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# **Section I**

## **International Affairs**

## The External Trade of Romania: Evolution Trends

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### Abstract

*In most cases there is a direct link between the economic development and the foreign trade of a country. Over time, Romania has not been an exception to this rule. Engaged in the capitalist mechanism both in the interwar period and in the period elapsed since 1990, Romania has been held between the interests of foreign capitalism and the decisions of a political class that did not always rise to the level of the times when it exercised its power.*

*On top of these, a series of negative impact events such as wars or crises have overlapped. Despite all the investment efforts made, the impact of Romania's economic development on foreign trade was limited during the socialist era. As regards the volume of foreign trade, the trade balance, the structure of exports and imports, the value of exports per capita, Romania's evolution was generally modest. Practically, with some exceptions, Romania's involvement in international trade was below the economic potential of our country throughout the analyzed period.*

**Key words:** export, import, trade balance, crisis

**J.E.L. classification:** F19

### 1. Introduction

The economic evolution of a country, and implicitly its participation in the world economic circuit, depends on a number of factors, among which the most important are the political decision and the international economic context.

In the last one hundred years, the evolution of Romania's foreign trade can be structured in three intervals, all three passing a deep global crisis.

Broadly speaking, the interwar period can be characterized by the efforts made to restore the economy after the First World War and the great economic depression of 1929-1933. Romania's capitalist development, based alternatively on the liberal doctrine and the peasant national doctrine, although a little bit successful, failed to place Romania among the performing countries in Europe, Romania playing a marginal role in international trade.

The emphasis on industrializing the country in the socialist era was basically correct. By trying to shorten the stages through slogans such as the "four-and-a-half" instead of the quinquennium (five-year) plan slogan, the lack of highly technical endowments, the sharp increase in the funds allocated to investments sometimes through massive external loans made the Romanian industry fail in reaching the level of competitiveness desired. The foreign debt crisis in Latin America since the early 1980s also hit Romania. Exacerbating exports and drastically diminishing imports to quickly pay off the foreign debt had a strong negative impact on the population's standard of living.

The third period started in 1990, when Romania was among the countries in transition from the planned socialist economy to the capitalist market economy. In the first years of this interval, there were strong imbalances in Romania's economy. The chaotic and questionable privatization of an industry previously declared by the then prime minister as a heap of scrap iron, the populist measures led to increased consumption through the amplification of imports, which caused deep deficits of the foreign trade balance, these being just a few issues in this regard. The economic recovery was also based on an increase in Romania's participation in the world economic circuit, the degree of economic opening of our country being significantly higher than the world average.

Being in this situation, Romania's vulnerability to the great depression in 2008 was high, with Romania's GDP and foreign trade showing a massive decline.

## **2. Romania in the interwar period**

Due to the disappearance of European empires, the period following the First World War was characterized by the establishment of young European national states. Thus, the popular masses' desire to form Romania as a unitary national state was fulfilled.

The decrease of US loans to European countries and increase in private banks' interest rates on the background of a lack of confidence in the financial sector resulted in a sharp decline in consumption. In this context, the absorption capacity of foreign markets diminished, which led to lower prices and production constraints, with direct effects on reducing economic efficiency. There was a significant increase in the unemployment rate in various European countries. On the whole, the international context existing during the 1920s was unfavorable to the development of cross-border trade, with the global economy being affected by an acute overproduction crisis.

It is worth noting that the economic recovery after the First World War was made much harder in the countries that opted for a high inflation rate, with Romania included in this group as well.

The beneficial economic effects (including rising living standards) were unevenly distributed across the world, the USA, the UK, France, Germany, Sweden, etc. being among the countries which benefited from most of these advantages.

The international economic context in which Romania evolved during the interwar period was dominated by turbulence and individualism. The economic crises, especially the great economic depression of 1929-1933 and the politics of many countries (the USA, Great Britain, France, etc.) to protect their national economy by increasing the level of customs duties on imports caused disturbances of economic growth, with different intensities in the European states.

In addition to the generally unfavorable international context, during World War I, Romania experienced losses of human lives estimated at about a quarter of a million, with direct economic implications, and a decrease in the birth rate. The Romanian economy was predominantly agrarian, with much of the industrial capabilities being destroyed by war.

Romania's agriculture, as an important economic branch, also held a significant share in the exports of our country. The very large number of small agricultural holdings (under 5 ha), their poor technical equipment, the high share of cereals in the total agricultural production made Romania to achieve poor performances in terms of economic efficiency per area unit.

The evolution of the oil industry, as the main branch of the Romanian industry, was not characterized by outstanding results. Throughout the interwar period, the share of foreign capital in the Romanian oil industry was around 70%, the foreign capital being also predominant in other important areas such as banking, which weakened our country's economy during the crisis of 1929-1933.

During the Great Depression, in order to stabilize the economy, there was a massive use of foreign loans, contracted at substantial interest, involving major costs for Romania. There were a number of compromises such as the transfer to foreign firms of economic opportunities of monopoly nature or the reduction of economic independence by accepting as a counselor to the NBR a foreign person as the representative of private international creditors.

At global level, the world industrial production declined by 36% between 1929 and 1932. The industrial product price level fell by 36.5%, the raw materials prices went down sharply (56%), with severe consequences in particular for countries exporting raw materials. During the crisis, the cost of living increased by 20% in Italy, 24% in Germany, 35% in the US (the country that was at the origin of the crisis) and 47.2 in Romania. (Josan, 2004, p.137, p. 138)

The relative success obtained by the Romanian industry during the crisis period, the peak year being 1938, affected the agreements concluded by Romania with Germany, agreements that prepared the ground for the Romanian economy's involvement in Hitler's war mechanism with all its negative consequences.

With regard to the evolution of Gross Domestic Product per capita in the interwar period, Romania's performance was modest; among the European countries only Albania, and in the last years Bulgaria ranking lower as far as this indicator is concerned.

Cereals, along with oil and its derivatives, represented the main categories of export goods in interwar Romania.

Although in the interwar period, in quantitative terms, Romania's grain exports had seen a clear growth trend - with some exceptions caused by meteorological factors - in terms of value, the amounts collected from these exports diminished.

This paradox can be explained by the fact that in the years following the First World War there was additional demand on the international grain market and therefore world grain prices were rising. Romania, like most of the countries that participated in the First World War, in the next future obtained modest cereal yields mainly caused by human and animal casualties during the war. As time went by, both in Romania and in the other countries participating in the war, cereal production increased and implicitly the quantities destined for exports, with an important increase in the supply on the foreign markets and consequently a substantial decrease in prices.

*Table no.1 Evolution of Romanian exports of cereals and derivatives (indices, multiannual averages)*

Interval	Quantity	Value
1924-1928	100,0	100,0
1929-1933	159,1	60,8
1934-1938	97,6	46,3

Source:(Murgescu, 2010, 236)

While during the years that followed World War I until the 1929 crisis, the cereals dominated the value of Romanian exports; in the period from 1929 to the beginning of the Second World War this role was taken over by oil.

The evolution of Romanian exports of petroleum products was, to a great extent, similar to that recorded in the cereal sector, meaning that when Romania exported small quantities, world prices were high and vice versa.

The swings between liberal politics "with ourselves" with autarchic tendencies and the peasant national politics "open to foreign capital" favoring the big international companies caused legislative instability in an area where technical endowment was extremely important, requiring important capital.

The structure of Romanian exports was clearly unfavorable to our country, considering that out of the total exports the unprocessed and low-processed products accounted for over 90%.

The import in the first part of the reference period consisted predominantly of manufactured products, and it is worth mentioning that in its structure the group of machinery and equipment was small, being imported especially agricultural machinery, machines for the textile industry, trucks, locomotives, etc.

With small exceptions, during the period between the two world wars, Romania had a trade surplus balance, while the balance of external payments was deficient, the situation being determined by the substantial sums paid to international creditors to support the service of the external debt.

Regarding the evolution of Romania's imports, in the first part of the interwar period, the manufactured products were predominant and at the end of the period the raw materials were dominant.

By comparing the main economic indicators with those of the other countries, Romania's role in the world economy diminished, which busted the myth of the remarkable economic development of interwar Romania.

### **3. Romania's economic evolution on the path of socialist development**

With a severely troubled economy in the Second World War, Romania was forced to implement a series of measures specific to the Soviet-influenced socialist production process in order to rebuild its national economy. The nationalization of industrial enterprises, the cooperativization of agriculture, the acceleration of the investment program were initiatives that marked the strong development of Romania in the next 40-50 years. Absolute priority was given to the development of heavy industry with the machinery industry at its core, thus avoiding the role

assigned to Romania by the USSR in the division of labor within the system of the socialist countries. Romania, according to the Soviet vision, should have been a deep agrarian economy supplying raw materials to the other countries in the system.

Table no. 2. The GDP evolution in Romania and at a world level (million dollars)

	1970	1980	1988	1989
<b>România</b>	12720	36469	63874	56907
<b>World</b>	3400050	12283757	19738889	20665034
<b>%</b>	0,37	0,29	0,32	0,27

Source: [http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS\\_ChosenLang=en](http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en)

As a result of the economic development strategy, determined by the decision-makers, there was a sharp increase of the industrial production in Romania, as well as of its share in GDP. In fact, during 1970-1982 Romania's GDP grew steadily, but from 1983 until the fall of communism, the evolution of this indicator was fluctuating, the historical maximum of \$ 63,874 million being recorded in 1988. It must be noticed that the Romanian industrial products, i.e. most of them, were characterized by a low level of competitiveness.

Regarding the foreign trade of Romania, in the socialist era, especially at the beginning of it, special importance was given to the trade relations with the Soviet Union.

The withdrawal of the Soviet troops from Romania, the dissensions between the great Communist powers (USSR and China), the progress made by the national industry allowed our country to distance itself economically and politically from Moscow.

Table no. 3. Romania's foreign trade (million dollars)

	1948	1953	1970	1980	1981	1988	1989
Export	160	341	1851	11400	11180	11390	10490
Import	96	385	2117	13200	10980	7640	8435
Total foreign trade	256	726	3968	24600	22160	19030	18925
Foreign trade	120923	166044	648577	4141135	4109359	5847713	6314467
%	0,21	0,43	0,61	0,59	0,53	0,32	0,29

Source: [http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS\\_ChosenLang=en](http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en)

The public positions adopted by the political factors in Bucharest as well as the performances of Romania's officials within the international institutions made our country display, in many situations, a diametrically opposed attitude to that adopted by the USSR. The attitude of a rebellious child manifested by Romania in the socialist camp led to positive appreciation from the great capitalist powers, with a reorientation of the Romanian trade exchanges in the sense of increasing their volume with the developed capitalist countries as well as with the developing countries outside the Communist camp.

The international position of Romania, including the Middle East military confrontations, was generally positive towards trade relations with the Arab and African countries.

The positive attitude adopted by the major capitalist powers towards Romania had the effect of facilitating access to external sources of finance, with direct effect on the realization of the ambitious national investment program and implicitly on the development of Romania's foreign trade.

During the period 1948-1980, the Romanian foreign trade registered a continuous increase (96.1 times), with the mention that imports (137.5 times) recorded higher increases compared to exports (71.2 times). With few exceptions, Romania's foreign trade balance was in deficit. The forced industrialization program made Romania acquire a consistent external debt of about \$ 11 billion.

The external debt crisis at global level, but especially in Latin American countries, led to a substantial increase in interest rates on foreign loans, seriously affecting Romania's economy. The decision to pay the external debt at any rate led to a forced increase in the Romanian exports, while our country reduced the imports to the minimum possible level. Romania had generally a surplus trade balance over the period 1981-1989, and it was able to pay off the external debt at the end of the period. It should be noted that this success was also due to the sale of a significant amount of



gold from the national treasury. However, the rapid payment of Romania’s external debt was reflected by the strong deterioration in the population’s standard of living and in the impossibility of endowing the national industry with technical equipment.

It is worth noting that in the first period of communist development, Romania’s imports were dominated by machinery and equipment necessary for the endowment of industry, and since the 70s the share of mineral raw materials and fuels increased, these goods being necessary for the production process in the national economy. Unfortunately, the Romanian industry, with some exceptions, relied heavily on imported raw materials while being energetically intensive.

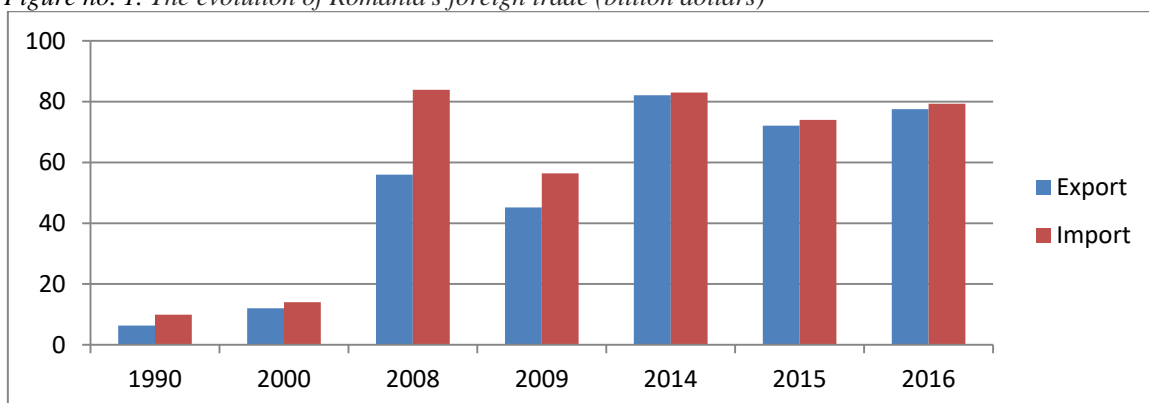
During the planned economy period, we can notice that the share of Romanian foreign trade in the total international trade was superior to the share of Romania’s GDP in the total world GDP, indicating a tendency to engage in the world circuit, although there are arguments supporting the theory of trends in an autarchic type of development.

#### 4. Romania's Return to Market Economy Values

After the events of December 1989, Romania opted for another path of economic development, entering a period marked by a whole series of difficulties, i.e. the transition to a market economy. The collapse of the GDP, the privatization process, the aspirations towards the values of the capitalist world have also impacted on Romania’s foreign exchanges. After a rebound, in 1990 and 1992, Romania’s foreign trade registered a general upward trend until the global financial crisis, with the indication that the average annual growth rate of imports steadily exceeded the growth rate of exports. Thus, unlike the evolution of the 9<sup>th</sup> decade, over the last 27 years, Romania’s trade balance has been - without exception - deficient. In 2006, 2007, 2008 there were peaks of the deficit of the external trade balance and implicitly its share in GDP. The fact that Romania did not become incapacitated in relation to its external payments, the Romanian currency, *leu*, even strengthening on the Romanian foreign exchange market, was due to the strong foreign currency inflows, coming mainly from Romanians working abroad, from foreign investors attracted mainly by the privatization process and the foreign currency loans granted by banks to foreign citizens.

Unexpectedly, during the first year of crisis, Romania’s foreign trade deficit narrowed significantly. In 2009, as compared to the previous year, both exports and imports fell substantially, the latter having experienced a more pronounced reduction due to lower wage incomes and tighter credit conditions.

Figure no. 1. The evolution of Romania's foreign trade (billion dollars)



Source: [http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS\\_ChosenLang=en](http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en)

From the perspective of Romania’s trade deficit concerning goods and services, it improved until 2014 when this indicator fell slightly below \$ 1 billion. Along with the wage “relaxation” in 2015, 2016 and 2017, population consumption grew, with an important share being held by imported products. For this reason, Romania’s trade deficit has followed a growing trend, together with all the negative aspects of this phenomenon.

Nearly 90% of the trade balance deficit regarding goods is made by Romania in relation to the EU countries, being worth mentioning that more than 70% of our foreign trade has been carried out in the last years with this category of countries. At least as far as exports are concerned in order to increase their income and to mitigate the effects of crises in different parts of the world on the national economy, it is advisable to extend trade links with non-EU countries as well.

During this period, Romania has had a trade surplus in relation to African countries and countries in the Middle East and the Near East.

Taken one by one, the most significant deficits were with Germany, China, Hungary, the Russian Federation, Austria, etc. After the crisis, trade deficits with the Germans and the Russian Federation diminished substantially due to the increase in Romanian car exports to Germany and the decrease in oil and gas imports from Russia, but also due to the reduction of world hydrocarbons prices. The deficit with China remained at high levels, Romania mainly importing from China electronics, textiles, garments, etc.

In 2016, among the main categories of products found in Romania's foreign trade structure, only two of them, transport machinery and equipment, respectively raw materials and materials, Romania registered a slight surplus, being in deficit as far as the other categories are concerned.

## 5. Conclusions

Over the last one hundred years, Romania's foreign trade has evolved sinuously, being influenced by wars, economic crises, changes in political regimes, internal political decisions (some of them being questionable), geopolitical interests and not only.

During the period concerned, with some exceptions, Romania consumed more than it produced, which transformed the deficit of the foreign trade balance into a normal state of affairs.

Also in terms of the structure of products which are subject to foreign trade, Romania's situation is not to be envied. While a hundred years ago the products in which Romania held a major share in world exports were cereals, oil and wood, at present the products are live sheep and goats, silk threads and sunflower seeds.

Last but not least, one must notice the solutions provided by great personalities of the time through their works concerning the impact of international trade on the economic development of the country. Unfortunately, decision-makers have often ignored these proposals, giving Romania a peripheral role both in the world economy and in the international trade.

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# Drivers to the Corporate Social Responsibility in Romania: The Banking Challenge

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## Abstract

*The corporate social responsibility agenda has profoundly changed in the last decades in Romania, driven by the new optics of multinationals and their response to the local market. This paper provides a new insight in the CSR field of the banking sector, extending the narrow vision of the CSR implementation in Romania, by confronting the measures taken by the banks from the Romanian market with the financial group's perspective. The paper consists of a comparative analysis of BRD - Groupe Société Générale and the corresponding group, Société Générale, in order to complete the vision of strategic dependencies in a period of economic, monetary, territorial and political integration. The research use the coding process, identifying major strengths and tendencies of the CSR in Romania, composing a complex approach based on the group strategic imperatives, similarities and adjusted elements for a reconstruction of the CSR concept in the considered sector.*

**Key words:** corporate social responsibility, bank, financial group

**J.E.L. classification:** G21, M14

## 1. Introduction

The corporate social responsibility agenda within the Romanian landscape has experienced a continuous progress in the last years, even if the measurement tools of the CSR performance are underdeveloped and the reporting criteria are still in an emerging phase. Often defined as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (Commission of the European Communities, 2001, p. 6), the corporate social responsibility concept suggests a positive relationship between the economic, the social and the environmental dimensions, defined by Elkington as the „triple bottom line” theory (1997). Various research papers have focused on the drivers of the CSR current in Romania, the benefits and the development stage, admitting the key role of the multinationals for the CSR composition in Romania, but little attention was paid to the understanding of the real contribution of the groups to adjust the CSR programs to their subsidiary.

In an attempt to synthesize the CSR particularities in the Romanian banking sector, Joldeş, Belu and Iamandi emphasize the financial groups capacity to transfer the CSR practices to the local environment, concluding that „the responsible actions undertaken by the Romanian banks are in line with the ones of their European counterparts” (2008, p. 672). The present paper brings a new insight in the CSR analysis of the Romanian banking system, outlining both the similarities and the differences of the CSR strategies between BRD - Groupe Société Générale and the corresponding group, Société Générale. Thus, following the „triple bottom line” theory, BRD - Groupe Société Générale fulfill the economic performance through the market capitalization indicator, but also the social and environmental fields, grouping its efforts in the CSR direction.

Considering the CSR area, the major objective of this paper is to find out to what extent the bank that activate on the Romanian market is influenced by the parent group, trying to identify the most commonly used tools in this direction. On the other hand, this study case will highlight the CSR reporting practices, as a significant communication process to share the CSR information to

the stakeholders, providing also its efficiency for the corporate reputation if it's used as a marketing method. Comparing the bank at the national and international level will allow us to explain the CSR trend, reporting variances and transparency.

Moreover, the CSR trend is considered an efficient tool to increase the competitiveness of local or international corporations on the domestic market, a learning and embryonic stage to adjust the customers' response according to the established business objectives, even in an asymmetric CSR communication perspective. Filatotchev and Stahl provide various CSR approaches and governance reactions for MNCs, observing that those corporations that compete in the global marketplace „face a perennial dilemma: how to balance the need for global consistency in CSR approaches across various countries where they operate with the need to be sensitive to local stakeholder demands” (2015, p. 122). Although there are various universal social and environmental demands, this paper will trace how BRD - Groupe Société Générale responds to these expectations on the Romanian market, exploring in the same time the national context and the local constraints.

## **2. Methodology**

According to the data provided by the National Bank of Romania, the Romanian banking sector reported profit at the end of 2016, while the distribution of credit institutions with majority foreign capital by net assets highlights a performing position of BRD - Groupe Société Générale, totalizing 50,657.6 mil. lei (12.87%). The third position for this category, after Banca Comercială Română and Banca Transilvania suggests the importance of BRD - Groupe Société Générale for the national banking sector. On the other hand, the second criteria considered in the analysis was the trading value at the Bucharest Stock Exchange, also resuming the major power of Banca Transilvania and BRD - Groupe Société Générale S.A., included in the top ten companies by trading data for the period 25.11.2016 – 24.11.2017.

Thus, referring to the monthly bulletin october 2017 of the Bucharest Stock Exchange, BRD - Groupe Société Générale was on the top 15 by turnover (with a turnover of 62.915.561,58 RON and 5.069.427 traded shares) and on the top 15 by market capitalization (5,32% of the total capitalization). The option for a case study on BRD - Groupe Société Générale derived from the market capitalization criteria and the trading value at the Bucharest Stock Exchange, alongside with the international presence, as part of the group Société Générale. Thus, confronting the resulting data, it was obtained a comparative image of the CSR strategies at both national and international level, completed by the coding process through MAXQDA 12 of BRD - Groupe Société Générale official statements.

BRD - Groupe Société Générale S.A. was established in 1990 as an independent commercial bank with the Romanian state majority capital. Starting from march 1999, the French financial services organization, Société Générale, has acquired 51% of the social capital, while at 31.12.2015 the part owned by the group Société Générale increased at 60,17%. At 24.11.2017, the shares of BRD - Groupe Société Générale S.A. are traded at the main segment of the Bucharest Stock Exchange, category premium, being part of the indices BET, BETPlus, BET-TR, BET-XT-TR, ROTX, BET-BK and BET-XT.

