study and assurance regarding the privacy of the respondents was attached with the questionnaire. There were two sections in the questionnaire; the first section was about the demographic information. It inquired about the respondent's gender, age, education, job status, and tenure in the respective organization. The 70% of respondents were male and 30% of the respondents were females with an average age of 31 years and 18 years of average education and average 4.5 years of experience. The second section comprised of the questions measuring the variables of the study. The details of which are described below.

3.3 Measures

Scale for the OCB, WFC, and WLB was adapted from the previous literature. Table 1 shows the details of the measures used in the current study. The couple status was measured using one item having two options: 1) one spouse employed and 2) both spouses employed.

Table 1: Detail of the Measures Used In the Study

Variable Name	Source	No of Items	Rating Scale	Cronbach's Alpha Coefficients
OCB	Podsakoff et al. (1990)	14 items	5 point Likert Scale ranging from Strongly Disagree to Strongly Agree	0.794
WFC	Carlson, Kacmar & Williams (2000)	18 items	5 point Likert Scale ranging from Strongly Disagree to Strongly Agree	0.846
WLB	Marks & MacDermid (1996)	4 items	5 point Likert Scale ranging from Strongly Disagree to Strongly Agree	0.764

Source: Based on Literature and Cronbach Alpha calculated by Author

4. Results

SPSS 21 was used for data analysis. Mean, Standard Deviation and correlation were calculated. Multiple regression analysis was applied to test hypothesis 1 and 2, while to test hypothesis 3, 4 and 5 Independent Sample T-Test was conducted.

Table 2 shows mean, standard deviation and Pearson's Correlations. WFC has significant negative correlation with OCB (r =-. 68, p <. 01), meaning that more the WFC the less is the engagement in OCB. WLB has significant positive correlation with OCB (r =.61, p <.01), meaning that the individual has more WLB the higher is his/her engagement in OCB.

Table 2: Means, Standard Deviations, and Correlations

Variables	*M*	*SD*	*1*	*2*	*3*
1. OCB	3.34	0.98	1		
2. WFC	2.97	1.22	-.68**	1	
3. WLB	3.01	1.24	.61**	-.75**	1

Statistical significance: *p <.05; **p <.01; ***p <.001
Source: Calculated by Author

Table 3 shows multiple regression analysis that was conducted to find how WFC and WLB relate to OCB. The analysis showed *the R2 value* of.494, showing that the predictor variables; WFC and WLB caused 49.4% variance in the OCB with F (2,197) = 96.139, p <.000). Whereas the beta coefficient for WFC (β =-. 528, p <. 000) is showing the significant negative effect on OCB and the beta coefficient of WLB (β =. 213, p <. 006) is showing the significant positive effect on OCB.

Table 3: Multiple Regression analysis showing the effect of WFC and WLB in the Prediction of OCB (N = 200)

Model	*B*	*SE*	*B*	*T*	*P*
(Constant)	4.101	.364		11.848	.000
Work-Family Conflict	-.422	.062	-.528	-6.850	.000
Work-Life Balance	.167	.060	.213	2.676	.006
***R* =.703** **R^2 =. 494**					

Statistical significance: *p <. 05; **p <. 01; ***p <. 001
Source: Calculated by Author

In order to test the Hypothesis 3, 4, 5, an independent samples t-test was conducted to see if there was a significant difference between likely WFC, WLB and OCB for single and dual-earner couples. The results in Table 4 revealed a significant difference between the single and dual-earner couples t (198) = 9.266, p<. 000) for work-family conflict. Dual-Earner Couples significantly scored higher on work-family conflict as compared to Single Earner Couples. Dual-earner couples (M = 3.640) reported that they were more probable to face WFC than single-earner couples (M = 1.819). Similarly, the significant difference was also shown between the single and dual-earner couples t (198) = 14.524, p<. 000) for work-life balance and t (198) = 8.835, p<. 000) OCB respectively. Single Earner Couples (M = 3.929) significantly scored higher on WLB as compared to Dual-Earner couples (M = 2.513). Single Earner Couples (M = 4.038) significantly scored High on Organizational Citizenship Behavior as compared to Dual-Earner Couples (M = 2.961).