## **3. The CSR pattern in the banking design: A comparative analysis**

This section provides a useful insight in the CSR practice for BRD - Groupe Société Générale S.A. and the established relationship with the corresponding group, Société Générale. First of all, in terms of CSR visibility, it can be noticed a greater openness at the international level than at the domestic market. Thus, while the financial group has a maximum level of visibility through a special section dedicated to the corporate social responsibility issues on the website, a chapter of responsibility in the annual report and a distinct CSR report, BRD - Groupe Société Générale S.A. meets only the first two criteria: CSR section on the website and in the annual report. The most powerful communication tool in the CSR field is a special CSR report that incorporates the vision of the bank's management regarding the responsible behavior, the dominant directions of CSR

activity, the targeted stakeholders with the proposed responsible actions for them or descriptions of particular CSR projects conducted by the bank.

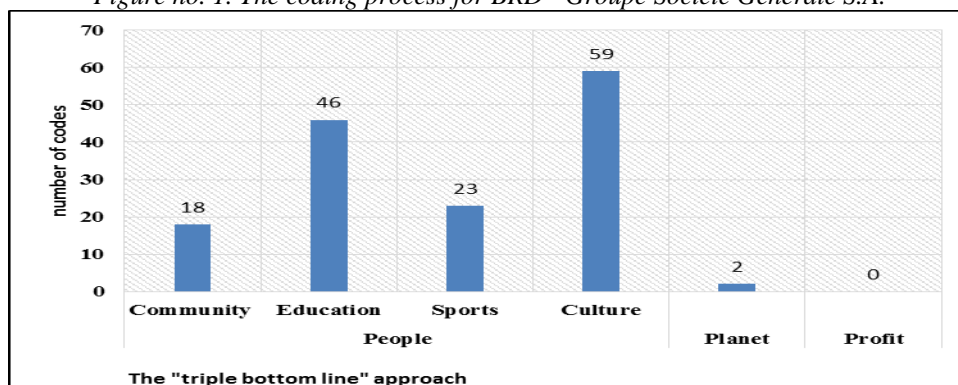
Société Générale group’s decisions supports the corporate social responsibility current, stating that its role as a responsible banker focuses on the ethical values, in order to achieve the public trust and to strengthen the reputation on the long run. From the very beginning, on the official website of Société Générale are mentioned the social and the environmental principles, following the „triple bottom line” hypothesis. The link with the ethics suggests the correspondence with the the Carroll’s pyramid, with four basic dimensions of responsibility: economic, legal, ethical and philanthropic (1979). The group history regarding the CSR activity is much more structured, starting in 2000 with Société Générale participation at the Wolfsberg Group, an association engaged in fighting against corruption issues and money laundering. While the financial group clearly outlines the steps in the CSR evolution, with the adhesion to the international principles, associations or conventions, the first mentions about the CSR projects of BRD - Groupe Société Générale S.A., on the local market, are in 2003.

Considering the Romanian context, BRD - Groupe Société Générale S.A. has not a particular CSR report, suggesting that the CSR disclosure practice is still in its infancy, without standardized methods of data communication. The main fields of CSR activity declared by the bank are: culture, education, sports and community. For the cultural field, BRD - Groupe Société Générale S.A. invests in the young generation, challenging its potential through performing arts or classical music. The education area is emphasized by the concern for a long-term development, strating from the active involvement in CSR projects that investigate in depth the educational system, continuing with the teaching staff training programs and extending the CSR efforts to the students.

The bank also promotes sports and the connection with the educational field, sustaining sporting events like BRD Năstase Țiriac Trophy or BRD Open Bucharest, but developing in the same time a new type of sports journalism. The last field, that refers to the community, was built on three main pillars: the volunteering actions of the employees, the strategic partnerships with the non-governmental sector and the mixture between education and community, in order to prevent the school dropout.

Due to the fact that there is a lack of transparency on the Romanian market regarding the CSR activity derived from the regulation gap, the option for coding data was in accordance with the potential to collect and process in a suitable manner the official statements of the bank. Using the qualitative analysis software MAXQDA 12, it was analyzed the content of the official website of BRD - Groupe Société Générale S.A. which refers to the corporate social responsibility. The research was constructed under the „triple bottom line” theory, dividing the in-vivo codes into three main categories: profit, people and planet. According to the Figure 1, the People dimension prevails, with 146 codes, while for the Planet dimension it’s assigned only two codes. Moreover, from the bank’s perspective, the profit dimension is not considered as part of the corporate social responsibility, even if the significant impact on the Romanian market it’s emphasized by total turnover, number of employees, total value of taxes or the market share.

Figure no. 1. The coding process for BRD - Groupe Société Générale S.A.



Source: author analysis, MAXQDA

The bank official position on the website is clearly related only to the People dimension, neglecting the role of profit or planet for a responsible citizenship. However, these elements are included in the Annual report 2015, being emphasized the entirely commitment of the bank for a clean environment, implementing intern waste management programs or reducing the CO2 emissions from the operational activity of the bank. A particular attention is given to the human resources management, the bank being involved in the career development of each employee, offering continuous support, training programs and a large set of benefits. It can be noticed that BRD - Groupe Société Générale S.A. dissociates the CSR actions by those related to the human resources, considering them a duty and not a voluntary part of its mission.

A number of 59 codes were attached to the cultural category, due to the active involvement of the bank in cultural events like Sibiu International Theatre Festival, Bucharest National Theatre Festival, "Ideo Ideis" National Young Theatre Festival, White Night of the Art Galleries, production projects, cultural workshops or art exhibitions (*No men's land*, *Cristian Paraschiv. Convulsion Ltd.*, *Tania Mouraud – OTNOT*, *Repeat After Me: Damir Očko*). At the same time, BRD - Groupe Société Générale S.A. supports the classic music through *SoNoRo Conac* project and starts a new innovative platform of cultural journalism for the young generation.

The educational sphere is much more divided into projects focused on the access to the educational systems for deprived children, strategic cooperation for young people and teachers, the volunteering actions of BRD employees that have fight against the school dropout, the personal and professional development through the innovation, technology and competitions. The bank promotes the link between education and sports, sustaining the performance, the leadership spirit and the authentic values. The coding process has outlined the call for emotions, being used words such as „to dream”, „love” or „passionate journey”, while the code „partnership” was frequently used in the CSR disclosure practice of the bank. On the other hand, the CSR actions for community create a sustainable mechanism between employees, clients, other partners and society, with a special focus on the young people, social NGOs and internal donations for social causes.

In comparison, the CSR strategy of Société Générale is founded on the three main pillars of the „triple bottom line” approach (social – economic – environmental), as indicated by Frédéric Oudéa, Chief Executive Officer, at the beginning of the CSR description from the website. Thus, it is emphasized the key role that the bank plays in supporting and financing the economy, being also sensitive to the economic impact. Another difference between the group and the local bank is based on the number of formalized principles, directives or standards to which Société Générale has joined: E&S General Principles, Equator Principles, the United Nations Global Compact, the United Nations Environment Programme Finance Initiative, the Joint Declaration initiated by Transparency International France for transparent and honest lobbying, the Green Bond Principles, the Universal Declaration of Human Rights, sector policies and other international documents. Moreover, the group clearly defines its stakeholders and measure their satisfaction: customers, shareholders and investors, the media, rating agencies, civil society, employees, suppliers, regulatory bodies and supervisors.

The disclosure practice is more advanced at the group's level, being published the 2016-2017 Corporate Social Responsibility Report, structured as follows: commitments, challenges and ambition, corporate responsibility governance, implementing responsible financing, the CSR actions attached to the climate issues, the solidarity and commitment of the financial group and the image of the group as a responsible employer. While the vision of the BRD - Groupe Société Générale S.A. is more narrow regarding the human resources place on the CSR agenda, the group's perspective is completely different, aiming to respond to the employees expectations by fostering their engagement with the bank's values and including this objective into the CSR priorities. According to the data provided by the Group in the CSR Report 2016-2017, 84% of the total employees of Société Générale were trained in 2016, finishing at least one training module. On the other hand, the group offers to its employees the necessary tools to adapt to the group's digital transition by designing strategic workforce plans and ensuring transparent evaluation measures. A similar approach for both the bank and the financial group can be noticed regarding the balance between the worklife and the family life.

While BRD - Groupe Société Générale S.A. focuses most on the People direction, the CSR report of Société Générale reveals the group's prior commitment to the environmental field, in the context of the climate change and the ecological challenges. The group's concern towards this priority takes the form of a climate strategy, the energy sector financing and green funding. Both the bank and the group apply the resources management in order to reduce the carbon footprint, business travel, the energy, water or paper consumption by implementing internal policies or other measures that promote the circular economy.

But the most striking difference remains the adapted services of the group for its customer's needs, making them accessible for all clients, including those with serious health risk or in a state of dependency. Thus, the group focuses more on identifying the responsible solutions for the over-indebted customers, identifying the most suitable microfinance schemes, while the CSR actions in the educational field are more assigned to the financial education area. It can not be neglected the financial instruments dedicated to the SMEs, NGOs or for public interest investments, which are more visible in the case of the group. However, BRD - Groupe Société Générale S.A. is in line with the CSR programs of Société Générale dedicated to the culture, sports, partnerships and employee's volunteering, designing its responsible events in partnership with several key organisations and institutions.

#### 4. Conclusions

Developing the CSR understanding on the Romanian banking sector after the model of the international practice has many advantages, leading to a transition stage of the CSR process that follows the directive lines of the group. The present study case supports the idea of a direct link between the CSR activity of BRD - Groupe Société Générale S.A. and the corresponding financial group, Société Générale, as a driver of corporate social responsibility on the Romanian market. The in-depth analysis confirms the assumption of a CSR phenomenon related to the „triple bottom line” theory, which is more remarkable at the group level. Even if BRD - Groupe Société Générale S.A. sustains such pillars, they are not perceived as part of corporate social responsibility, being reflected as a hybrid form of CSR, more adjusted to the domestic market. Thus, the responsible actions of the bank are directed mainly on the People dimension, through charity, sponsorship programs or strategic partnerships with the NGOs. At the moment, the situation in Romania is unstable in terms of responsible behavior, being sustained the young and vulnerable people, sports, education, culture and arts. On the other hand, the strategy of Société Générale is much more connected with the sense of the term „responsibility”, conducting to responsible financing methods, environmental concern or commitment to the international sustainability principles. In order to build a stable CSR framework on the Romanian environment, it must be designed an efficient model based on the group's values, being neglected the marketing objectives or those concerning only to the organisational image.

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## Entrepreneurship in the World: The Analysis of the Global Entrepreneurship Index in the Period 2015-2017

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### Abstract

*The last decades have witnessed the rapid spread of entrepreneurship all over the world. Consequently, the state of entrepreneurship has significantly improved. The aim of the paper is to present the evolution of the top ten countries in the world according to the Global Entrepreneurship Index in the period 2015-2017. The research methodology is based on a quantitative method. The paper shows that the top ten countries in the world according to this index in the last three years were the same in a high proportion and demonstrates the absolute domination of the United States of America and the growing presence of the European countries.*

**Key words:** entrepreneurship, Global Entrepreneurship Index, country, United States of America

**J.E.L. classification:** L26

### 1. Introduction

Since the First Industrial Revolution entrepreneurship has increasingly become a subject of interest for various stakeholders (e.g., governments, policy makers, companies, businessmen, researchers, and scholars). The consequences of entrepreneurship over the socio-economic life are numerous and important such as job generation, social inclusion, innovation, technological progress, wealth creation, and economic growth and development (Braunerhjelm, 2010; Naudé, 2013; Toma et al, 2014; Organisation for Economic Cooperation and Development, 2016; Organisation for Economic Cooperation and Development, 2017; Global Entrepreneurship Monitor, 2017).

The last decades have witnessed the rapid spread of entrepreneurship all over the world. Consequently, the state of entrepreneurship has significantly improved. Since 2015, the United States of America (USA) has remained the most entrepreneurial country worldwide (Ács et al., 2017). The following three mega trends shaping the future of the American entrepreneurship were identified (Kauffman Foundation, 2017): new demographics of entrepreneurship, new map of entrepreneurship, and new nature of entrepreneurship. However, these trends are also to be found in other countries (e.g., Canada, Australia) as building entrepreneurial societies represents a major challenge in the 21<sup>st</sup> century for most of the countries (Bargen, 2003; Straub, 2016). As one of the global megatrend, entrepreneurship rising is more and more connected with other megatrends such as digital future, global marketplace, and urban world (Ernst&Young, 2015; KPMG, 2017).

The aim of the paper is to present the evolution of the top ten countries in the world according to the Global Entrepreneurship Index (GEI) in the period 2015-2017. The research methodology is based on a quantitative method. The next part of the paper is dealing with the analysis of the GEI in the period 2015-2017. The paper ends with conclusions.

## 2. Analysing the Global Entrepreneurship Index in the Period 2015-2017

The GEI is an annual index published by the Global Entrepreneurship and Development Institute (GEDI). It measures the health of the entrepreneurship ecosystem in countries around the world and then ranks the performance of these countries. The GEI is based on the following 3 sub-indexes and 14 pillars:

- Attitudes sub-index (opportunity perception, startup skills, risk acceptance, networking, cultural support).
- Abilities sub-index (opportunity startup, technology absorption, human capital, competition).
- Aspiration sub-index (product innovation, process innovation, high growth, internationalization, risk capital).

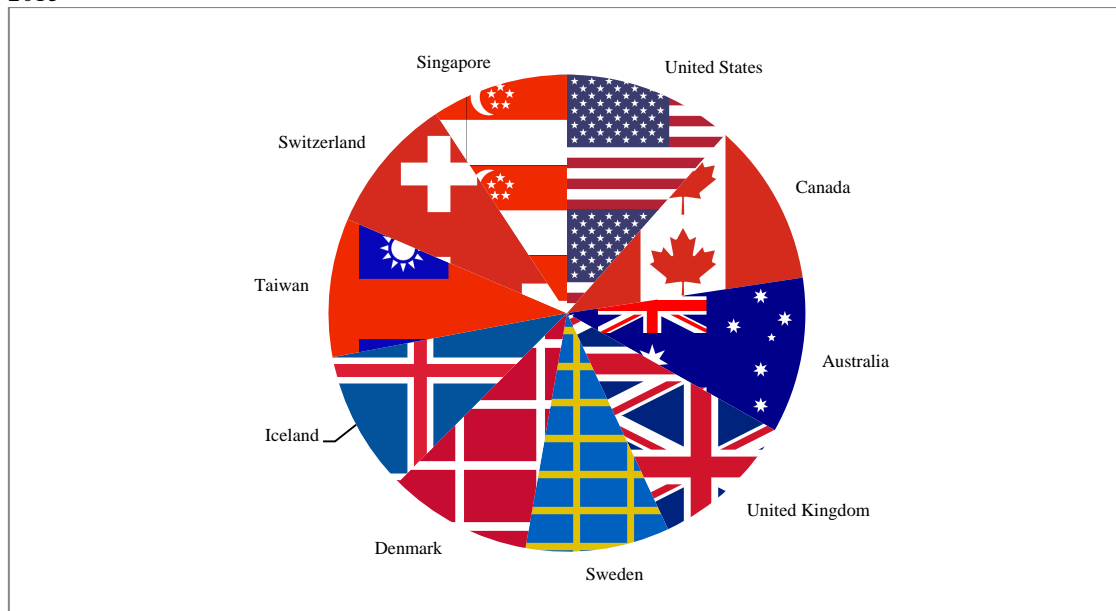
The GEI 2015 highlights the domination of the USA with a gap of 3.5 points more than Canada and a gap of 7.4 points more than Australia, its main competitors (Table no. 1). The ranking is dominated by Europe with five out of ten countries although the first of them is only ranked fourth (Figure no. 1).

Table no. 1 The top ten countries in the world according to the GEI in 2015

Rank	Country	Score
1	USA	85.0
2	Canada	81.5
3	Australia	77.6
4	United Kingdom	72.7
5	Sweden	71.8
6	Denmark	71.4
7	Iceland	70.4
8	Taiwan	69.1
9	Switzerland	68.6
10	Singapore	68.1

Source: (Ács et al., 2015)

Figure no. 1. The geographical distribution of the top ten countries in the world according to the GEI in 2015



Source: (authors' contribution)

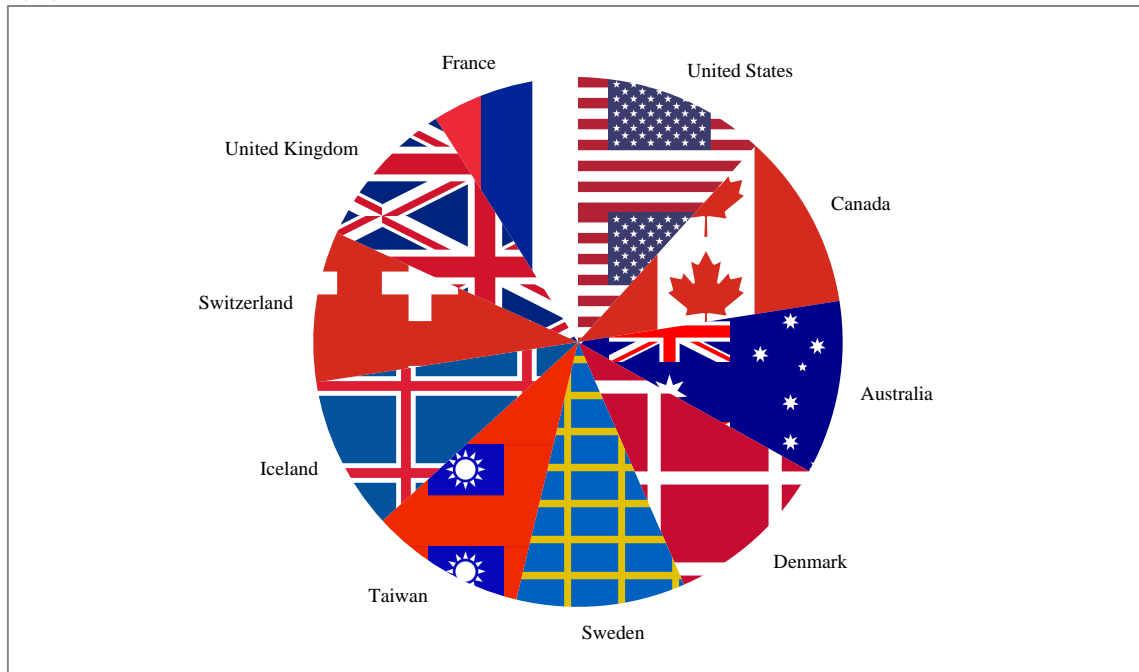
In 2016, the USA is leading in a definitive manner the GEI, a gap of 6.7 points separating them from Canada, the second ranked country (Table no. 2). Europe has six countries among the top ten, the highest ranked one being Denmark on the fourth place (Figure no. 2).

Table no. 2 The top ten countries in the world according to the GEI in 2016

Rank	Country	Score
1	USA	86.2
2	Canada	79.5
3	Australia	78.0
4	Denmark	76.0
5	Sweden	75.9
6	Taiwan	69.7
7	Iceland	68.9
8	Switzerland	67.8
9	United Kingdom	67.7
10	France	66.4

Source: (Ács et al., 2016)

Figure no. 2. The geographical distribution of the top ten countries in the world according to the GEI in 2016



Source: (authors' contribution)

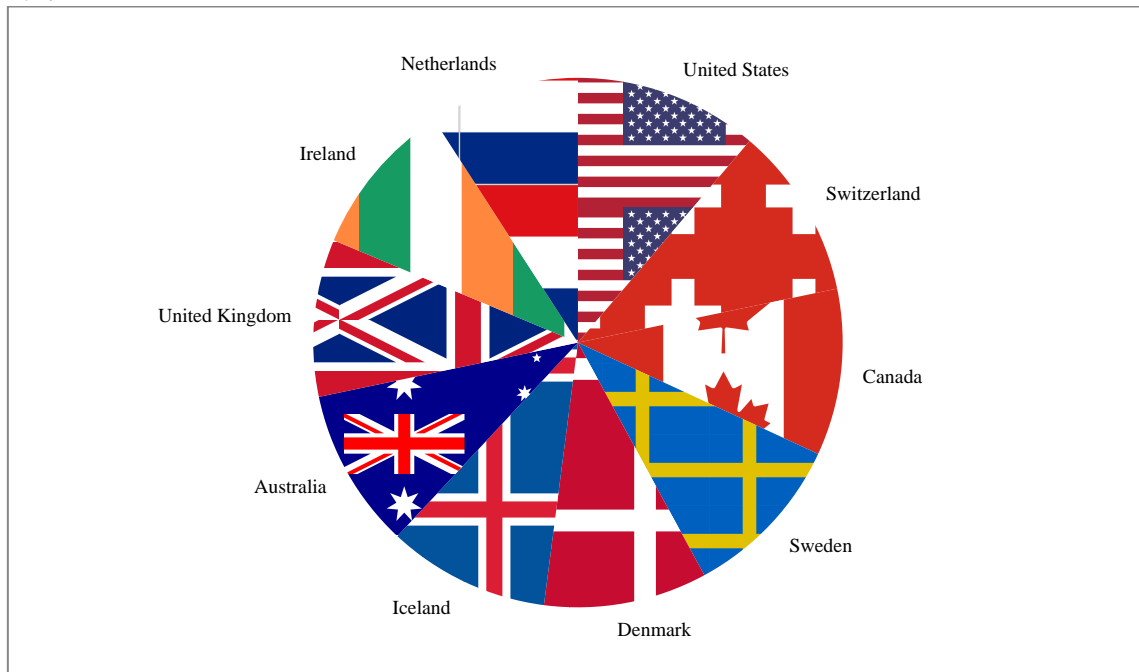
In 2017, the USA keeps its leading position (Table no. 3), with a 5.4 point difference in comparison to Switzerland (second country in the hierarchy) and a 7.8 point difference in comparison to Netherlands (third country in the ranking). Europe shows its total domination with seven countries ranked among the top ten according to the GEI (Figure no. 3).

Table no. 3 The top ten countries in the world according to the GEI in 2017

Rank	Country	Score
1	USA	83.4
2	Switzerland	78.0
3	Canada	75.6
4	Sweden	75.5
5	Denmark	74.1
6	Iceland	73.5
7	Australia	72.5
8	United Kingdom	71.3
9	Ireland	71.0
10	Netherlands	67.8

Source: (Ács et al., 2017)

Figure no. 3. The geographical distribution of the top ten countries in the world according to the GEI in 2017



Source: (authors' contribution)

The USA has been a clear leader of the GEI ranking from 2015 until 2017, each year having a gap bigger than three points than their follower (Canada in 2015 and 2016, and Switzerland in 2017), the highest gap being reached in 2016: 6.7 points between the USA and Canada. An interesting ascent from 2016 to 2017 is achieved by Switzerland, managing to gain considerable ground, surpassing six countries and reaching the second position. On the other hand, Australia lost its third spot (held both in 2015 and 2016), descending to the seventh place in 2017 and the United Kingdom fell from being fourth in 2015 to ninth in 2016. The USA, Canada, Australia, the United Kingdom, Sweden, Denmark, Iceland and Switzerland managed to rank among the top ten countries in the world from 2015 until 2017. Taiwan was only present in 2015 and 2016, whilst Singapore, France, Ireland and the Netherlands having one entry in the rank. European countries are dominating the hierarchy, starting with five countries in 2015 and managing to place seven among the top ten in 2017.

### 3. Conclusions

The beneficial role played by entrepreneurship in society has been increasingly emphasized in recent times. Entrepreneurship is more and more considered not only a driver for economic growth, but also a prerequisite for social development and inclusion.

The paper shows that the top ten countries in the world according to the GEI in the period 2015-2017 were the same in a proportion of 80%. Also, it demonstrates the absolute domination of the USA and the growing presence of the European countries.

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# The Future of Traditional Commerce

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## Abstract

*The paper presents the concept that seems to be getting more and more bigger, namely electronic commerce. The theme is a debate about what the world of commerce means and attracts through its timeliness.*

*Entry into the third millennium has triggered one of the greatest changes in our daily lives - the move towards an Internet-based society. But one of the most significant changes is manifested in the way business is conducted, especially in the way to lead and manage markets and in the way to trade.*

**Key words:** traditional commerce, global economy, e-commerce, traditional markets

**J.E.L. classification:** M1, M12, M15

## 1. Introduction

Trade is one of the areas that has discovered the potential of information technology. From the very beginning, he used the innovations and advantages of this field (Andre, 1999, p.122-125).

The 2000s are the years of globalization (Fingar, 2000, p.144) of the integration of communications and the unprecedented development of intelligent technologies. There is a strong decline in Internet costs, which has led to and will further increase the number of users. Today e-commerce and e-business go through a period of consolidation where enthusiasm for new technologies and ideas is accompanied by a great deal of attention to strategy, implementation and profitability. In addition, it is increasingly recognized that e-business has two parts, not just technology but also trade.

E-commerce has quickly become a component part of globalization, a particular and spectacular component. It is expected that this phenomenon will remain an important area on the international agenda for a good period of time, due to its profound macroeconomic and social implications (Iancu, 2011, p. 296-301). Although it is not yet a global economic force, it is predicted to become significant over the next ten, twenty years.

The rapid expansion of electronic transactions (Kalakota, 1996, p.98-99) is a major opportunity for trade and development, it is the source of a significant number of success stories by which companies can reach new levels of international competitiveness and participate actively in the global information economy.

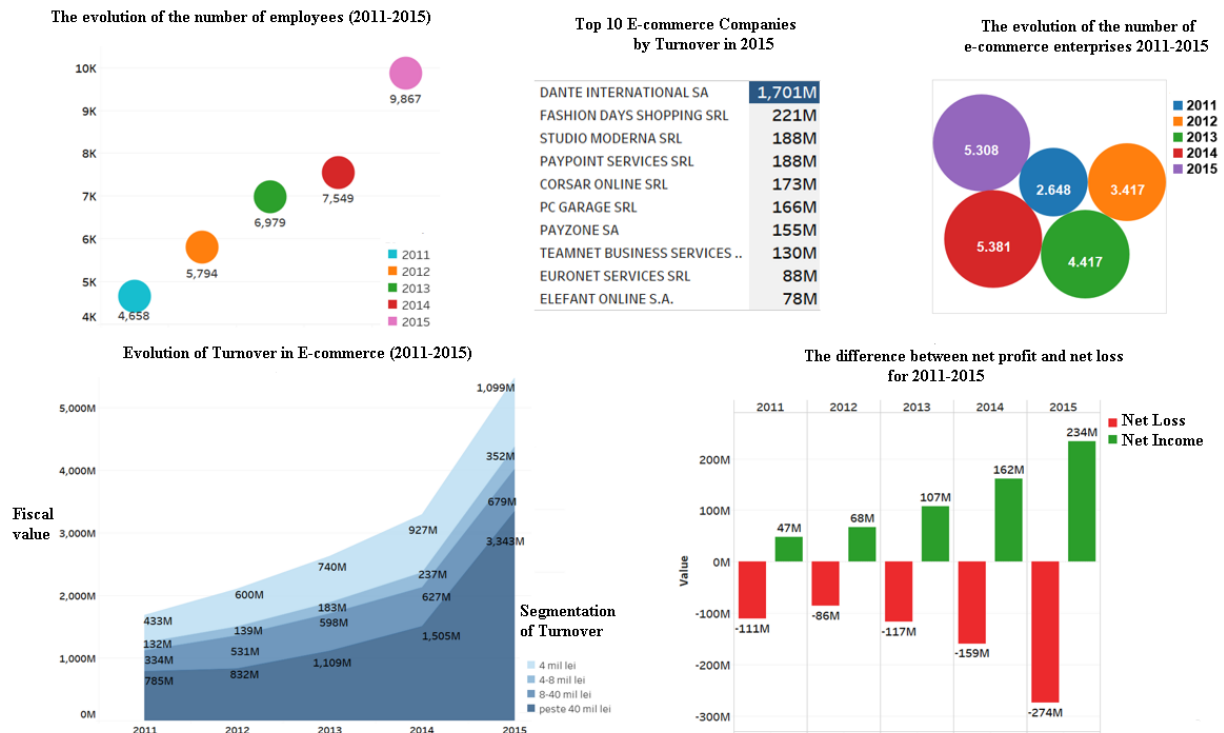
## 2. Developing e-commerce

The Internet represents new opportunities for traditional businesses, including the diversification of services offered and the promotion of new, personalized and attractive services that information and communication technologies make possible. Against this background, the impact of the Internet, which has allowed the development of a new form of commerce - Internet commerce - of global traditional trade is strong. E-commerce stimulates competition and competitiveness by developing new products and markets through the emergence of new players in traditional markets and new types of relationships between suppliers and consumers. But, undoubtedly, the development of e-commerce will not reduce the importance of traditional trade as long as, on the one hand, the infrastructures on which e-commerce is based will still be influenced

by a number of trade barriers and depend on investment; the other, there will be individuals who want physical contact with the product they purchase. The fact is that the development of traditional trade is also boosted by this modern form of commerce, which is the Internet trade.

Against the backdrop of the increase in Romanians' interest in products and services sold on the internet, the profitability of the sector advanced from 47,4 million lei in 2011 to 233,7 million lei in 2015 and a target of over 300 million lei was foreseen for 2016 ([www.keysfin.ro](http://www.keysfin.ro)).

Figure no. 1 The online business in Romania



Sursa: [www.keysfin.ro](http://www.keysfin.ro)

It is true that electronic media have been used in the past for commercial purposes, but the explosion of the Internet has created new opportunities for mankind, while generating an unprecedented development of shopless stores. With the development of e-commerce, the disputes about the future of traditional trade, made by classical means, began. It is known that the development of society has led to an increase in the responsibility of commercial activity, which is why the notion of commerce is defined as a set of activities that concern a product from the time of the investment or the intention to create it until its destruction in the process consumption or use, irrespective of its form.

### 3. E-commerce and Traditional Trades – similarities

According to the given definitions, not only do e-commerce cover not only the commercial transaction itself but also all the interactions and exchanges of information between the seller and the buyer that appear before and after the transaction - advertising, technical support of the purchased product, delivery, commercial services, etc.

Thus, in the case of e-commerce, the same components as in the case of classic trade are encountered, but with specific changes, namely (Pascu, 2016, p.10-15):

- product / service - there is a product or service that is material or digital;
  - Place of sale - In the case of Internet trade is a website on the network that presents the products or services offered;
  - Advertising - a way has been developed to get people to come to a particular website;
  - the way of selling - an online form for Internet shopping;
  - Payment method - Internet commerce is increasingly being applied to e-banking, a way to cash in - usually a bank account with credit card payments. E-banking implies the existence of a secure order page and connection to a bank;
  - the delivery method - delivery of the products purchased through the Internet is done either by mail, courier or classic - by moving the buyer to the seller's warehouse.
- Any trading transaction can be divided into three main stages:
- the search and advertising stage;
  - the contracting stage;
  - the delivery and payment stage.

Obviously, all of these phases can be achieved via the Internet, so that all trade activities are covered by the e-commerce concept. So, e-commerce activities do not differ from those of traditional trade (Iancu, 2017, p.302-306):

- a simple sales cycle without intermediary, in which only shipment of tangible goods can not be carried out by electronic means;
- databases useful for e-business;
- electronic business activities - advertising for goods and services, promotional actions, merchant communications, online delivery of software packages, electronic magazines, newspapers and newsletters, fund transfers, commercial auctions, direct marketing, pre- launching orders, transferring transport documents, contracting services, etc.

To achieve a certain level of profit, retailers are interested in the commercial vendor of their operations unit, the architecture of the location, its interior and exterior layout, the different ways of attracting customers, displaying and displaying traded goods , the forms of sales practiced and, last but not least, the complexity of the commercial services offered. But companies doing e-commerce are also subject to rules similar to those in the real market.

#### **4. E-Commerce and Traditional Trades - differences**

With few exceptions, e-commerce does not differ greatly from traditional trade in terms of the steps needed to complete transactions. But there are other issues that delimit the two forms of trade. First of all, it is about the sphere of action or coverage of the two forms of trade.

However, e-commerce can not be limited within a territory, because there are at least two e-commerce features due to Internet technology, namely - the market is open on a global scale and it represents the network and the partners are unlimited, being so well known both unknown and unknown. The development of e-commerce was possible due to another very important aspect in defining traditional e-commerce, namely the trading time. Ecommerce reduces the importance of time by shortening production / sales cycles, allowing businesses to operate more efficiently and consumers to participate in transactions at any time.

Another relevant aspect in the definition of traditional e-commerce refers to the categories of products marketed. Traditionally, traditional trade provides all the goods that are produced to customers because it acts as a distributor and service provider for consumers. Instead, eMarketer eCommerce firms sell: computer hardware (software, accessories), books, music, financial services, entertainment, home electronics, gifts and flowers, tourist services, toys, tickets shows and travel, information and too few foods due to their perishability.



## 5. Conclusions

Concluding, it is clear that the emergence and leaps and bounds of e-commerce change the business world, threatening the existence not only of firms but of the entire industry.

For some businesses, e-commerce means any financial transaction that uses computer technology. For others, the notion of e-commerce covers the complete sales circuit - including marketing and selling itself. But e-commerce is, broadly, a much deeper on the evolution of business and includes, in fact, not only new acquisitions trade but also all the activities that support the marketing objectives of a company, which may include, for example, advertising , sales, payments, after-sales, customer service, etc.

It is clear that this development has a major impact on the economy, in terms of creating new businesses, diversifying existing ones and, in particular, the potential of the market, the labor force and its employment in the future.

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## Energy Crisis in Nigeria: Evidence from Lagos State

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### Abstract

*This study examined the nexus between urbanization and energy crisis in Lagos State using questionnaire to elicit information from one hundred randomly selected Lagos residents in Akoka and Onike areas. The study identified the energy supply gap within the Lagos metropolis and found that the energy requirement in the state for industrial, commercial, and domestic needs is not met by supply. It was observed that urbanisation is the root cause of energy crisis in the state and generators provides the main coping strategy for residents. It is therefore recommended that Lagos state should be allowed to generate its own electricity and distribute appropriately among the residents as against the current practice of contributing its generated power to the national grid.*

**Key words:** urbanization, energy crisis, electricity, Nigeria

**J.E.L. classification:** L94, O18, Q42

### 1. Introduction

Rapid urban growth has outweighed the capacity of several big cities' quest to ensure adequate provision of basic facilities, especially energy, for their citizens (Salau, 2009). In spite of this challenges posed by urbanisation, on yearly basis still, the big cities attract a large number of people mostly from the rural areas who, together with the growing native population, increase the amount of squatter settlements and shantytowns. This culminates into worsening of urban safety and hinders attempts to deliver essential services and improve the provision of basic infrastructure (Salau, 2009). In terms of having access to stable and sufficient energy, in 2009, about 1.5 billion people lack access to electricity in less developed countries (LDCs), while close to 3 billion people rely on solid energy source for cooking (Legros *et al*, 2009). As it pertains to several regions of the world, 625 million and 560 million people respectively are without access to modern fuels and electricity in sub-Saharan Africa. In regions like Asia, the people lack access to modern fuel, though several others have access to electricity.

Furthermore, less than 200 million people in East Asia and the Pacific lack access to electricity, while about 1.1 billion depend on solid energy for cooking. About 79% of people are without electricity access in developing countries. 74% of them are in sub-Saharan Africa, compared to the 28% as a whole in LDCs. This means that access to energy varies widely across LDCs, but energy access is far lower in poorer developing countries than in richer ones. Also, access to modern fuels is just about 17% in sub-Saharan Africa and just about 9% in developing countries (Legros *et al*, 2009), meaning that a large percentage of the population are without access to modern fuels. In 2012, out of the 1.3 billion people who lack access to electricity, over 600 million are in sub-Saharan Africa, while over 300 million come from India alone (USAEE, 2014). However, according to the World Economic Outlook (WEO, 2016), about 16% of the world population (i.e. 1.2 billion people) lack access to electricity in 2016. Over 95% of them reside in developing Asia and sub-Saharan Africa. Also, over 38% of global population (i.e. 2.7 billion people) rely on the

traditional use of solid biomass. About 50% rely on biomass in developing Asia and 80% in sub-Saharan Africa. In total, almost three-quarters of the world population do not have access to clean cooking facilities and this amount to about 2 billion people (WEO, 2016).

In Nigeria, while electricity access has grown from 27.3% in 1990 to 57.7% in 2014 (World Bank, 2016), the problem of urbanisation has continued to play down the impact of such growth over time. Currently, out of the 170 million of Nigeria's population, about 98 million are without access to electricity. The national electrification rate in Nigeria as at the end of 2014 was 45%, out of which urban electrification rate was 55%, while the rural electrification rate was 36%. Similarly, in terms of biomass use for cooking, the population relying on biomass use in Nigeria is 134 million with 76% of this still only relying on traditional use of biomass in 2014 (WEO, 2016). It means that generally in Nigeria, access to modern energy is very low and the energy crisis is very high. Therefore, the low rate of rural electrification in Nigeria and inaccessibility to modern energy make the rural-urban migration a necessity and an unstoppable trend. This has exacerbated the problem of urbanisation and further deepened the energy crisis in the urban areas, especially in Lagos state.

Lagos state has a population of 10.6 million and a density of 20,000 per square metre (Lagos State Government, 2006). Lagos also has a yearly population growth of 275,000 (Lagos State Government, 2002; Lagos State Government, 2004). The megacity status of Lagos serves as a major migration destination for most Nigeria's indigenes from the rural areas and neighbouring African countries. This therefore exerts severe strain on existing infrastructure and contributes immensely to energy crisis in the state. The deplorable energy situation of the state has adversely affected the productivity status of the industrial firms in the Lagos metropolis. Most of the slump areas of the state, which include Ajegunle, Mushin, Makoko and others, are the worst hit by this energy crisis. Resolving this urban growth problems vis-à-vis energy crisis should be of paramount interest to Nigeria and most especially Lagos state. This is to fast track the goal of achieving sustainable development in the state and improves the living conditions for the citizenry.

The challenges posed by the rapid urban growth in Lagos State could be enormous particularly with respect to secondary energy, like electricity. Adequate supply of energy has been ascribed as a key input in the day-to-day running of the economy. Nigeria only generates less than 5,000 MW for a population of about 170 million. Incidentally, metropolitan Lagos accounts for about 40 per cent of the total electric power supply for industrial, commercial, and domestic demands as characterized by the power supply companies, thus highlighting the picture of the problem. The relevant questions are: Given the population of the state, what is the ideal quantity of electric power requirement? Is there any gap between the energy supply and the requirement of the city? What are the strategies employed to cope with the incidence of the gap on the households and firms, if any? Therefore, this study seeks to evaluate the pushing effects of urbanization and unstable electric power supply on the growth of Lagos State economy. The study makes use of case study to achieve its objectives. This approach is suitable because it enables researchers to examine data at the micro level. The motivation for the study stems from the realisation that poor electricity supply in the face of a rising urbanization demand poses a problem on growth and accordingly, the need to offer suggestions that can ameliorate the challenges are the expected outcomes of this study for necessary policy options.

## **2. Literature Review**

Owing to increased concern over the problem of urbanisation vis-à-vis energy related crisis, several studies have beamed search light from various perspectives. Parikh and Shukla (1995) employed a multiple regression framework using a cross section data to analyse indicators of urbanisation and other economic indicators. It was observed that aggregate energy consumption increases with urbanisation. Shahbaz and Lean (2012) found that a bi-directional causality exists between industrialisation and energy consumption, while it was also observed that urbanisation intensified the volume of energy consumption in Tunisia. Shen *et al* (2005) analysed the trend between urbanisation and energy demand and concluded that if urbanisation grows faster than predicted, China might face long term resource shortage. Wang (2014) defined two types of energy use in the urbanisation process as residential energy consumption (REC) and production energy

consumption (PEC) observed that growth enhanced by urbanisation increased REC while PEC was consistently reduced by PEC between 2001 and 2005 in China. Jones (1989) conducted a cross-sectional study on 59 LDCs and observed that urbanisation significantly increased energy use. Imai (1997) empirically observed that urbanisation contributed to energy crisis in China. Zhou *et al* (2012) observed a negative relationship between energy demand and urbanisation. Ewing and Rong (2008) observed that more urban areas had very reduced energy consumption per-capita in Canada.

In terms of studies on the causal link between urbanisation and energy consumption, Liu (2009) found that urbanisation have a positive causal effect on energy consumption in China. Fan and Xia (2012) found the same results in China. Mishra *et al* (2009) observed that short term causality exists between energy consumption and urbanisation in the Pacific Island Countries while Halicioglu (2007) observed that causality runs from urbanisation and GDP to energy consumption in Turkey. In terms of Nigerian studies, Babanyara and Saleh (2010) observed that the country lost an annual average of 409,700 hectares of forest to urbanisation while Jiboye (2011) observed that the pervasiveness of urban growth in Nigeria is strongly linked with globalisation, population explosion and industrialisation.

### 3. Methodology

This study adopted the survey research design and cross-sectional analysis. This design is chosen because of the research questions raised and the stated hypotheses. Moreso, it was chosen because researchers observed the behavioural pattern of one or more variables instantly which will also afford the study to take an informed decision and make appropriate policy options. The population of this study includes the residents of Lagos metropolis. Lagos state was selected because it is the second most populated state and commercial city in Nigeria. The study draws its sample size of 100 from the population of the Lagos residents around Akoka and Onike areas of Yaba Local Government of Lagos state. These areas are selected basically because it is just a pilot study and for the purpose of minimising cost. Akoka and Onike also afford us the opportunity to harvest opinions of a typical residential area of Lagos pertaining to energy crisis and urbanisation. This primary data analysis is conducted using random sampling techniques. The random sampling technique is employed to randomly select our sample respondents. In addition, both qualitative and quantitative methods of analysis are employed. For the former, two different modes of sourcing information are employed. Structured questionnaires which detail the socio-demographic information of the respondents as well as key questions which border on urbanisation challenges and energy issues are asked. Furthermore, statistical analyses suitable for the stated objectives are used to arrive at the findings of the study.

The questionnaire is structured into two sections; the first section dealt with the demographic factors while the second section provides information on energy crisis and urbanization. The validity test computed using Pearson Product Moment Correlation (PPMC) techniques is 0.831 and 0.897 for demographic factors and questions in section two respectively, which is larger than its critical value at 5 per cent. Additionally, the Cronbach-alpha value used for testing reliability test is 0.92 and 0.95 for demographic data and questions in the second section correspondingly. The values are higher than the benchmark value of 0.78. Thus, the instrument is reliable. The data collected from 100 respondents for pilot study was sorted, edited and analysed using Microsoft Excel and Statistical Packages for Social Sciences (SPSS) for preliminary analyses. The study used graphs and tables to present the response of respondents to the questions. It also employed the Relative Importance Index (RII) to identify and rank the factors to the overall root of energy crisis, migration rate of citizens from other states to Lagos, coping strategies of residents to electrifying purposes and domestic shores, and causes of electricity power supply crisis in Lagos. The equation of RII is presented as:

$$RII = \frac{\sum W}{AN}$$

The value of RII ranges between 0 and 1 (i.e.  $0 \leq RII \leq 1$ ). Where  $W$  = the weights given to each factor by respondents ranging from 1 to 5;  $A$  = is the heightened weight i.e. 5; and  $N$  = is the total number of respondents.

#### 4. Results and Discussions

This section presents the results to the data collected from the questionnaires administered to respondents. The first part is the presentation of the demographic characteristics of respondents.

Figure no. 1: Demographic Classification by Gender

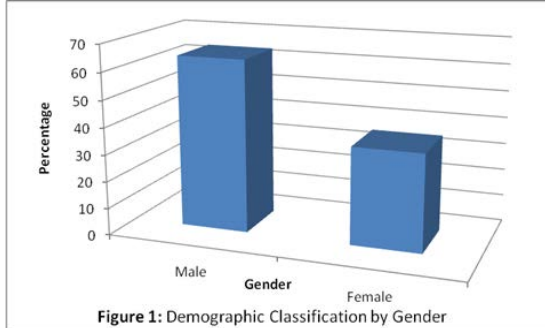
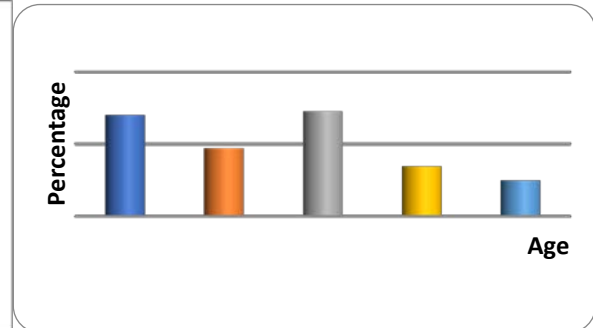
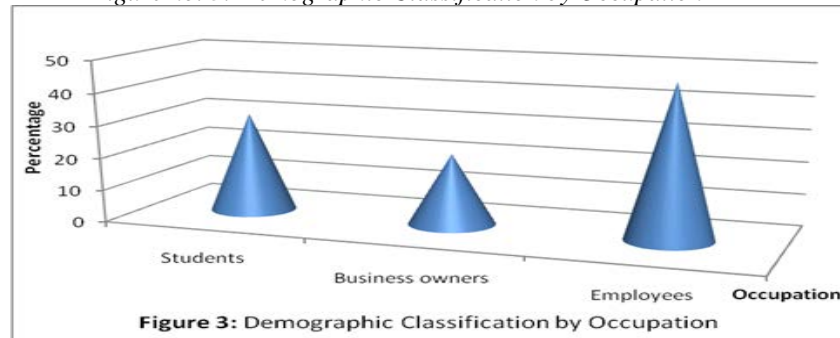


Figure no. 2: Demographic Classification by Age



Source: Authors' computation (2017)

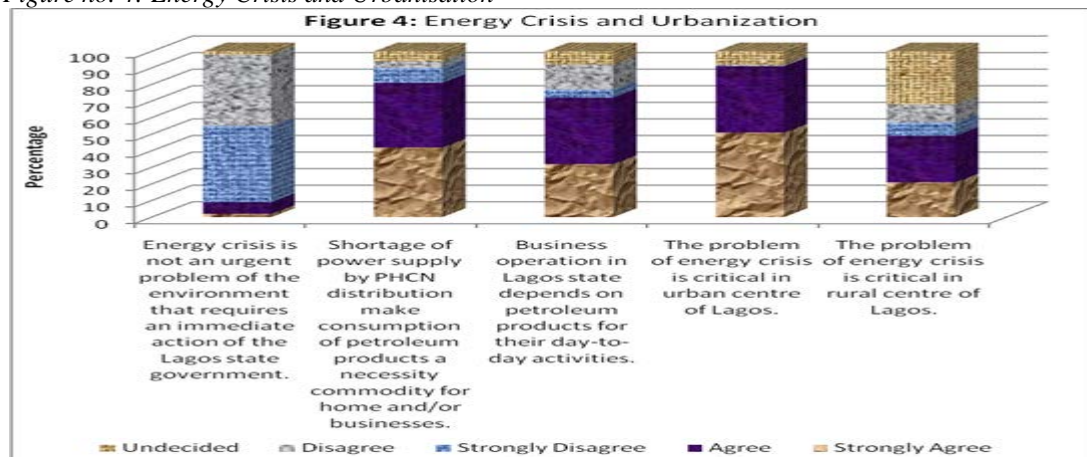
Figure no. 3: Demographic Classification by Occupation



Source: Authors' computation (2017)

Figure 1 depicts the demographic classification by gender, which revealed that 64% and 36% of the total respondents are male and females. The age distribution of our respondent showed that 28%, 19%, 29%, 14% and 10% are within the age bracket of 18–25 years, 26–35 years, 36–45 years, 46–55 years and 56 years and above correspondingly as depicted in Figure 2. The last demographic factors indicating the occupation of the respondents revealed 31%, 22% and 47% are students, business owners and employees respectively. It is shown in Figure 3. The respondents that constituted the study are males who are within the working age and also engaged in business activities. However, employees constitute the larger part of the respondents.