Table 4: Mean, Standard Deviation and t values for Single and Dual-Earner Couples on WFC, WLB and OCB (N = 200)

	Single Earner Couples (*N* = 77)		**Dual Earner Couples (*N* = 123)**		
Scales	*M*	*SD*	*M*	*SD*	*T*
Work-Family Conflict	1.819	.687	3.640	.934	9.266*
Work-Life Balance	3.929	.8103	2.513	1.153	-14.524*
OCB	4.038	.404	2.961	.999	8.835*

df= 198, Statistical significance: *p <. 05; **p <. 01; ***p <. 001
Source: Calculated by Author

5. Discussion and Conclusion

Hypothesis 1 stating that work-family conflict will negatively predict organizational citizenship behavior was accepted and this finding was consistent with the previous research findings (Bragger et al, 2005). Work-family conflict effect performance in both the roles, but tend to influence extra-role behavior more as compared to in-role behavior. Individuals confronting the high level of WFC is more inclined to fulfil mandatory requirements of the job, as they feel it forms the necessary basis for supervisor's performance evaluations. These individuals are motivated to preserve their personal resources for in-role functioning and may tend to reduce their engagement in extra-role behaviors such as OCBs.

Like Hypothesis 1 our study found support for Hypothesis 2 as well, showing a positive relationship between WLB and OCB. By getting into account the perspective of social exchange theory and organization support theory, it can be said that work-life balance policies are an expression of concern that the employer show towards their employees. This sense of supportiveness generates positive feelings and employees are more willing to pay back to the organization by engaging more in extra-role behaviors (Lambert, 2000).

The study also found the support for Hypothesis 3, 4 and 5 regarding the comparison of dual and single earner couples experiences of WFC, WLB and their respective engagement in OCB. One of the reasons for high work-family conflict among dual-earner couples is that they have lack of support at home if the problem or need arises in their family domain there is nobody to take care of those problems and needs. Since in dual-earner families, both partners are employed, when unexpected demands arise e.g. anyone of them has to work overtime or taking care of sick children, one of them has to compromise the work role, resulting into greater work role conflict and stress. Consequently, this affective experience of the family domain when get transferred to work domain increases the chances of work-family conflict, but on the contrary single earner couples have support from their spouse in their family role which decreases the chances of work-family conflict.

Moreover if taking into account the cultural perspective, it can be argued that cultural values also tend to influence work-family conflict. For example, Pakistan, according to Hofstede (1980) is a collectivist society and in collectivist cultures, individuals experience more work-family conflict because collectivist cultures have strong ties with family, which can lead to increased family interference with work that eventually results into greater family-work conflict (Allen et al., 2015).

Previous research evidence reveals that dual-earner couples not only struggle to balance work and family domain, but their engagement in other spheres of life such as community involvement also face problems of imbalance. Single-earner couples having one working member are in a better situation to achieve balance in both work and family domains; because it is easy for one member to adapt his/her schedule of employment to accommodate family problems. Whereas this utility is not available for dual-earner couples

because both spouses are employed full-time, having rigid work schedules make difficult any adjustment.

It can be concluded that single earner couples have low work-family conflict and high work-life balance which enables them to engage in OCB relatively more as compared to the dual-earner couples. Dual-earner couples emphasize more on in-role behaviors rather than extra role behaviors to meet the mandatory job requirements. The resources obtained in one role, such as time, flexibility, money, acceptance, self-esteem and information can affect one's availability, competence, and emotional gratification in the other role (Freidman and Greenhaus, 2000). Single-earner couples have greater work-family integration, which results in the greater availability of such resources, unlike dual-earner couples who face scarcity of such resources. As a result dual-earner couples tend to preserve resources due to fewer resources available at their disposal, so in work domain, they focus more on in-role requirements by performing minimum obligations and tend to reduce their engagement in activities that are beyond specified duties and responsibilities.

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