Figure no. 4: Energy Crisis and Urbanisation



Source: Authors' computation (2017)

Figure 4 reports respondents' perception on energy crisis and urbanization. In figure 4, 89% of respondents opined that energy is an urgent problem that requires an immediate action. About 81% of respondents agreed that shortage of power supply makes the use of petroleum products a necessity commodity for home and/or businesses. Also, about 72% of respondents confirmed that business operations in Lagos depend on petroleum products for their day-to-day activities while 91% of respondents opined that energy crisis is critical in urban centres of Lagos. However, about 49% suggested it is more critical in rural areas, 19% disagreed while 32% were undecided.

*Table no. 1: The root of energy crisis in Lagos state*

	<b>Relative Importance Index</b>	<b>Ranking</b>
Price of petroleum products	0.742	6
Migration from other states	0.877	2
Overconsumption of petroleum products	0.864	4
High population growth in Lagos	0.927	1
Poor infrastructure	0.623	7
Wastage of energy resources	0.865	3
Poor distribution system	0.850	5

*Source:* Authors' computation (2017).

Table 1 report that high population growth was ranked as the root cause of energy crisis in Lagos state with an aggregated relative importance index of 0.927. This is followed by migration from other states (RII = 0.877), wastage of energy resources (RII = 0.865), overconsumption of petroleum products (RII = 0.864), poor distribution system (RII = 0.850), price of petroleum products (RII = 0.842) and poor infrastructure (RII = 0.823), in that order.

*Table no. 2: Coping strategies of Lagos residents for electrifying purposes*

	<b>Relative Importance Index</b>	<b>Ranking</b>
Use of inverter	0.850	3
Use of generating plants	0.854	1
Use of solar energy	0.427	4
Use of tidal waves	0.391	5
Use of wind mills	0.812	6
Use of lanterns/lamps	0.851	2

*Source:* Authors' computation (2017).

The coping strategies of Lagos residents for electrifying purposes were reported in Table 2 which identified the use of generating plants as the main source of energy residents in the state rely on when there is supply shortage of energy. The relative importance index is 0.854. The remaining coping strategies were the use of lanterns/lamps (RII = 0.851) and inverter (RII = 0.850). The other two coping strategies had low relative importance index indicating that consumers rely less on them for electrifying purposes. The RII values are 0.427 and 0.391 for usage of solar energy and tidal waves respectively. These coping strategies are considered insignificant since the RII values are less than 0.599.

*Table 3: Coping strategies of Lagos residents for domestic uses*

	<b>Relative Importance Index</b>	<b>Ranking</b>
Use of charcoal	0.774	3
Use of kerosene stove	0.895	1
Use of firewood	0.612	4
Use of cooking gas	0.827	2

*Source:* Authors' computation (2017).

In Table 3, the top-most coping strategy of residents for domestic uses is the use of kerosene stove because it has the highest index of 0.895. This is followed by the use of cooking gas (RII = 0.827), charcoal (RII = 0.774) and firewood (RII = 0.612).

## 5. Conclusions

This study investigates the effect of urbanization and energy crisis in Lagos state. The study analysed primary data obtained from questionnaires administered to the residents of Akoka and Onike areas of the state and found that there is huge energy supply gap in Lagos state. The study opines that the current coping strategies employed by residents are costly and are also not sustainable. Therefore, from the empirical results presented, we, conclude that the large volume of immigration and urbanisation are the major causes of energy crisis in Lagos state. Hence, to ensure sustainable growth, Lagos state should be allowed to generate its own electricity and distribute among the residents as against contributing its generated power to the national grid.

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# The Importance of the European Union in International Trade

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## Abstract

*In this article we aim to highlight the importance of the European Union in international trade. In this sense the work is divided into two parts. In the first part, we intend to highlight the role of the EU in trade negotiations taking place worldwide. In the second part we will analyze the evolution of EU trade flows during the period 2002-2017. In this paper, we will analyze the trade in goods of the EU-28.*

*To achieve this goal, we used as a method of research, analysis documents. The data collection was done by analyzing several documents, such as: specialized articles, European Commission communications, EU technical datasheets, the Global Competitiveness Index.*

**Key words:** EU, international trade, commercial policy

**J.E.L. classification:** F10, F13

## 1. Introduction

The EU is one of the most representative global economic actors. This is highlighted by the fact that in 2016, EU-28 GDP represented more than 21% of world GDP. The EU is also a strategic pillar of the world economy, "that has a potential comparable to that of the United States, gaining leadership in certain sectors of the economy, such as: world production, exports of goods, exports and imports of services and is the world leader in delivering development aid"(Mucha et al., 2010, p.161).

Another strength that turns it into a major global actor is the share of EU-28 trade in world trade. Thus, in 2016, in terms of import, the EU had a share of 14.8% of world imports in 2016 compared to the US of 17.6% and China by 12.4%, and in terms of exports, the EU share was 15.6% of total world exports, compared with the US share of 11.8% and China's 17%.)

Given the benefits of trade (stimulating economic growth and implicitly improving living standards, spreading innovation, providing access to high technology, contributing to economic and political stability, stimulating competition and competitiveness among the world's states), in the following sections we will analyze the role of the EU in international trade negotiations and the evolution of EU-28 trade in goods between 2002 and 2017.

## 2. The role of the EU in trade negotiations

As we have outlined above, the EU is an important player in international trade. This is because the EU acted globally as one voice; this being more important than having acted with 28 separate business strategies and tools. According to Meunier (2007, p. 907), "the EU's unique negotiating position is determined by a number of factors, such as: preferences of the Member States, institutional rules and the basic structure of EU power".

In addition, "The EU aims as an objective in the field of international trade, ensuring free and fair trade and a trade system in which all countries will trade on equal grounds and in the absence of protectionist barriers"(Institutul European din România, 2005, p.6). The EU believes that the introduction of protectionist barriers would lead to high import costs and this would result in higher prices for goods and services, implicitly reducing the standard of living of its citizens. In this sense,



The European Union adopts a trade policy that supports sustainable development and promotes EU values.

The EU also played an important role in setting up the World Trade Organization (WTO) and has a key role to play in trade negotiations taking place within the WTO. This role can be highlighted by the fact that "the EU has greatly contributed to the inclusion of countries such as Cambodia, Saudi Arabia and Vietnam within the WTO"(Meunier, 2007, p.912). The EU has always pleaded for a free, fair, sustainable trade that respects the win-win strategy.

It is important to note that "the EU introduced the Generalized System of Preferences (GSP) in 1971, being the first economic entity to apply such a system"(Comisia Europeană, 2016, p.13).

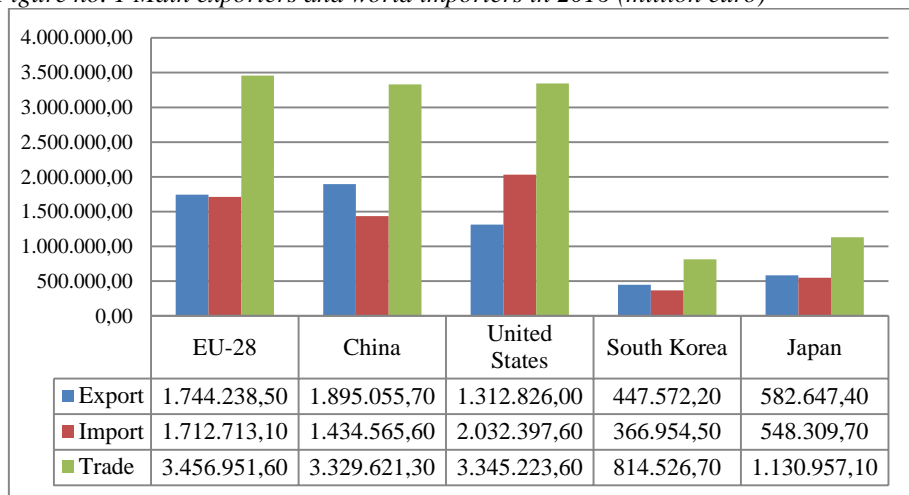
In the light of the above, we conclude that the European Union is a strategic actor in the world economy, which is essential for fair and sustainable international trade. In this context, we think that in the next section we shall analyze the evolution of EU-28 trade between 2002 and 2017.

### 3. Evolution of EU-28 commodity trade between 2002 and 2017

Trade plays an increasingly important role in the European Union's economy, contributing to its proper functioning. Given the "difficult economic situation in the past and present, it is an important means for achieving both economic development and creating jobs without affecting public finances" (European Commission, 2013, p.1). According to European Commissioner for Trade Cecilia Malmström, "31 million jobs in the EU (1 in 7 jobs) depend on export"(European Commission, 2016). In this context, "The EU is adopting a new trade policy based on a competitive economy in an open world trading system, based on multilateral rules complemented by principles developed in bilateral and regional agreements"(Wröbel, 2013, p.11).

In terms of trade, in 2016 the value of EU trade represented 15.5% of the world trade value. We can see in the chart below that in 2016 the EU was the leader in international goods trade, with a value of EUR 3456951.6 million, followed by the US (EUR 3345223.6 million) and China (EUR 3329621.3 million).

Figure no. 1 Main exporters and world importers in 2016 (million euro)

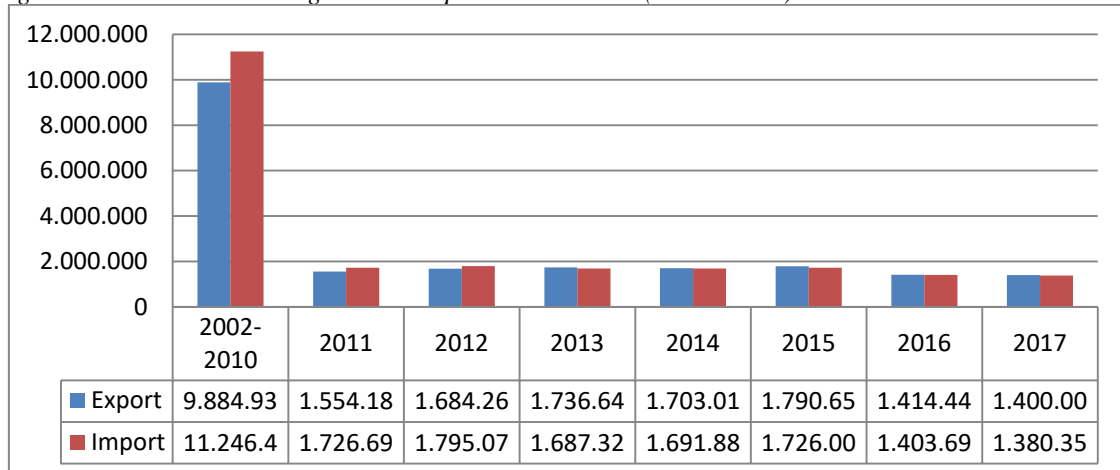


Source: made by author based on data from Eurostat

Considering the two components of international trade, the EU ranks second in both world imports and world exports. In terms of exports, in 2016 it held a 15.6% share, being overtaken by China, which had a 17% share, followed by the US with a share of 11.8%.

In terms of world imports of goods, the EU ranked 2 in the world after the US, accounting for a share in 2016 of 14.8% (€1,712,713 million) of total global imports, followed by China (12.4%) and Japan (4.7%). "EU performance is due to the upgrading of product quality, combined with the ability of EU companies to sell premium products due to quality, branding and related services"(Fojtkova, 2010, p. 34).

Figure no. 2 EU-28 trade in goods in the period 2002-2017 (million euro)



Source: made by author based on data from Eurostat

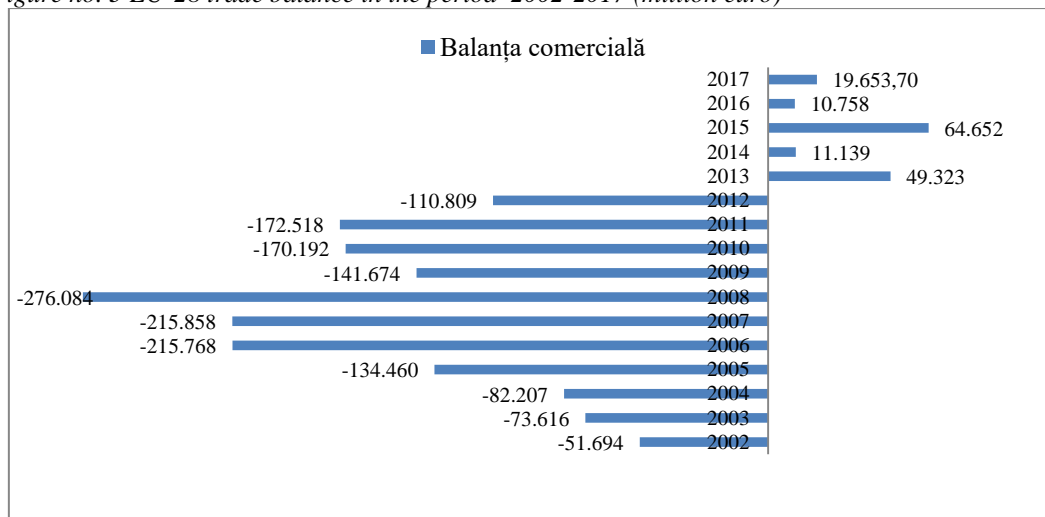
Note: 2017-first nine months

Following the analysis of statistical data, we can see that the EU's global trade relations have seen both downs and ups, reaching a record high of €3,516.6 billion in 2015. The year 2016 is characterized by both a decline in exports (exports declined by 21%) and imports (imports declined by 18.67%). Thus, we can see that in 2016 the value of trade of the EU-28 reached EUR 2.780 billion.

In addition, from the analysis of the statistical data highlighted in the chart below, we can see that the trade deficit has widened since 2005, reaching its peak in 2008, with a value of €276.084 million. This coincides with the accession of the countries of Central and Eastern Europe to the EU in 2004 and 2007. According to the statistical data provided by EUROSTAT in 2008, only two countries (Malta and Estonia) recorded a surplus balance of the 12 countries that joined the EU in 2004 and 2007.

Since 2013, the EU is registering a trade surplus, reaching a peak of 64,652 million euros in 2015, and in 2016 declining to 10,758 million euros.

Figure no. 3 EU-28 trade balance in the period 2002-2017 (million euro)



Source: made by author based on data from Eurostat

Note: 2017-first nine months

Trade balance is also determined by the structure of trade. The main products exported by the EU-28 in 2015 were the manufactured products - transport machinery and equipment - 752.629 million euros, other manufactured goods - 403.436 million euros, chemicals - 314.974 million euros. Regarding import, the main imported products were: transport machinery and equipment -

534.585 million euro, other manufactured goods- 451.077 million euro, fuel - 328.359 million euro. In 2015, the EU had the highest surplus on machinery and transport equipment - 218.044 million euros, and the highest deficit in fuel, amounting to -243.166 million, decreasing by 28.68% compared to 2008.

If we consider trade in partner countries, we can see that their position has changed during the analyzed period. Therefore, the position of the main EU-28 export partners has evolved considerably. If in 2002 the main EU export partners were the US, Switzerland, Japan, China and Russia, their position changed in 2016: US, China, Switzerland and Russia.. In 2016, the US retains its leadership position with a share of 20.8% of total EU exports, followed by China and Switzerland. Japan ranks 5th with a share of 3.3% of total exports. In terms of import, the main partners' position has evolved as follows: China is the main source of EU-28 imports since 2005, ahead of the US. In 2016 Chinese imports recorded a 20.21% share, followed by the US, Switzerland and Russia with a share of 14.6%, 7.1% and 6, 9%.

Following the analysis, we can say that the European Union is a trading power because:

- in 2016 it carried out 15.6% of world trade;
- in 2016 it was the second exporter with a share of 15,6% of the total exports and the second importer having a weight of 14,8% of the total imports;
- it has a population of over 500 million inhabitants who are looking for affordable quality products;
- encourages developing countries to use trade to stimulate economic growth and improve the standard of living (European Commission, 2016, p.15);
- in 2012 the EU had 135 Fortune 500 companies, more than the US (132 companies), China (75 companies) and Japan (European Commission, 2012, p.2);
- if we consider the global competitiveness index, 5 of the top 10 countries are EU-28 members- the Netherlands is on the 4th place, Germany on the 5th, Sweden on the 7th, UK on the 8th, Finland on the 10th (World Economic Forum, 2017);

Taking into account the above, we can say that the EU is one of the world's leading players in world trade in goods and the world economy, and it has its mark on all trade.

#### 4. Conclusions

The EU is an important player in international trade, which has contributed, contributed and contributed to the smooth development of world trade.

Following the analysis of the statistical data provided by Eurostat, we can see that the EU's trade balance was deficient until 2012 and from 2013 onwards it has become surplus, reaching €64.652 million in 2015. Although the year 2016 was characterized by a decrease in the value of international trade, the EU managed to maintain its leading position in international trade, with a trade value of 2 818 billion EUR and a surplus of 10.758 million EUR. Also, we can see that in the analyzed period (2002-2016), the US is net importer compared to the EU, which has been net exporter since 2013.

As regards trade policy, the EU adopts a policy that fosters fair, sustainable and fair trade. In addition, the EU supports and urges developing countries to use trade to attain economic growth and, implicitly, to raise living standards.

Considering all the above, we can conclude that the European Union is the largest trading power that has an impact not only on developed countries but also on developing countries.

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## Imports vs Exports. Case Study: Romania

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### Abstract

*Exports have an important role in a country's economy as it influences the level of economic growth, employment and balance of payments. On the other hand, no country in the world can produce all the goods and services, which is why each country has to import in order to satisfy its own demand. In the present paper, we have analyzed the international trade of Romania from 2005 until September 2017. In this regard, indicators such as the value of imports and exports, the analysis of international trade by product groups and the situation of the trading partners are presented.*

**Key words:** goods, deficit, imports, exports

**J.E.L. classification:** F13, F40

### 1. Introduction

International trade is simply known as the exchange of goods and services between the nations of the world.

The theory of comparative advantage highlights the fact that countries of the world are mutually changing goods and services because of the concept of differentiation in natural resources, human resources, financial capital and technical capabilities to endow of the nations. Some countries are more endowed with these resources than others or some countries, even if they have good resources, do not have the capacity to manage and channel them into their advantage.

Therefore, international trade suggests that economies need to export goods and services to generate revenue for the purpose of financing imported goods and services that can not be produced internally.

Trade balance is the largest component of a country's balance of payments. Trade balance is the difference between export and import, and its balance may be positive (when export is higher than the imports, the case of trade surplus), negative (export value is lower than the one of import, the case of trade deficit) or balanced (export is equal to import). (Manole, Carp, Popovici, 2017, p.133)

### 2. Evolution of international trade in Romania during 2005-2017

Throughout the analyzed period, Romania recorded a trade deficit, which means that since 2005 our country imports more products and services than exports.

Year 2005 was characterized by a faster growth of import than exports, driven by the need for raw material and materials of the industry and the purchase of capital goods (machinery, cars, installations and equipment for endowing new and modernization of existing ones). This year, sectors such as electronics, aviation, IT & C or pharmaceuticals had a poor export performance, products from these sectors accounting 1.3% of total exports.

In 2008, Romania's trade deficit grew to 23,515 million euros, value that ranked Romania on 7<sup>th</sup> place among EU countries with a high trade deficit.

Table no 1. Exports, imports and trade balance during the period 2005-2017

Year	Exports FOB millions EURO	Imports CIF millions EURO	Trade balance millions EURO
2005	22.255	32.568	-10.313
2006	25.850	40.746	-14.896
2007	29.549	51.322	-21.773
2008	33.725	57.240	-23.515
2009	29.084	38.953	-9.869
2010	37.360	46.869	-9.509
2011	45.292	54.952	-9.660
2012	45.069	54.703	-9.634
2013	49.562	55.317	-5.755
2014	54.466	58.522	-6.056
2015	54.610	62.971	-8.361
2016	57.392	67.364	-9.972
11.2017	46.597	55.485	-8.888

Source: [www.insse.ro](http://www.insse.ro)

Year 2016 marks a new record, as the trade deficit is close to 10 billion euros, but this value is close to half of the deficit recorded before the crisis, with the peak of 2008, while the value of imports exceeded that of exports with 23 billion euros. This period is characterized by tax cuts, low bank interest rates, wage increases that have boosted lending and all these were observed in the strong evolution of consumption. (Geamănu, 2015, p.957)

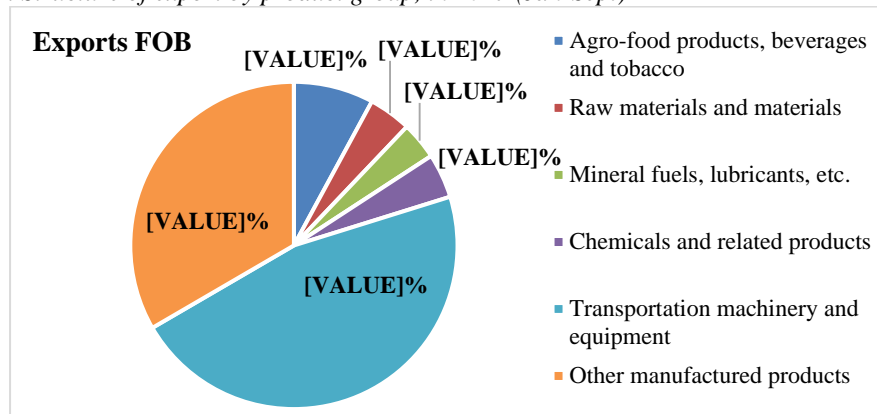
Romania had the best rhythm of growth since 2008 (although it is not a sustainable growth), which is also evidenced by the evolution of the trade deficit. Since 2014 it has grown significantly, and because the surplus of demand has not found a response on the local market, imports have increased.

### 3. Structure of international trade by product group

In year 2017, the group of transport machinery and equipment held important weight in both export and import structure.

Regarding the structure of exports made by Romania in 2017, the situation is shown in the figure no 1. As it can be seen, the export of Romania is based on the local auto industry. The two existing assembly factory (Dacia at Pitesti and Ford in Craiova), along with other factories that produce components for the automotive industry, contribute largely to exports abroad. Among the best-selling Romanian products are auto parts (small parts for cars), car wiring, Dacia and Ford cars, dashboards, fuel and car seats.

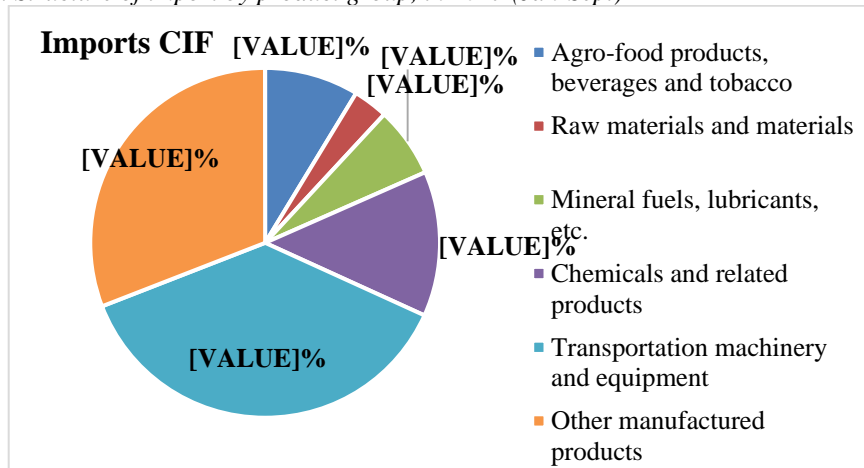
Figure no 1. Structure of export by product group, in 2017 (Jan-Sept)



Source: own processing based on data collected from [www.insse.ro](http://www.insse.ro)

In the first nine months of 2017, our country exported 7.87 million tonnes of cereals to intra-Community and extra-Community countries. The value recorded last year was 5.6% lower than the one recorded in 2016. As for the raw material, the most important export of Romania was represented by wheat. Subsequently, significant earnings were recorded in exports of corn grains, rice and barley. Last year highlighted the fact that the cereals proved to be the cultures with the highest potential in Romania, justifying the old myth that Romania was considered to be the "granary of Europe".

Figure no 2. Structure of import by product group, in 2017 (Jan-Sept)



Source: own processing based on data collected from [www.insse.ro](http://www.insse.ro)

The Machinery and transport equipment sector also has an important share in the structure of imports. Thus, Romania imports various components for cars from abroad even from those branches of concern that are found in Romania. It should be noted, however, that the export of machinery and transport equipment is higher than the import, which indicates a trade surplus for this segment of goods (Toma, Vlad, 2014, p.383)

Concerning the agrifood sector, beverages and tobacco, Romania imported more than exported in 2017, thus the weight of this segment was 8.7% of the total imports. Although the year 2017 was a good year in terms of agriculture, domestic producers could not meet the demand for food, which is why they were massively imported, especially in the winter and spring months. The import value of 2017 was double than the one recorded in 2008.

#### 4. Commercial partners of Romania

As far as Romania's foreign partners are concerned, they come mostly from EU countries. Most of the Romanian goods are destined for export to Germany. Then, Romanian exports are absorbed by Italy, France, Hungary and Great Britain.

Table no 2. Romania's export partners

Romania's export partners	Romania's export (thousands of euros)
Germany	1.2325.202
Italy	6.671.822
France	4.141.355
Hungary	2.980.531
Great Britain	2.489.816

Source: own processing based on data collected from [www.insse.ro](http://www.insse.ro)



The most important goods in the Romania-Germany trade are included in the category of electrical equipment, machinery and equipment and common metals. Romania sends to Italy, the second country as volum of goods exported, electric machines, appliances and equipment, articles of apparel and footwear, vehicles (Slette, Dobrescu, 2017, p.4).

In relation to the main import partners, they are the same as for exports: Germany, Italy, Hungary, France and Poland. According to statistical data, our country has a trade deficit with Germany, Italy and Hungary, but it is in commercial surplus with France.

Table no 3. Romania's import partners

Romania's import partners	Value of Romania's import (thousands of euros)
Germania	13.830.156
Italia	6.911.389
Franta	3.731.356
Ungaria	5.057.900
Polonia	3.459.644

Source: own processing based on data collected from [www.insse.ro](http://www.insse.ro)

Most goods are imported from Germany, so this country is Romania's main trading partner. Among the products we import from Germany are means and materials of transport, vehicles, electrical appliances, common metals.

Italy ranks on 2<sup>nd</sup> place among the countries from which Romania imports and among the products brought to our country are plastics, electrical equipment, engines and turbines. From Hungary our country imports fuels, mineral oils, pharmaceuticals and electrical equipment.

## 5. Conclusions

As it has been noticed, the export and import of Romania is made especially with the Member States of the European Union. The value of exports made by Romania places our country on the 16<sup>th</sup> place in the ranking of exporters in the European Union, following countries such as the Czech Republic, Slovakia or Hungary.

Analyzing the exports by group of goods it was found that the main weightings were held by the products specific to the machine building industry, agri-food products, textile products, wood products, chemicals specific to the chemical industry, common metals.

Regarding the structure of the Romanian imports according to the product groups, in the last years there have been registered increases for the products of the machine building industry, stone, ceramics and glass products, chemical industry products, textile products and agro-food products.

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## Shrinking Cities in Poland: Demographic Perspective

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### Abstract

*Shrinking cities can be found more and more often in many places around the world. This is the result of many interrelated processes, including demographic changes, uneven and irregular economic development, changes in urban development and in the ways of using the land. The effects of these changes are reinforced by the processes of globalisation, European integration and related restructuring of local economies.*

*This paper purports to present the issue of "shrinking" cities in Poland. The author has included a general characteristics of the process, considering only the aspect of changes in the population. A typology of population movements was introduced on the basis of a relation between the actual birth rate and the migration balance, whereas the typology was based on Webb's procedure. The author has also made an attempt to classify the shrinking cities based on the definition adopted by the Shrinking Cities International Research Network (SCIRN). A detailed analysis was conducted on large cities with more than 100 thousand inhabitants and covered the period from 2000 to 2016.*

**Key words:** cities, shrinking cities, Poland

**J.E.L. classification:** J10, J11, R23

### 1. Introduction

Shrinking cities are one of the key problems that currently exist in urban areas. Globalisation, integration with the European Union, system changes, restructuring of post-Communist countries or changes in demographic patterns and behaviours have impacted the structure and dynamics of the changes in the population of specific countries, also in the cities.

Shrinking cities are characteristic of many urban centres in the world. A know example of a shrinking city is Detroit in the United States. The effects of the crisis in the automotive industry, which was the basis of the local economy, contributed to the regression of the city (Kowalewski, 2013, p. 110-113). Similar problems affected many other American cities, such as for example Baltimore, where the crisis was due to the collapse of the local harbour. There is also Flint, whose adverse demographic situation was the result of the collapse of the automotive industry, St. Louis, Memphis or Cleveland. The process of shrinking cities can be observed in many European cities as well, e.g. in Germany (Leipzig-Halle), the United Kindgom (Liverpool), Czech Republic (Ostrava), Italy (Genoa), Spain (Bilbao), France ( Saint-Etienne), Romania (Timișoara), and Poland as well (Łódź, Katowice, Wałbrzych). It should be noted that this process may also affect whole regions (e.g. cities in eastern Germany or in the Silesian voivodeship in Poland).

This paper purports to present the issue of shrinking cities in Poland. The author has characterised the current situation in Polish cities in the context of the depopulation phenomena and presented the differentiation of the demographic dynamics with regard to the processes observed in this respect. In this paper, the process has been narrowed down to population changes, since this is one of the most significant indicators on the basis of which the scale of the discussed phenomenon may be identified. A detailed analysis was conducted on large cities with more than 100 thousand inhabitants and covered the period of 16 years, i.e. from 2000 to 2016.

## **2. Theoretical background of the shrinking cities process**

One of the problems of the modern city development includes adverse demographic changes. In many cities one can observe the tendency for depopulation, often related to the crisis in local economy. This process is referred to as city shrinking (Stryjakiewicz, 2014, p. 9).

In the literature on the subject, one can find two ways of defining the process. According to the traditional approach, the process is defined as progressing depopulation related to the deteriorating economic situation of the city. The other approach is multifaceted and treats this term as a process composed of social, economic and spatial transformations within a city, combined with constant reduction in the urban population (Zborowski et al. 2012; Stryjakiewicz, 2014, p.8).

According to the definition formulated by Shrinking Cities International Research Network (SCIRN), a shrinking city is an urbanised area with large population density, where the population decrease has been observed for more than 5 years, with the intensity of more than 0.15% per year. A shrinking city is also such an urban area which has been affected by a structural crisis as a result of the progressing economic transformation process (Stryjakiewicz, 2014, p. 11-12).

The term "shrinking city" is a complex and multifaceted notion. It should be analysed as a system of complex determinants conditioning both the process itself and its consequences, subject to multiple criteria. The determinants that have the greatest impact on the process of shrinking cities are those related to economic transformation, de-industrialisation, global economic transformations and consequences of the second demographic transition (Haase, 2013, p.32). Industrial plants located in such cities collapsed or underwent a serious crisis after 1990, which resulted in changes in the employment structure, unemployment experienced by a large portion of the population and consequently, mass migrations of the inhabitants, especially those young and well-educated, to those cities which could offer jobs and better living conditions (Stryjakiewicz, 2014, p.80; Musiał-Malago', 2015, p.147; Musiał-Malago', 2016, p. 92-94; Musiał-Malago', 2017, p. 72).

The phenomenon of shrinking cities therefore refers to those cities where we can observe a reduction in population, decreased employment and prolonged economic crisis. Furthermore, cities affected by this process usually have negative population growth rate and migration balance. The effects of these transformations have affected the change in the economic function of the cities and in their previous functional, spatial, social and demographic structure. In the cities which did not have differentiated and diverse functions and their dominant branch of economy was industry, one could observe a particularly difficult process of adaptation to the new market situation. The cities that did not manage to develop any modern industry or transform into modern service centres during the period of intense transformation, are now experiencing a crisis. The result of such changes is bad situation on the local job market and consequently, poverty, social polarisation and housing-related segregation.

What is important in the research related to the process of shrinking cities is distinguishing between the actual and ostensible shrinking. Actual shrinking means that depopulation affects both the city and its surroundings at a given point in time. The city experiences high unemployment rates and outflow of inhabitants, especially young and educated ones. The other aspect is when the city loses its inhabitants within its administrative borders, but the people go to the areas surrounding the city and functionally related to it. This is when a city loses its inhabitants in the process of suburbanisation. It should be noted, though, that ostensible depopulation is not tantamount to economic regression of a city (Kantor-Pietraga, 2014, p.63-64). Large cities that experience strong suburbanisation processes may still keep the role of important economic development centres.

## **3. Trends in the changes in the demographic situation of the Polish cities**

The settlement structure in Poland in 1990-2016 was transformed in the demographic, social and economic context. A particular exponent of those transformations was a change in the number of cities in individual categories on the basis of size and demographic potential. Generally speaking, in Poland there was an increase in the number of cities from 830 in 1990 to 919 in 2016, which spells an increase by 10.7%. Over 26 years, the number of cities in Poland increased by 89.

Although the number of cities increased, urban population actually dropped in the same period from 23 546 people to 23 130 (the whole population of Poland slightly dropped in this period (by 1.0%), and similarly in urban areas ( i.e. by ca.1.8%), whereas the number of people in rural areas dropped by ca. 5.3%).

In 1990 small cities constituted 73.6% of all urban centres and nearly 19.5% of the urban population lived there. In the next periods, the number systematically increased. In 2016, such cities constituted 76.2% of all the cities and they were the home of ca. 21.6% of the urban population. At the same time, the number of medium-sized cities also increased, as well as their population. After 26 years, the number of the largest cities reduced by 4 and the number of population - by 963 thousand (i.e. by 8.2%).

After World War II, until the 1990s, the population of the cities in Poland kept growing steadily. It was a result of intense demographic growth of the cities, due to the increasing level of urbanisation, considerable migration from the countryside to the city because of the intense industrialisation of the urban areas (Szymańska, 2007, p.62). The intensity of the industrialisation process and numerous investments contributed to the growth of industry and the development of cities, thus resulting in intense migration from the rural areas to the cities; this is where people found their chance for a "better life." Since the beginning of the 1990s, we have clearly seen a drop in the demographic dynamics in nearly all the cities. Two characteristic periods may be distinguished: 1990-2000 and after 2000. While the last decade of the 20th century saw a slight, yet positive demographic dynamics, after 2000 we have seen a marked tendency for depopulation. Among the key reasons behind the current demographic condition of Poland we have to mention migration and reduced birth-rates (Harańczyk, 2015, p. 46). It should be noted, though, that higher decrease in population follows from migration. In Poland, until the end of the 1990s more people came to the cities than left, which meant that migration cause an increase in the number of urban population. After 2000 this positive migration balance in the cities changed to negative. Since then, more people have been leaving the cities than arriving. Cities started losing their population and rural areas started growing. In the future, this trend will be even more noticeable. At the moment, 23.2 million people live in the cities while ca. 15.2 million live in the countryside. As follows from demographic forecasts produced by the Main Statistical Office, by 2050 the number of people in the countryside will increase (more than 15.1 Poles), while in the cities it will drop (18.8 million). Therefore, in the next decades, the percentage of Poles living in the cities will considerably reduce from 60.2% in 2016 to 55.5% in 2050. This will be the result of the uneven rate of dying out. The reasons behind this situation include: ageing cities, lower birth rate in cities and intensifying suburbanisation processes.

As a result of changes in demographic processes, the structure of population, according to economic age groups, changes as well. There is a reduction in the number and percentage of children and adolescents (0-17 years). It is also noted that the society is ageing and there is a constant growth in the number of pensioners.

#### **4. Analysis of the demographic aspect of the shrinking cities process in Poland**

The study group included large cities with more than 100 thousand inhabitants (39 cities). In 2016 there were a total of 10816 inhabitants of such cities, which constitutes 46.8 % of the urban population and 28.1 % of the population of the whole country.

Among the studied cities we can distinguish:

- ✓ 5 cities with more than 500 thousand inhabitants (Warsaw, Cracow, Łódź, Wrocław, Poznań),
- ✓ 4 cities with 300 - 500 thousand inhabitants (Gdańsk, Szczecin, Bydgoszcz, Lublin),
- ✓ 7 cities with 200 - 300 thousand inhabitants (Białystok, Częstochowa, Gdynia, Katowice, Radom, Sosnowiec, Toruń),
- ✓ 23 remaining cities have 100 - 200 thousand inhabitants.

As was already mentioned before, since 2000 a large number of cities have experienced depopulation. In 2000 the number of people in the studied cities was 11204 people and systematically decreased over the next years - in 2016 it was 10816 (a drop in the number of urban population by 3.5%). In 2000-2016, in 32 of the studied cities there was a drop in the number of

population. The largest decrease (more than 10% inhabitants) was observed in 7 cities, i.e. Bytom (-13.4%), Wałbrzych (-13.0%), Łódź (-12.8%), Sosnowiec (-12.2%), Gliwice (-11.2%), Zabrze (-11.0), Częstochowa (-10.6%). These cities experienced a serious social and economic crisis as a result of the restructuring of the so called traditional industry and the collapse of giant industrial plants.

According to the typology of shrinking cities adopted by SCiRN, 30 out of the 39 analysed cities can be described as shrinking. In the period covered with the research, the shrinking process in the majority of the studied cities was a long-term phenomenon<sup>1</sup>. Only in 3 cities (Gdynia, Koszalin and Tychy) there was a five-year period in which the average annual pace of changes in the population was between -0.15% and +0,15% or there was a slight increase in the population, by more than 0.15% (Table 1, Table 2).

Table no.1. Shrinking cities broken down by size - attempt at classification

Size of city	Cities with more than 100 thousand inhabitants		
	Shrinking	Stable	Growing
Characteristic of group	Decrease in the number of population by more than 0.15% per year in the studied period	Change in the number of population between -0.15% and 0.15% per year in the studied period	Increase in the number of population by more than 0.15% per year in the studied period
100 000-199 999	Bielsko Biała, Bytom, Chorzów, Dąbrowa Górnicza, Elbląg, Gliwice, Kalisz, Kielce, Koszalin, Legnica, Opole, Płock, Ruda Śląska, Rybnik, Tarnów, Tychy, Wałbrzych, Włocławek, Zabrze	Zielona Góra, Gorzów Wielkopolski, Olsztyn	Rzeszów
200 000-299 999	Częstochowa, Gdynia, Katowice, Radom, Sosnowiec, Toruń	Białystok	
300 000-499 999	Bydgoszcz, Lublin, Szczecin	Gdańsk	
500 000 and more	Łódź, Poznań	Kraków, Wrocław	Warszawa

Sources: own completion

In the next section of the paper, the author attempted to answer the question which component of the actual population growth rate (birth rate or migration balance) was dominant and whether there were any changes in the relation between these components of population growth in the studied period. Based on the birth rate and migration balance, a demographic typology was created for the studied cities, according to Webb's procedure. Depending on the intensity and shape of both features, we can distinguish eight main classes for the classification of spatial units (Kurek, 2013, p.60, 66; Dziewoński, Kosiński, 1967, p. 32; Runge, 2007):

Type A – positive birth rate outweighs the negative migration balance

Type B – positive birth rate is higher than the positive migration balance

Type C – positive birth rate is lower than the positive migration balance

Type D – positive migration balance considerably offsets the negative birth rate

Type E – negative birth rate is not offset by the positive migration balance

Type F – negative birth rate paired with negative, but not lower (in absolute value) migration balance

Type G – negative birth rate and negative, but not higher (in absolute value) migration balance

Type H – negative migration balance is not offset by the positive birth rate

<sup>1</sup> In the cities that experience long-term (lasting) shrinking the number of population drops by more than 0.15% per year over the whole analysed period

The types from A to D are characteristic of the units with positive population balance, i.e. demographically active centres (developing potential), whereas types from E to H stand for units with negative population balance, inactive, i.e. those where the population is decreasing.

Table no.2. The elements of factual rate in the selected Polish cities in 2000 and 2016

Cities with more than 100 000 inhabitants	Population in cities			birth rate		migration balance		demographic typology of Webb	
	2000	2016	decrease/increase in population	2000	2016	2000	2016	2000	2016
<b>łódzkie</b>									
Łódź	798418	696503	-12,8	-6,93	-5,04	-0,60	-1,2	F	F
<b>mazowieckie</b>									
Radom	230492	215020	-6,7	1,45	-0,99	-1,90	-3,8	H	G
Płock	128580	121295	-5,7	1,16	-0,76	-1,20	-3,1	H	G
Warszawa	1672418	1753977	4,9	-3,56	1,41	1,90	3,8	E	C
<b>małopolskie</b>									
Kraków	758715	765320	0,9	-1,45	2,18	1,50	1,9	D	B
Tarnów	120822	110110	-8,9	1,90	-0,57	-1,00	-1,9	A	G
<b>śląskie</b>									
Bielsko-Biała	178611	172030	-3,7	0,30	-0,49	-1,00	-1,8	H	G
Bytom	195807	169617	-13,4	-1,45	-3,29	-1,20	-3,4	F	G
Częstochowa	253133	226225	-10,6	-2,14	-4,39	-1,40	-2,9	F	F
Gliwice	205092	182156	-11,2	-1,80	-1,03	-1,80	-2,8	F	G
Zabrze	197111	175459	-11,0	-0,20	-1,42	0,30	-3,2	D	G
Chorzów	118708	109398	-7,8	-4,37	-3,17	2,30	-0,6	E	F
Katowice	330625	298111	-9,8	-2,87	-2,51	-2,40	-2,8	F	G
Ruda Śląska	152280	139125	-8,6	-1,18	-1,74	-1,50	-1,7	G	F
Rybnik	143218	139252	-2,8	1,31	1,46	-1,20	-2,2	A	H
Dąbrowa Górnicza	132858	121802	-8,3	-2,39	-2,47	0,20	-2,1	E	F
Sosnowiec	234486	205873	-12,2	-2,67	-4,64	-2,60	-3,5	F	F
Tychy	133463	128351	-3,8	0,85	0,85	-2,40	-1,5	H	H
<b>lubelskie</b>									
Lublin	358933	340466	-5,1	0,03	0,43	0,30	-1,2	C	H
<b>podkarpackie</b>									
Rzeszów	160779	187422	16,6	1,86	3,73	-1,00	6	A	C
<b>podlaskie</b>									
Białystok	289233	296628	2,6	0,55	2,53	3,00	-0,5	C	A
<b>świętokrzyskie</b>									
Kielce	213469	197704	-7,4	-0,15	-1,41	-2,50	-1,6	G	G
<b>lubuskie</b>									
Gorzów Wielkopolski	125767	123995	-1,4	0,62	-0,04	0,10	1	B	
Zielona Góra	118103	139330	18,0	0,07	0,51	1,30	3,3	C	C
<b>wielkopolskie</b>									
Kalisz	110104	102249	-7,1	-0,54	-2,56	0,70	-2,8	D	G
Poznań	582254	540372	-7,2	-2,22	1	-0,60	-3,6	F	H
<b>zachodniopomorskie</b>									

Koszalin	108899	107680	-1,1	0,16	-1,2	0,20	1,3	C	D
Szczecin	416657	404878	-2,8	-1,59	-1,38	1,60	0,7	D	E
<b>dolnośląskie</b>									
Legnica	107416	100718	-6,2	-0,12	-0,95	0,90	-1,7	D	G
Wałbrzych	131675	114568	-13,0	-3,60	-6,41	-2,90	-2,8	F	F
Wrocław	640614	637683	-0,5	-2,54	1,01	0,90	2,5	E	C
<b>opolskie</b>									
Opole	130427	118722	-9,0	-0,70	0,60	1,00	0,60	D	
<b>kujawsko-pomorskie</b>									
Bydgoszcz	375676	353938	-5,8	-1,15	-1,3	-0,40	-2,4	F	G
Toruń	210194	202521	-3,7	1,08	0,91	-0,70	-1,3	A	H
Włocławek	121833	112483	-7,7	-0,26	-2,63	-1,10	-3,2	G	G
<b>pomorskie</b>									
Gdańsk	462995	463754	0,2	-1,23	1,44	-0,60	2,7	F	C
Gdynia	253387	246991	-2,5	0,16	-1,07	3,10	-0,3	C	F
<b>wamińsko-mazurskie</b>									
Elbląg	128305	121191	-5,5	0,82	-2,54	-0,30	-1,5	A	F
Olsztyn	172843	172993	0,1	1,39	0,82	3,80	0,1	C	B

Source: own elaboration based on data provided by the Main Statistical Office, www.stat.gov.pl (Accessed 20 October 2017)

Table no.3. Cities broken down by demographic typology of Webb

Demographic typology of Webb	Characteristic of demographic typology of Webb	Number of cities	
		2000	2016
A	+BR>-MS	5	1
B	+BR>+MS	1	2
C	+BR<+MS	6	6
D	-BR<+MS	6	2
E	-BR>+MS	4	1
F	-BR>-MS	10	9
G	-BR>-MS	3	13
H	+BR<-MS	4	5

Sources: own completion

Among the studied cities all of the eight basic types can be identified. In 2000, 18 of the studied cities were classified as developing types with positive population balance. In the case of cities with developing potential, two types were dominant – C and D (6 cities in each group). In both these types the development of a city was influenced by the positive migration balance. In type C, birth rate was positive, but its value was not high enough to exceed the positive migration balance. 6 cities were also classified as type D, with positive migration balance and negative birth rate. It was therefore positive migration rate that determined the development of these cities. Among the depopulating cities, type F was dominant (10 cities), with negative birth rate compounded by a high negative migration balance.

In 2016 the demographic situation of the studied cities changed. 11 cities were classified as types A-D according to Webb's typology, which means they were developing, whereas depopulation was observed in 28 of the cities. Considerable shift was observed towards depopulating cities: in 2000 these types of cities constituted 54% of the studied units, whereas in 2016 they constituted 72%. It was discovered that in 2016 the most significant demographic type was G, as more than 30% of the cities had high negative birth rate and even higher negative migration balance. The study conducted with Webb's method allowed the author to find out that among the studied cities, the dominant type is negative migration balance and negative birth rate,

whereas emigration exceeds natural decline in population, which points to intense population migration.

The spatial analysis showed that in the studied cities, the depopulation process is diversified and that it has also changed over time. The typology applied to classify the cities points to the dynamics of the discussed phenomenon and to the urban areas which are at the greatest risk of progressing depopulation and, consequently, shrinking.

## 5. Conclusions

The tendencies of the changes observed in the cities in the studied period prove the adverse demographic situation of these areas. In 2000 the studied units entered the depopulation phase caused i.a. by natural decline in population and intense migrations. This depopulation is constantly growing and according to the forecasts formulated by the Main Statistical Office, this phenomenon will continue to intensify.

The process of shrinking cities is going to proceed and progress, thus considerably affecting the development of urban areas. The effects of this process are diverse and mostly negative. A particularly difficult situation is observed in the cities, where the reduction in the number of inhabitants causes adverse phenomena in the local social, economic or spatial structures. An individual or multifaceted process of shrinking requires that the authorities adopt a new perspective on the urban policy, the principles of urban economy and a relevant strategy to match this phenomenon (Harańczyk, 2014). It is therefore vital that the public authorities and local communities cooperate and act together on many levels, so as to make well-informed decisions and effective actions to counteract the adverse effects of this process.

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## Comparative Approach of Romania-Croatia in Terms of Touristic Services

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### Abstract

*The United Nations has designated 2017 as the International Year of Sustainable Tourism for Development. Despite the slow economic growth in advanced economies and geopolitical tensions in some regions, the Tourism and Travel sectors still represent a major part of the world economy and employment. Thus, the Tourism and Travel sector creates jobs, leads exports and generates prosperity around the world. In the present paper we approached the theme of tourism, especially the Romanian tourism in parallel with the Croatian tourism, the two states being in direct competition regarding the touristic services.*

**Key words:** tourism, tourism index, competitiveness, services

**J.E.L. classification:** L80, Z32

### 1. Introduction

According to the World Tourism and Travel Council (WTTC), the Tourism and Travel sector continues to grow with 4% per year, faster than sectors like financial, transport and manufacturing services.

The Tourism and Travel Competitiveness Index (ICTC) aims to measure the issues that have been identified as levers to improve the competitiveness of this sector in countries around the world. Through detailed analysis of each pillar and sub-pillar of the index, companies and governments can act directly to develop the sector.

There are four categories of variables that affect the competitiveness of tourism globally. These categories are estimated through four sub-indices subordinated to the Tourism and Travel Competitiveness Index: Permissive environment, Policy and conditions allowed in Tourism and Travel, Infrastructure and Natural and cultural resources.

### 2. Tourism industry - general considerations

The human, even in the farthest times of his development, failed to deliver all the necessities of subsistence and, despite the poor communication means, sought to cultivate and maintain relations with his peers in other communities through trade, which inherently favored a gradual widening of contacts, allowing a better mutual knowledge of the respective collectives. In this context, some initial forms of tourism have been practiced since the earliest times. Perhaps it would not be abusive if it were stated that although they were not an end in themselves, the travel satisfaction of some travels have an approximately same age as the first stable human settlements (Snak, 1976).

The capitalization of the national tourism heritage of an area, resort or settlement is strongly conditioned by the content of touristic services, variation and the quality of services provided by organizers of touristic travels and providers of tourism services for tourists.



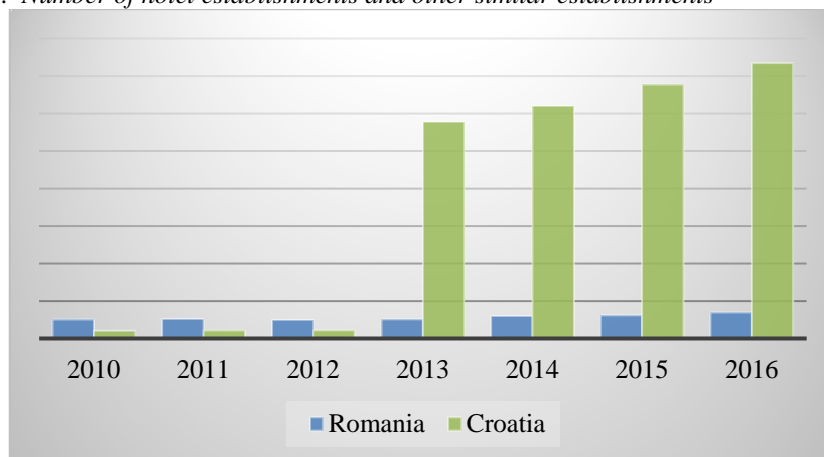
The concerns of tour operators and providers of tourism services to enrich the touristic offer with active holiday arrangements are part of the ongoing diversification of touristic offer by launching new, more complex and attractive touristic products in comparison with some traditional touristic products.

As active holidays take forms of organized or semi-organized tourism, they also involve special forms of travel organization. The global offer of such arrangements will include, in the basic services category, also some services, which are considered as special events. Of course, potential consumers of these service categories must first know the enriched offers of travel agencies with such activities. This consideration also requires the reorganization of the concept of tourism promotion, the forms of message expression being conducted more nuanced, in order to correspond to the preferences of the market segments from which the new categories of tourists are recruited (Snak, Baron, Neacșu, 2001).

### 3. Comparative analysis Romania - Croatia in terms of touristic services

Our comparative analysis begins with reference to the number of hotel establishments and similar establishments in the two countries.

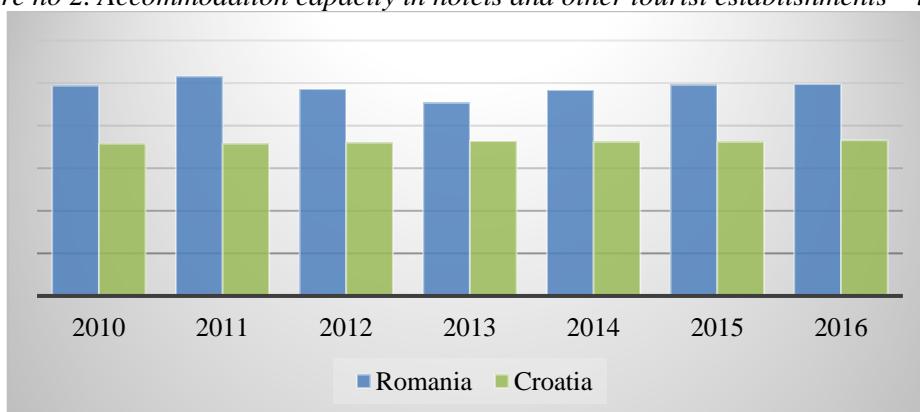
Figure no 1. Number of hotel establishments and other similar establishments



Source: authors' processing based on Eurostat 2016 statistical data

As it can be seen, between 2010 and 2016, Romania and Croatia registered upward trends in the number of hotel establishments and other establishments destined to accommodate tourists, the average value of Romania (almost 5700 units) being far exceeded by the average of its competition (38.000 units).

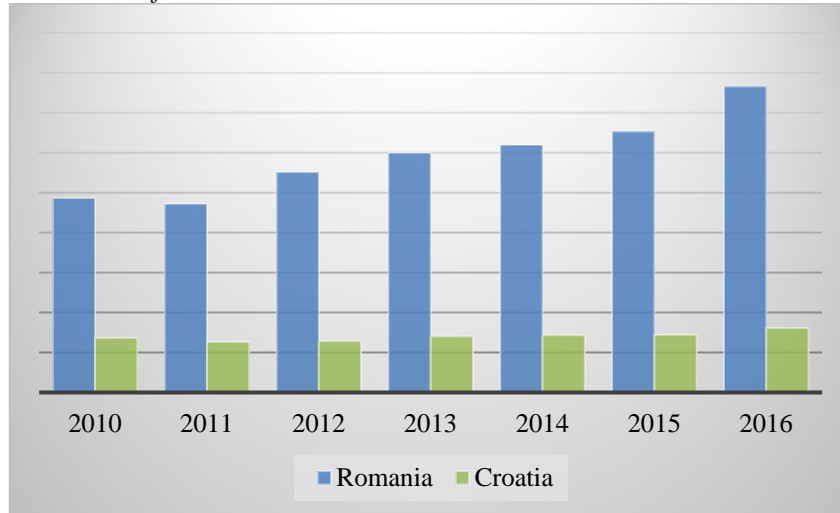
Figure no 2. Accommodation capacity in hotels and other tourist establishments – thousands



Source: authors' processing based on Eurostat 2016 statistical data

Regarding accommodation capacity in hotels (number of beds) and other tourist establishments, Romania registered an increase in the first part of the period, followed by a significant decrease in the second half, while Croatia registered a slight increase in accommodation capacity (number of beds) in 2010-2016.

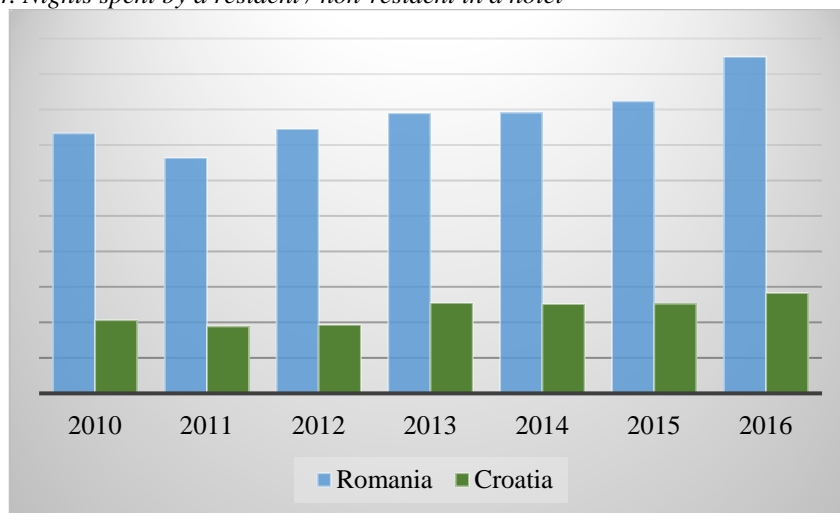
Figure no 3. Arrivals of residents and non-residents- thousands



Source: authors' processing based on Eurostat 2016 statistical data

Romania gained detached competition with Croatia on attracting tourists, registering an increasing trend in terms of arrivals of residents and non-residents, while Croatia had an oscillating evolution over the same period of time, 2010-2016. The historical maximum in the analyzed period was in 2016 with the following values: almost 7,7 million arrivals in Romania and 2 million arrivals in Croatia.

Figure no 4. Nights spent by a resident / non-resident in a hotel

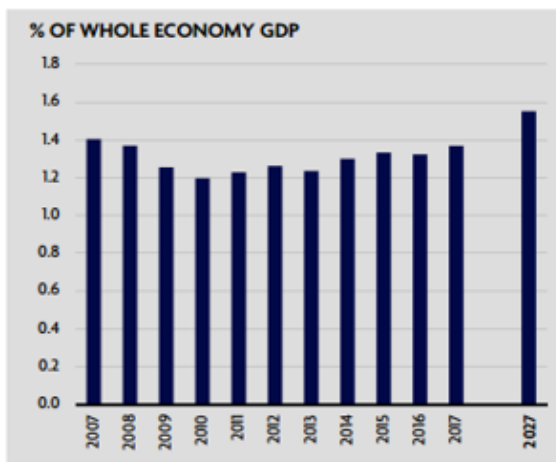


Source: authors' processing based on Eurostat 2016 statistical data

During 2010-2016, the number of nights spent by tourists, residents and foreigners, in accommodation units in Romania and Croatia was increasing. Romania's absolute values exceeded those of Croatia.

*The direct contribution of the Tourism and Travels sector to GDP.* At the end of 2016, Tourism and Travel sector of Romania contributed with 39.3 billion RON, approximately 5 billion EUR in the total GDP (5.2% of GDP), while Croatia accounted for 24.7% in GDP, which means 85,173.4 million HRK, approximately 11 millions EUR.

Figure no 5. The contribution of the Tourism and Travels sector to GDP.  
Romania



Croatia

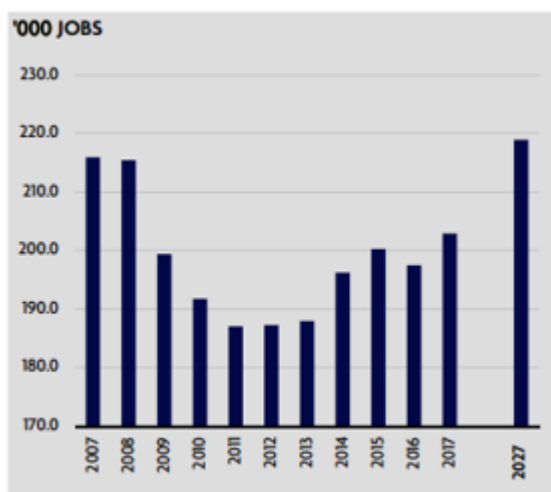


Source: Scowsill, 2017

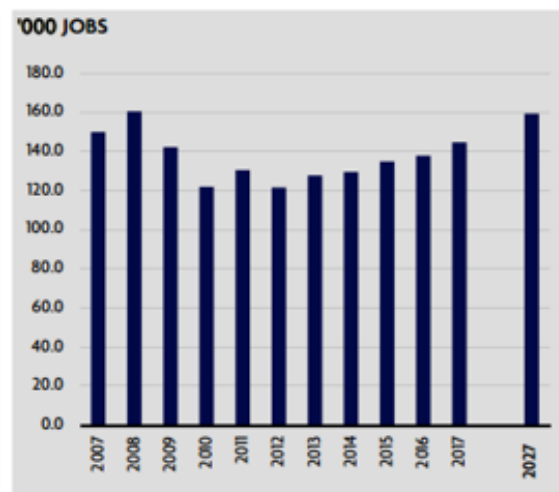
Starting in 2010, there is a tendency to increase the contribution of the Tourism and Travel sector to the GDP of the two countries, a trend which is expected to remain until 2027, as can be seen in Figure 1.

As can be seen from Figure 2, the direct contribution of the Tourism and Traveling sector in Romania's employment, characterized by a fluctuation on an ascending trend, is higher than that in Croatia, characterized by a steadily ascending slope.

Figure no 6. The contribution of the Tourism and Travels sector to Employment.  
Romania



Croatia

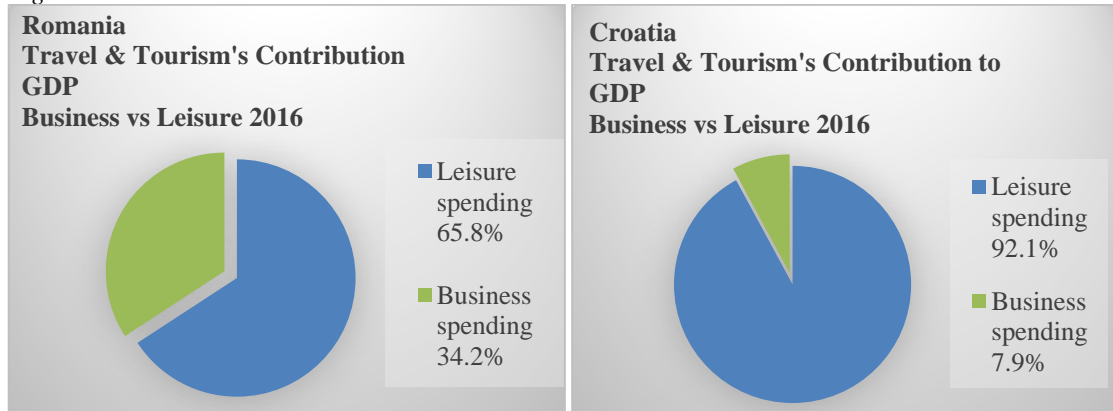


Source: Scowsill, 2017

In Croatia, the Tourism and Travel sector generated 321.500 jobs in 2016 (23.4% of total employment). The Tourism and Travel sector has created new jobs in departments such as travel agencies, airlines, hotels, restaurant and catering services and also in leisure activities area.

*Recreational tourism vs. business tourism.* In Romania, recreational tourism spendings, conducted by both resident and non-resident tourists, generated 65.8% of tourism and travel revenues in GDP (15.0 billion RON) in 2016, while tourism business recorded 34.2% (7.8 billion RON) (Scowsill, 2017)

Figure no 7. Recreational tourism vs. business tourism.

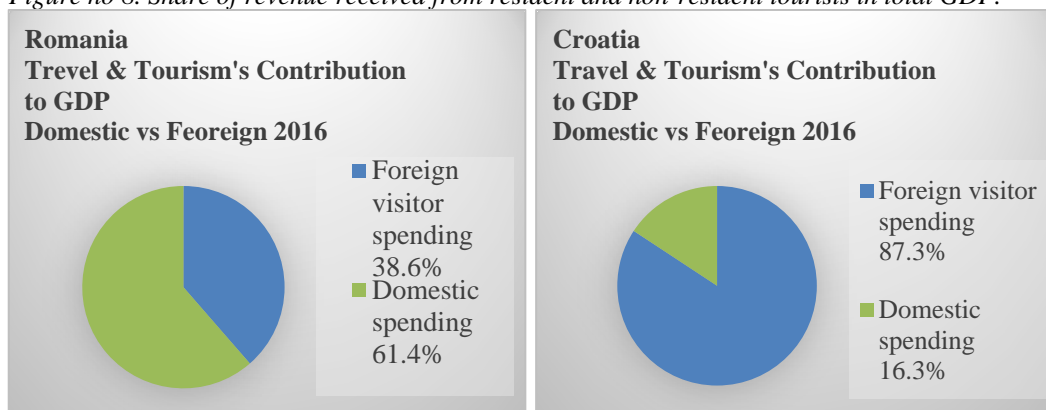


Source: Scowsill, 2017

In Croatia, recreational tourism spendings, made by resident and non-resident tourists, generated 92.1% of tourism and travel revenue earnings in GDP (HRK 73,088.4 million) in 2016, while business tourism recorded 7.9% (HRK 6,248.9 million).

*Share of revenue received from resident and non-resident tourists in total GDP.* In Romania, the revenues earned from resident tourists generated 61.4% of the total direct revenues generated by the Tourism and Travels in GDP sector in 2016, while the tourist revenue received from non-residents was 38.6 percent.

Figure no 8. Share of revenue received from resident and non-resident tourists in total GDP.



Source: Scowsill, 2017

At the opposite side, Croatia recorded a 16.3% share of revenue earned from resident tourists in the total direct revenue generated by the Tourism and Travel sector in 2016, while non-resident tourists' incomes recorded 87.3 percent. (Scowsill, 2017).

#### 4. Conclusions

Tourism, by its very nature, generates new jobs and has a major contribution in attracting labor surpluses from other sectors and, implicitly, in reducing unemployment. Despite the growing and unpredictable shocks due to terrorist attacks, political instability and natural disasters, the Tourism and Travel sector continued to demonstrate its resilience. In the long run, the growth of the Tourism and Travel sector will continue to be strong as long as investment and development take place in an open and sustainable manner. In this way, not only can we expect the sector to support over 380 million jobs by 2027, but will continue to increase its economic contribution, providing the rationale for further protection of nature, habitats and biodiversity.

The analysis carried out in this paper is able to propose some answers regarding the reasons for Romania's tight competitiveness in relation to Croatia.

First of all, it is noted that Romania does not effectively use its favorable geographical position, natural and cultural resources, nor does it place any effort in capitalizing it. Due to this, the Romanian population, both as a provider and as a beneficiary of tourism services, is not educated in the spirit of environmental protection and sustainable development. Better road transport infrastructure, easier access to local tourist attractions, better advertising campaigns - can ensure a higher position of Romania on the international tourism map.

Thus, besides the modernization of the tourist structures, tourist resorts and the creation of new tourist products, resorts, original, attractive and unusual programs, which could, through a sustained promotion activity on the international market, direct important tourist flows to Romania.

Along with the modernization and development of a diversified and competitive tourist offer, measures to improve and develop the marketing and promotion activity, to integrate into global tourism, to ensure the legal framework and the appropriate stimulating and stable financial and tax environment are necessary.

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## Promotion of Cultural Tourism through Cooperation in the Cross-Border Area

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### Abstract

*The uniqueness and richness of culture and heritage in the cross-border area: Hungary, Slovakia, Romania and Ukraine (HU-SK-RO-UA) creates the opportunity for developing cultural tourism through innovative tourism and integrated tourism products, with the result of promoting tourism, generally in Europe and especially in Trans-Carpatic Region. For this purpose, new projects initiated can achieve better cooperation and coordination between the relevant stakeholders in the tourism sector, as well as to develop and implement joint tourism strategies. The paper presents a project proposal on promoting the culture and heritage in HU-SK-RO-UA area, through tourism function. The main activities designed in the project lead to joint cross-border tourism management in order to increase the attractiveness of cultural sites and joint cross-border touristic offer, by strengthening joint new touristic products and organizing joint cultural events.*

**Key words:** cultural heritage, touristic destinations, tourism, sustainable development, project  
**J.E.L. classification:** Q01, Z32, O22

### 1. Background of the project

The unaltered preservation of cultural heritage in Europe in general, and in our region in particular, is a challenge and, at the same time a key condition for ensuring the sustainability of the heritage. It has an important role to play in ensuring social cohesion between different regions, ethnic groups, cultures. The cultural heritage is of particular importance for economic growth, by generating value chains in various sectors, with major implications for creating and strengthening jobs (European Commission, 2014).

The spiritual value of cultural heritage is reflected on all people who improve their everyday life. For creative industries, for art and artists, cultural heritage is a model, a source of information and knowledge.

Through culture and history, the attractiveness of a region can grow; this is manifested by the interest of those looking for a job in the cultural sector, tourists who are visiting the region, or those who choose to live in these regions. In this context, tourism and cultural management have become important subjects for organizations, cultural management institutions, local authorities and those who administer the cultural and historical heritage of the regions (Pedersen 2002). Cultural and historical sites can rapidly expand the tourism industry with all the beneficial implications for regional development. The major importance of the stakeholders in the planning and management of tourism activities is made by selecting and promoting tourist destinations, that can quickly generate economic growth and local development, with multiplier effects on many industries (Sheehan & Ritchie, 2005), (Crouch & Ritchie, 1999).

In a study conducted by the European Commission (European Commission, 2013), multiplier effects in many economic sectors are demonstrated by the contribution of the cultural sector to GDP in the EU, through tourism enterprises and jobs. Also, the number of tourists in the EU

indicates that cultural heritage is a key factor in choosing a travel destination. Thus, 2013, 52% of EU citizens visited at least one historic monument or site and 37% a museum or gallery in those countries, while 19% visited a monument or historical site in another EU country.

Authors as Richards & Wilson (2006) or Anholt, (2007) argue that culture can provide the brand of a new city or region while attracting talent. In addition, technology adds economic value in the cultural and heritage sector (Cunningham, 2002), i.e., digitised cultural artefacts can be used to enhance the visitor experience, develop educational content; smart mobile phone apps may serve to broader information, documentaries, tourism applications as touristic routes and games. Cultural and Heritage promotion through tourism can be tool of regional development driven towards sustainability (Lordkipanidze, et. al., 2005).

## **2. Identification of the problems and needs for cultural tourism in cross project's development**

The cross-border area of Hungary, Slovakia, Romania and Ukraine has an important common asset represented by cultural heritage. In the cross-border area there are 7 UNESCO world heritage cultural sites, 2 UNESCO world heritage natural sites, a high number of museums (214) and almost 17 thousand protected buildings and monuments (ENI, 2016). Also, the area is rich in local, national and even international cultural events that tourism could build on; therefore, the area has many opportunities to attract tourists from all over the world. Thus, despite the rich heritage of the region and the fact that tourism may represent an important pillar of economic development, in this area the cultural and natural resources are not even in our days well promoted and valued, which is why tourism in this region is not sufficiently developed in order to make a major contribution to economic development. Also, there are not enough tourist products to contribute to the creation of competitive integrated packages offered to the beneficiaries and neither managerial tool to develop a common cross-border strategy, in line with the EU's policies.

The most important obstacles of region's development through cultural tourism are:

1. Information about historical and cultural heritage of Trans-Carpatic region is fragmented and presented in different languages and websites; because of that, potential tourists find quite difficult to plan their holidays in this area;
2. Online information in English or in the languages of the neighbouring countries (Ukrainian, Slovak, Hungarian and Romanian) is not always available;
3. Some local museums and other cultural institutions do not own a website and their presence online is limited due to the lack of employees;
4. Even cultural organisations which do have enough employees do not succeed to implement a viable marketing international strategy because the lack of training, abilities and knowledge their employees possess;
5. Cooperation among tourist organisations in the cross-border area is not typical;
6. Travel agencies do not offer packages including cultural or natural attractions located inside and outside of the countries forming the cross-border area, even if some historical events, identities and values cannot be fully understood by visiting only some of these attractions;
7. Many inhabitants of the four regions do not know the common history, heritage and culture they share with their neighbours, which is why social interconnection and interaction between them is limited and the sense of social cohesion is not developed enough among them;
8. The full potential value of the tourism is not being realized by local communities and the sites themselves;
9. Unplanned or mismanaged tourism and low level of integrated destination management and marketing are having a negative effect on the touristic attractiveness of the region and on local economies;

In conclusion the weaknesses that represent barriers in the development of regional cultural tourism and in a competitive common tourist offer. Some of these are: inadequate cultural marketing, insufficiently trained staff, poorly integrated tourist destinations, reduced visibility and promotion through Internet technologies.



### 3. The relevance of the project. Promotion of culture and heritage of cross-border area through TRANS-CULT-TOUR Project

In a long history of events, the cultural heritage of the project's region indicates an increased cultural, ethnic, natural diversity, which gives it an invaluable value but also uniqueness. The tourist niche comprises that portion of the market, perceived by tourists as the only one. Therefore, the potential for tourism development in this area is high. Unfortunately, many cross-border problems hinder the development of the cultural tourism sector.

According to the SWOT analysis carried out in the ENI (ENI 2016) programming document, shows that the main problems of the HUSKROUA area are poor infrastructure, lack of common tourist offer, poor housing quality, low cultural heritage marketing, lack of trained staff and continuous training programs, low touristic offer organized in the form products and routes that are visible on the market and lack of integrated destination management.

Based on the common and similar natural, cultural and historical values, the cross-border countries: Hungary, Slovakia, Romania and Ukraine (HU-SK-RO-UA), there has been initiated a project to increase the attractiveness, visibility and the market of tourism sector. The purpose of the project is to increase the number of tourists in the area, by providing complex packages focusing on destinations tourism for rapid promotion of cultural and natural heritage and a major driver for sustainable development. The overall objective of the project is to promote cultural heritage in Trans-Carpathic Region as common European value, through enhancing networking, cooperation, forming unique interactions in cultural activities, innovations for cross-border tourism offer to attract more visitors and increase value added for local economies.

Within this specific objective of the project called TRANS-CULT-TOUR, it will aim to provide:

- =better collaborations in and accross the neighboring countries between cultural, educational and tourist organizations through improved cultural and tourist infrastructure (platform, networking, performing cultural and research centres) and embedding cultural objects of common European heritage into tourism activities through highly interactive demonstration actions at the cultural centres created, and thus forming the unique cross-border tourism offers;
- =more innovation in exposing the cultural assets through digitalisation and smart applications of tourism routes for better tourist attraction in and accross the neighboring countries;
- =new knowledge,innovation on cultural heritage into educational curriculum, training programs and dissemination materials and thus improving the public awareness of them, connections to tourist activities in and accross the neighboring countries.

### 4. The strategy of the project

The project's activities are divided into Activities Groups (AG), through their implementation; the expected results are presented in table 1.

*Table no. 1 Results and Activity Groups of TRAN-CULT-TOUR*

Result = R1 /correspondent activity group =AG1
Cultural heritage and different attractions of Trans-Carpathian region will be presented in one single digital platform available in five languages (English, Ukrainian, Hungarian, Slovakian and Romanian);
Result = R2 /correspondent activity group =AG1
A marketing strategy for establishing thematic routes will be developed as a result of research, studies and statistics carried on Cultural Heritage and Destination Tourism;
Result = R3 /correspondent activity group =AG3
Value of cultural heritage tourism services will be enhanced by innovative products, namely by "Creative museum program" and Smart Application "Trans-Carpathic Heritage Trails";
Result = R4 /correspondent activity group =AG1
Cooperation among tourist organisations in the cross-border area will become more dynamic by creating a networking of cultural and tourism stakeholders for elaboration of route-based tourism products;



Result = R4 /correspondent activity group =AG2

Travel agencies will be able to offer joint tourism routes and products developed within the project;

Result = R5 /correspondent activity group =AG4-5

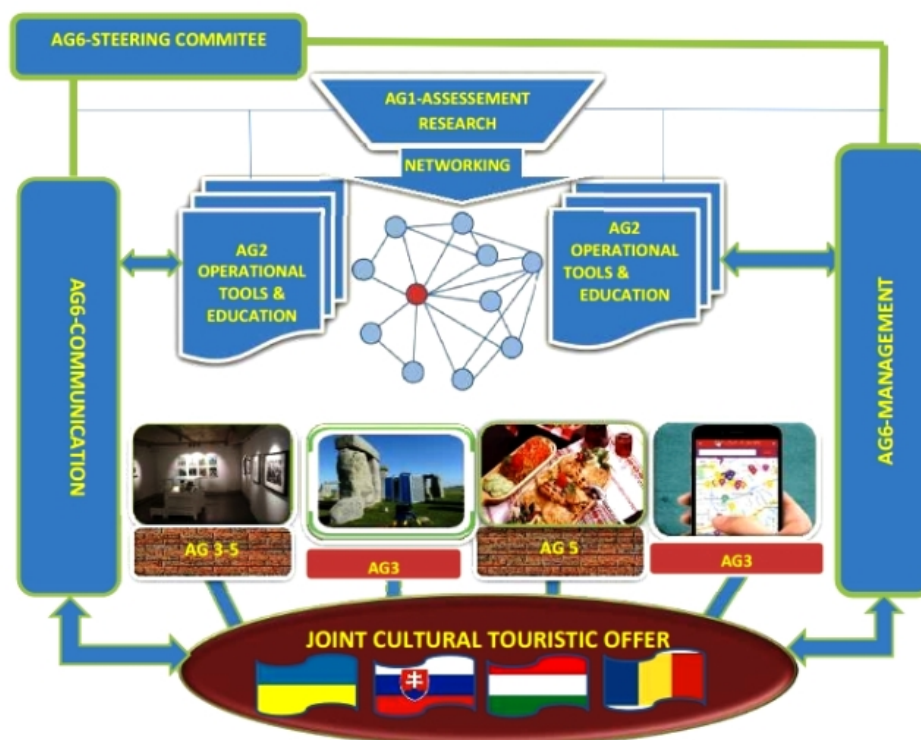
The common history, heritage and culture of the area will be promoted through the scientific events and public events organised within the project, but also through the development of two cultural heritage and research centres.

Source: Authors' contribution

The links between the Activities Groups and the logical flow of implementation of the project is presented in figure 1.

Cultural heritage of a region may represent an important fuel of development if it is well used and promoted. In this context, the project seeks to perform certain activities through which the specific culture and history of Trans-Carpatic region to be better understood, valued and promoted with the final purpose of sustaining the development of cultural tourism in the area. More precisely, the project TRANS-CULT-TOUR will start with a study and a research on cultural and historical heritage of HU-SK-RO-UA cross-border area. The results of this first step will represent the foundation of developing a digital common platform in order to ensure the dissemination and exchange of information between the four partners, but also between local inhabitants of the four regions. Also, by creating a network of cultural and tourism stakeholders we will be able to develop new common route-based tourism products. The active use of these products will be encouraged through organizing public events and lectures, through the creation of cultural heritage and research centres, but also through some new, modern and innovative technological solutions such as: (1) cultural objects digitization and (2) mobile application for smartphones which will make easier for tourists to find and select specific routes and touristic attractions in Trans- Carpatic area.

Figure no. 1. Conceptual scheme of the project



Source: Authors' contribution

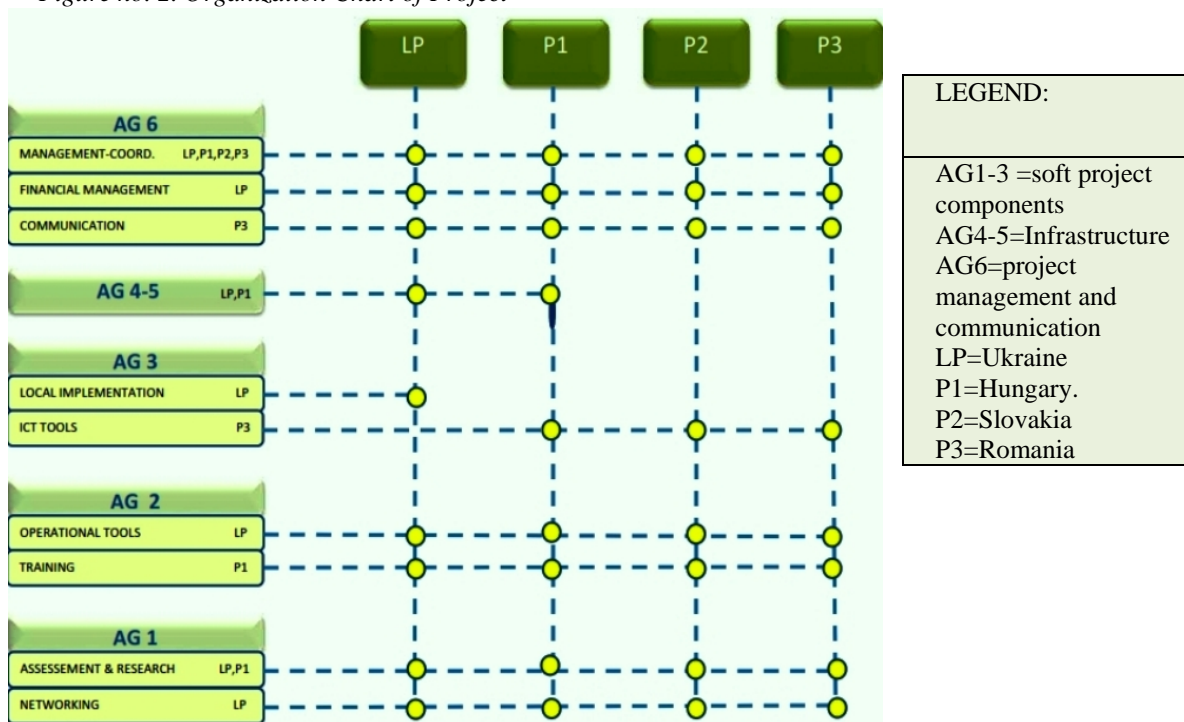
## 5. Cooperation approach in achieving the project's objectives and results

The cooperation criteria will be properly and commonly developed in relevance to the main cooperation criteria, namely: joint project development, joint project implementation, joint staffing, and joint financing, which is designed in the Organizational structure of the project presented in Figure 2.

- Joint project development: according to the cooperation criteria the project development is a common effort of all partners.
- Joint project implementation: The nature of the project is integrated. Partner's activity aimed to the achievement of the common objective namely: increasing the attractiveness of Trans-Carpathic region among tourists by integrating the objects / information of Common Cultural Heritage in tourist routes.
- Joint staffing: The human resources of the projects are aimed at the realization of the project objectives.

All the activities are adjusted by each partner followed by common project implementation and joint project management. All the partners are implementing the planned activities at local level and international level. The coordination team is taking the role of the lead partner of the project, but all partners are equal in the action. Each partner had similar actions before the current project and they are experienced in implementing such actions. On the other hand, common financing is one of the most important aspects, regarding the joint project implementation. Each partner has its budget for project implementation that developed at the level of project development according to action plan.

Figure no. 2. Organization Chart of Project



Source: Authors' contribution

## 6. Conclusions

The common cultural and heritage properties from Trans-Carpathic region which will preserve both the spiritual values and the economic- social development level in the area represent a challenge for authorities, policy-makers, companies, institutions. The opportunity of the development of programs, projects or activities regarding these issues are obvious.

Cooperation and dialogue amongst stakeholders from the public and private sectors, cultural institutions and tourism industries is the leverage of better tourism management. The joint project demonstrates the role and the importance of stakeholders to assist the decision-making processes of planning and managing the tourism activities that enhances the destination purpose.

The project demonstrates that knowledge, education, rapid dissemination of information through modern technology strengthen and reinforce the position of culture and history in an economic frame; The direct effect of Developing and marketing cultural heritage sites as touristic destination assures high quality in tourism and is basis of a competitive industry. This approach creates within the project a strong joint basis for the development of cross-border cooperation, in the direction of promoting local culture and heritage, with the purpose of sustaining the development of cultural tourism in the area. Since cultural and natural heritage of the HU-SK-RO-UA area transcends the actual physical borders of the four countries (for instance, Hollosy Simon is considered an important Hungarian painter, but he was also the founder of Baia Mare artistic colony in Romania and he spent more summers in Tiachiv, Ukraine where he died in the end), the performance of such challenge is possible only within the close cross-border cooperation between all countries.

Thus, cross-border cooperation is provided within implementation stages of the action: technical-preparatory, educational-organizational, main and informational stages. The project focuses on complex solution of problems of cross-border cooperation by means of the introduction of synchronized approach in obedience to the agreed plan of action and combination of efforts of basic target groups for the successful development of established partnerships and implementation of initiatives.

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## The World's Largest Energy Companies in the Period 2016-2017

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### Abstract

*The energy issues have always constituted an important topic for governments, policy makers, companies, non-governmental organizations, scientists, and academics. The last decades have witnessed the increasing diversification of resources and technologies within the energy sector. However, oil, coal, and natural gas have remained the most important sources of energy in the world. Some of the key stakeholders of the energy sector are the energy companies. The paper aims to present and analyse the evolution of the ten largest energy companies in the world by their revenues in the period 2016-2017. The research is based on a quantitative method. The paper shows that the top of the world's ten largest energy companies in the period 2016-2017 was dominated by the same companies in a relative high proportion.*

**Key words:** energy company, energy, company

**J.E.L. classification:** F00, Q49

### 1. Introduction

Energy's importance for human life and economic activity has been always emphasized and recognized during the time. Consequently, energy issues have constituted an important topic for governments, policy makers, companies, non-governmental organizations, scientists, and academics. As a prerequisite for all economic sectors, energy development has to take into account its significant effects on the natural environment, society and energy sources in order to prevent disastrous global consequences (Lior, 2008; World Economic Forum, 2017).

The last decades have witnessed the increasing diversification of resources (e.g., bioenergy) and technologies (e.g., solar photovoltaic) within the energy sector (World Energy Council, 2016) as concerns about the natural environment and future oil shortages appeared (Henriques et al, 2008). Four major shifts in the global energy system were identified as follows (International Energy Agency, 2017a, p. 1): "the rapid deployment and falling costs of clean energy technologies, the growing electrification of energy, the shift to a more services-oriented economy and a cleaner energy mix in China, and the resilience of shale gas and tight oil in the United States of America (USA)". Since the 1973 oil crisis oil, coal, and natural gas have remained the most important sources of energy in the world. The world crude oil production grew from 2,869 million tonnes in 1973 to 4,321 million tonnes in 2016, the world natural gas production grew from 1,224 billion cubic metres in 1973 to 3,613 billion cubic metres in 2016, and the world coal production grew from 3,074 million tonnes in 1973 to 7,269 million tonnes in 2016 (International Energy Agency, 2017b).

Some of the key stakeholders of the energy sector are the energy companies. In order to succeed in a fluid and volatile market they should be both connected and collaborative, and adaptable and agile (Chidambaram et al, 2017). New technologies, digitization, big data and new business models represent several challenges the energy companies should face in the 21<sup>st</sup> century (Hasse, 2017).

The paper aims to present and analyse the evolution of the ten largest energy companies in the world by their revenues in the period 2016-2017. The research is based on a quantitative method.

## 2. The evolution of the world's largest energy companies in the period 2016-2017

The Platts Top 250 Global Energy Company rankings were launched in 2002. The annual survey of the global energy companies, published yearly by S&P Global Platts, takes into account the following key metrics: asset worth (at least US \$5.5 billion), revenues, profits, and return on invested capital (S&P Global Platts, 2017). The top of the world's ten largest energy companies is dominated by Exxon Mobil (Table no. 1) with total revenues of \$205,004 million in 2016 (Fortune, 2017).

Table no. 1 The world's ten largest energy companies in 2016

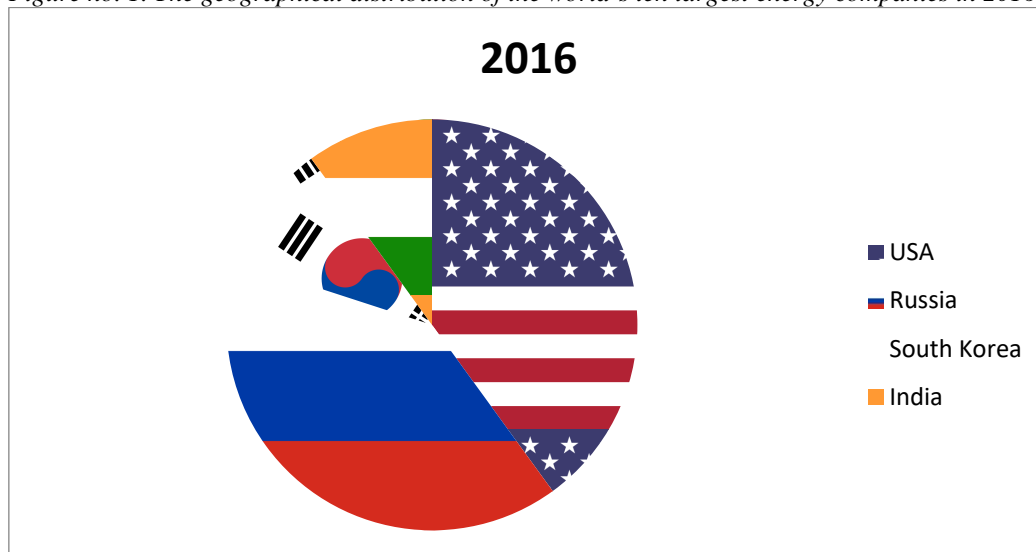
Rank	Company	Region	Industry
1	Exxon Mobil Corp.	Americas	Integrated oil and gas
2	Korea Electric Power Corp.	Asia/Pacific Rim	Electric utilities
3	PJSC Gazprom	Europe, Middle East and Africa (EMEA)	Integrated oil and gas
4	Phillips 66	Americas	Oil and gas refining and marketing
5	Valero Energy Corp.	Americas	Oil and gas refining and marketing
6	PJSC Lukoil	EMEA	Integrated oil and gas
7	PJSC Rosneft Oil Co.	EMEA	Integrated oil and gas
8	Reliance Industries Ltd.	Asia/Pacific Rim	Oil and gas refining and marketing
9	OJSC Surgutneftgas	EMEA	Integrated oil and gas
10	Marathon Petroleum Corp.	Americas	Oil and gas refining and marketing

Source: S&P Global Platts, 2016, p. 1

The above mentioned companies belong to the following countries (Figure no. 1):

- the USA (Exxon Mobil, Phillips 66, Valero Energy, Marathon Petroleum);
- Russia (Gazprom, Lukoil, Rosneft Oil, Surgutneftgas);
- South Korea (Korea Electric Power);
- India (Reliance Industries).

Figure no. 1. The geographical distribution of the world's ten largest energy companies in 2016



Source: Authors' contribution

This year Gazprom dominates the top of the world's ten largest energy companies (Table no. 2) with total revenues of \$107,217 million (S&P Global Platts, 2017). Gazprom is a public joint stock energy company, engaged in both the exploration and sale of gas and oil worldwide.

Table no. 2 The world's ten largest energy companies in 2017

Rank	Company	Region	Industry
1	PJSC Gazprom	EMEA	Integrated oil and gas
2	E.ON SE	EMEA	Multi-utilities
3	Reliance Industries Ltd.	Asia/Pacific Rim	Oil and gas refining and marketing
4	Korea Electric Power Corp.	Asia/Pacific Rim	Electric utilities
5	China Petroleum and Chemical Corp.	Asia/Pacific Rim	Integrated oil and gas
6	PJSC Lukoil	EMEA	Integrated oil and gas
7	Indian Oil Corp. Ltd.	Asia/Pacific Rim	Oil and gas refining and marketing
8	Valero Energy Corp.	Americas	Oil and gas refining and marketing
9	Exxon Mobil Corp.	Americas	Integrated oil and gas
10	TOTAL SA	EMEA	Integrated oil and gas

Source: S&P Global Platts, 2017, p. 1

The above mentioned companies belong to the following countries (Figure no. 2):

- the USA (Valero Energy, Exxon Mobil);
- Russia (Gazprom, Lukoil);
- India (Reliance Industries, Indian Oil);
- South Korea (Korea Electric Power);
- France (Total);
- the People's Republic of China (China Petroleum and Chemical);
- Germany (E.ON).

Figure no. 2. The geographical distribution of the world's ten largest energy companies in 2017



Source: Authors' contribution



Six out of the world's ten largest energy companies were the same (Exxon Mobil, Gazprom, Korea Electric Power, Valero Energy, Lukoil, Reliance Industries) in the period 2016-2017. From a geographical point of view, the world's ten largest energy companies belong to the USA, Russia, India, South Korea, France, the People's Republic of China, and Germany.

### 3. Conclusions

Energy is vital both for human life and economic activity. The diversification of energy resources and the rapid pace of technological change in the energy sector have led to an increasing global competition among energy companies all over the world.

The paper shows that the top of the world's ten largest energy companies in the period 2016-2017 was dominated by the same companies in a proportion of 60%. Also, it reveals that these energy companies are located in a relative small number of countries such as the USA and Russia.

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## **Section II**

# **Regional Development, Integration and Globalization**



# Statistical and Econometric Analysis of the Correlations Between Migration and the Main Macro-aggregates in EU

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## Abstract

*The paper analyzes the existing interdependencies between the migration phenomenon and the main macroeconomic indicators that characterize the EU economy (net income, unemployment rate and life expectancy) during 2008-2015.*

*The EU, but not only face a substantial migration increase. As method, was used regression and principal component analysis using SPSS software.*

*The results show that the migration is strongly influenced by unemployment rate, level of education, net income and life expectancy.*

**Key words:** migration, correlation coefficient, regression analysis, principal components analysis.

**J.E.L. classification:** C35, I31, J64, R58.

## 1. Introduction

Migration is a growing international phenomenon. At European level, after the Cold War, the movement of people was liberalized, people started migrating to improve their living conditions. Migration shows some advantages, such as intercultural exchanges, socialization, intercultural exchanges, but also has negative consequences, such as the depopulation of countries that offer less good living conditions.

In the literature are 3 categories of push factors: i) economic and demographic - high unemployment rate, low wages, high poverty gap, lack of jobs, unsatisfactory education and health care conditions; ii) political- conflicts, corruption and poor level of governance; and iii) cultural and social - discrimination, abuse of human rights (Gurcinaite, 2014).

Liu (1975) establishes that migration is connected with quality of life. The quality of life influence the decision to migrate. The incomes represent physically the quality of life.

Zhao (1997) determines that in China exists a link between migration and education level.

Martiskova (2013) analysed the migration and found that the main determinants of migration are the lack of career opportunities, the high unemployment rate, the political conditions, and the university crisis.

## 2. Data and method

The analysis is based on official data published by Eurostat. The variables used in the correlation analysis are:

Migration - Total number of emigrants;

Unemployment Rate - Unemployment rate (%), age 15-74;

Net Income - Median equivalised net income (Euro);

Education Level (%), age class from 15 to 64, upper secondary and post-secondary non-tertiary education (levels 3 and 4);

Life Expectancy - Life expectancy, less than 1 year.

The data is collected for 12 EU countries and the analysed period is 2008-2015. The methodology used is correlation analysis, factorial analysis (principal component analysis) and regression analysis.

Factorial analysis is primarily used to reduce the number of variables and to detect the structure of linkss between them. Principal Component Analysis (ACP) is commonly used as a descriptive method, for viewing the information contained in a quantitative data table, in particular the correlations existing between variables (Voineagu, 2007).

Regression is the existence of a statistical link on the behavior of some variables. The generalized linear model represents the class of regression models of the parameters that represent generalization of linear models. This type of model describes how the expected value of a dependent variable varies on the changes of an independent variable. In such models the main purpose is to find the best economic model that can represents the links between a dependent variable and some independent (Jaba, 2002).

### 3. Results and Discussion

The objective of this study is to assess the impact of macroeconomic indicators on migration.

Table no. 1. Matrix of correlation coefficients between macroeconomic variables

		Correlations				
		migratia	unemploy ment	net income	education	life_exp
migratia	Pearson Correlation	1	,759**	-,137	-,606**	,297**
	Sig. (2-tailed)		,000	,183	,000	,003
	N	96	96	96	96	96
unemployment	Pearson Correlation	,759**	1	-,554**	-,118	-,110
	Sig. (2-tailed)	,000		,000	,252	,284
	N	96	96	96	96	96
net income	Pearson Correlation	-,137	-,554**	1	-,556**	,665**
	Sig. (2-tailed)	,183	,000		,000	,000
	N	96	96	96	96	96
education	Pearson Correlation	-,606**	-,118	-,556**	1	-,734**
	Sig. (2-tailed)	,000	,252	,000		,000
	N	96	96	96	96	96
life_exp	Pearson Correlation	,297**	-,110	,665**	-,734**	1
	Sig. (2-tailed)	,003	,284	,000	,000	
	N	96	96	96	96	96

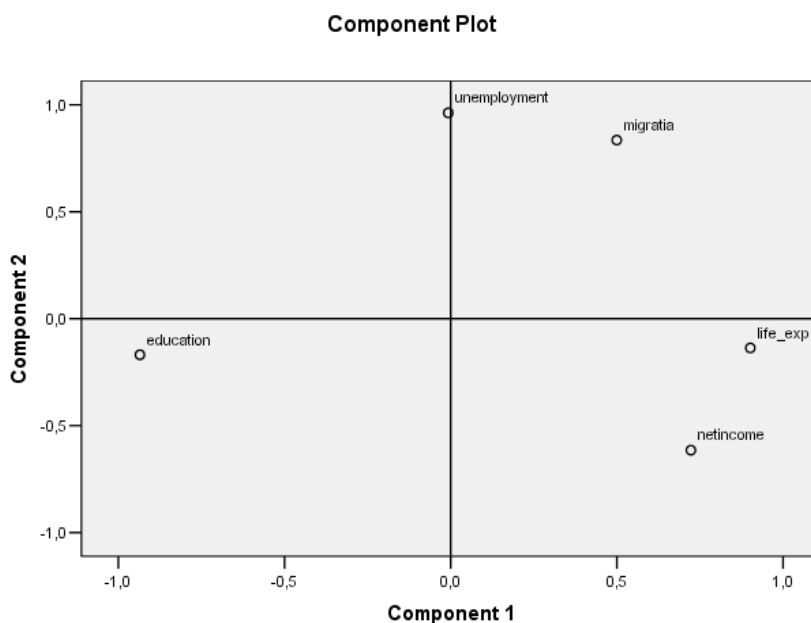
\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Own Projection, using SPSS

Analyzing the correlation between the variables studied (Table no. 1), there is a strong correlation between unemployment rate and migration. Increasing unemployment rates will increase also the migration phenomenon. Another strong link is between life expectancy and education, but this is reverse, when the number of people with levels 3 and 4 of education increases, life expectancy decreases. Instead, life expectancy registrate a direct and strong correlation with net income, when income increase, life expectancy increases, too.

The same conclusions result from the analysis of the graphical representation of all variables using factorial analysis (Principal Component Analysis). The analysis of the principal components shows that migration and net income are better explained by the second factorial axis, a direct link being established between its. The net income, life expectancy and education variables are explained by the first factorial axis, a direct link between the first two records, and between the two and the education level being an inverse, but strong link, i.e., when the number of people with level 3 or 4 of education increases, life expectancy and net income decrease.

Figure no. 1. The graphical representation of the variables on the correlation diagram, determined by the first two main components (which explains 90.17% of the initial variation)

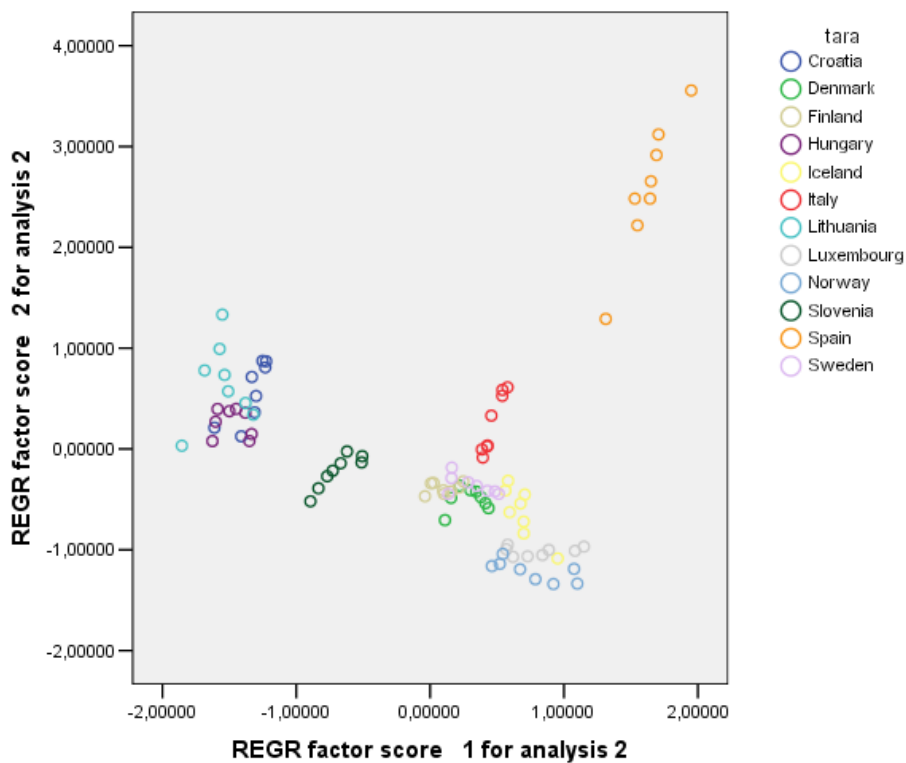


Source: Own Projection, using SPSS

If we analyze the figure 2, we notice that Spain records big values for migration for all the analyzed years, and Norway, Italy, Iceland, Denmark, Finland and Luxembourg have big net income.

Lithuania and Hungary registrate a large number of Level 3 and 4 graduates.

Figure no. 2. Evolution of the main macroeconomic indicators, represented on the main two components



Source: Own Projection, using SPS

In order to study the impact of the variables analyzed on migration, the regression function was determined. The regression equation is:

$$\text{Migration} = 247326,64 + 13069,81 * \text{Unemployment} - 1,25 * \text{Net Income} - 6205,84 * \text{Education}$$

$R^2 = 0,923$ , and  $F = 175,64$

The coefficients of the unemployment rate and education are significant for a probability of 99% and the coefficients of the net income variable for a probability of 90%. The model was validated with a high probability of 99%.

According to the model, if the unemployment rate increases with an unit, then the migration increases with 13069.81 units, if the other factors remain stable. If the net income decreases with an unit, then the migration increases with 1.25 units, while the other factors remain stable. When the number of persons of level 3 and 4 increases with an unit, the migration decreases with 6205.84 units.

#### 4. Conclusions

Analyzing migration at EU level, there is an increasing trend. For this was analyzed the variables that influence the migration and it was concluded that is a strong correlation between unemployment rate and migration, between life expectancy and net income and an inverse correlation between life expectancy and education.

From the analyzed countries, for all the analyzed years, Spain records big values for migration, and Norway, Italy, Iceland, Denmark, Finland and Luxembourg have big net income. Lithuania and Hungary registrate a large number of people with Level 3 and 4 of education.

The regression equation for the 12 countries for the period 2008-2015 is:

$$\text{Migration} = 247326,64 + 13069,81 * \text{Unemployment} - 1,25 * \text{Net Income} - 6205,84 * \text{Education}.$$

All coefficients are significant and the model was validated with a high probability of 99%.

The results revealed by our study using regression and principal component analysis are statistically relevant for the migration phenomenon in EU.

Subsequent developments in the study should enlarge the sample, and should also include other social and economic factors. Moreover, depending on the possibilities of accessing the necessary specific data, the study can also be applied at Romania's regions level.

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## The Regional R&D Activity in Romania – A Perspective Post-EU Accession

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### Abstract

*The study consists of analyzing the evolution of the research and development (R & D) sector in Romania, from the point of view of the structural changes registered at the level of the eighth development regions. The period considered in analysis consists in the years after the accession of Romania to the European Union, with the aim of identifying the territorial disparities as well as the generating factors associated with the general dysfunctions of the economic and social system. The data used in the study refers to the 2007-2014 period, 2014 being the last year with data available on Eurostat database for all the indicators considered.*

**Key words:** research and development, regions, disparities, Romania

**J.E.L. classification:** C19, O39, R12.

### 1. Introduction

In the last ten years, on the efforts to build up the European System of Innovation at the level of the EU member states has been a progressive and systematic process of convergence in terms of national R&D strategies and policies, as well as in terms of R&D expenditures (Goschin, Sandu, and Goschin, 2016, p.1). However, Romania had an insufficient and inadequate investment in this important sector. Nowadays, our country is still an insignificant force through the EU member states, with only 0,5% of its GDP dedicate to these important activities, even if a number of facilities have been thought, of lately to stimulate the sector, like labor incentives, fiscal incentives, reinvested profit, and state aid for R & D or intellectual property (Buciuman, Tapai, and Grigore, 2017, p.2). More than that, the territorial component of the national innovation system is still underdeveloped. The existence of major technological disparities among Romanian regions and counties has been recognized as a constraint in building an efficient national innovation system, but it is still lacking a strong regional R&D policy to address such disparities (Goschin, Sandu, and Goschin, 2016, p.2). To growing the R&D sector, is needed a continuous attention from the Romania's government, with higher targets, capable to create a functional and sustainable context to developing public and private research and development facilities.

### 2. Datasets and methodology

We considered two important classes of relevant indicators to defining the regional profile from this perspective: a) R & D expenditure (GERD), which includes spending on research and development by business enterprises, higher education institutions, as well as government and private non-profit organizations, and b) the number of researchers involved in R&D activities. Taking into account regional specific issues, to have a complete picture of the size of the R & D sector we consider the main indicators that can synthesize both the dimension of this sector and correlation with the regional employment profile, too:

- *Group 1 – "Expenditures"*, including 3 indicators: IND\_1 - total R&D, which indicates the level of investment in R&D activities, IND\_2 - total R&D expenditure / inhabitant, (measured in Euro), indicator describing the investment in R&D relative to the size of the region, respectively the number of inhabitants, and IND\_3 - Total R&D expenditure as a percentage of GDP of the region, named "R&D intensity" because it is used to measure the relative degree of an economy to invest in new knowledge and innovation (See Table no. 1), and
- *Group 2 – "Researchers"*, including 4 indicators: IND\_4 - R&D Researchers measured in FTE, IND\_5 - R&D Researchers measured in HC, IND\_6 - R&D Researchers, as % of total employment - numerator in FTE, and IND\_7 - R&D Researchers, as % of total employment - numerator in (HC) (See Table no. 2).

Table no. 1. R&D expenditure (GERD) by NUTS 2 regions

Region	Indicator	Year								Changes 2014/2007	
		2007	2008	2009	2010	2011	2012	2013	2014	$\bar{I}$ (%)	$\bar{R}$ (%)
Nord-Vest (N-V)	IND_1	58,003	70,182	45,816	46,859	71,189	66,965	51,325	45,92	96,72	-3,28
	IND_2	21,3	25,8	16,8	17,2	26,2	25,8	19,8	17,7	97,39	-2,61
	IND_3	0,38	0,44	0,33	0,33	0,49	0,44	0,32	0,27	95,24	-4,76
Centru (C)	IND_1	22,264	21,793	40,109	26,229	29,228	34,421	21,279	52,824	113,14	13,14
	IND_2	8,8	8,6	15,9	10,4	11,6	14,6	9	22,4	114,28	14,28
	IND_3	0,15	0,14	0,29	0,18	0,2	0,23	0,13	0,32	111,43	11,43
Nord-Est (N-E)	IND_1	49,039	58,279	37,233	37,545	40,632	54,945	44,739	43,088	98,17	-1,83
	IND_2	13,2	15,7	10	10,1	11	16,7	13,6	13,2	100,0	0,00
	IND_3	0,36	0,39	0,29	0,28	0,3	0,4	0,3	0,28	96,47	-3,53
Sud-Est (S-E)	IND_1	24,175	26,941	21,602	21,152	14,959	12,121	10,502	10,918	89,27	-10,73
	IND_2	8,5	9,5	7,7	7,5	5,3	4,8	4,2	4,4	91,02	-8,98
	IND_3	0,18	0,18	0,17	0,16	0,11	0,08	0,06	0,06	85,48	-14,52
Sud – Muntenia (S-M)	IND_1	69,49	62,319	52,07	57,156	62,712	74,359	59,839	66,735	99,42	-0,58
	IND_2	21	18,9	15,9	17,5	19,3	23,8	19,3	21,6	100,4	0,40
	IND_3	0,45	0,35	0,33	0,36	0,38	0,47	0,34	0,37	97,24	-2,76
Bucuresti – Ilfov (B-I)	IND_1	376,063	504,311	320,197	339,884	379,372	353,332	312,718	313,875	97,45	-2,55
	IND_2	168,5	224,9	142,1	150,3	167,3	155	137	137,5	97,14	-2,86
	IND_3	1,24	1,33	1,06	1,04	1,05	1	0,81	0,78	93,59	-6,41
Sud-Vest Oltenia (S-O)	IND_1	20,326	23,941	17,863	16,653	29,639	13,079	20,146	16,472	97,04	-2,96
	IND_2	8,9	10,5	7,9	7,4	13,3	6,3	9,8	8,1	98,66	-1,34
	IND_3	0,2	0,22	0,19	0,17	0,28	0,13	0,19	0,15	95,97	-4,03
Vest (V)	IND_1	33,455	41,628	20,997	27,493	29,679	34,99	37,22	25,289	96,08	-3,92
	IND_2	17,4	21,6	10,9	14,3	15,5	19,1	20,4	13,9	96,84	-3,16
	IND_3	0,27	0,29	0,18	0,22	0,23	0,27	0,27	0,18	94,37	-5,63
Romania (RO)	IND_1	652,815	809,401	555,887	572,971	657,411	644,211	557,769	575,12	98,21	-1,79
	IND_2	30,9	39,2	27,2	28,2	32,5	32,1	27,9	28,8	99,00	-1,00
	IND_3	0,52	0,57	0,46	0,45	0,49	0,48	0,39	0,38	95,62	-4,38

Source: Based on Eurostat,

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd\\_e\\_gerdreg&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdreg&lang=en)

The data in the table shows a lent tendency to decrease R & D expenditure nationwide for all three indicators considered, while the only region that in the year 2014 has an 11-15% increase from 2007 is the Centru Region. On the opposite side, we find the South East region where the relative decrease reaches 10,73% for IND\_1, 8,98% for IND\_2 and more than 14% for IND\_3. Even with a relative decrease above than the national level for the period 2007-2014, București - Ilfov remains the region with the highest level of R&D spending, indicating the concentration of the sector, especially in the capital of the country, București. As can be seen in the table below, between the year 2007 and 2014, the changes in the volume and structure of the researchers involved in the sector are much more obvious. While for most regions, including at national level, the trend was generally in decline, there are two regions where the trend is increase and a significant one: Vest and Centru Regions.

Data analysis consists of two successive stages in which two of the most usual methods in territorial studies, which allow comparability of the territorial units with the average level, or the "best performance", as the case may be, as well as the measurement of the gaps between its, were applied.

Table no. 2. R&D Researchers of all sectors of performance by NUTS 2 regions

Region	Indicator	Year								Changes 2014/2007	
		2007	2008	2009	2010	2011	2012	2013	2014	$\bar{I}$	$\bar{R}$
Nord-Vest (N-V)	IND_4	1.254	1.829	2.005	1.946	1.273	1.551	1.236	1.453	115,87	15,87
	IND_5	2.321	2.784	2.863	2.952	2.458	2.320	1.962	2.280	98,23	-1,77
	IND_6	0,1093	0,1622	0,1822	0,1728	0,1136	0,1343	0,1068	0,1242	113,63	13,63
	IND_7	0,2023	0,2469	0,2602	0,2622	0,2193	0,2008	0,1696	0,1948	96,29	-3,71
Centru (C)	IND_4	837	1.052	1.391	2.159	1.308	1.477	1.263	1.285	153,52	53,52
	IND_5	2.257	2.504	2.823	2.842	2.027	1.831	1.606	1.832	81,17	-18,83
	IND_6	0,0832	0,1024	0,1396	0,2418	0,1512	0,1689	0,1434	0,1453	174,64	74,64
	IND_7	0,2242	0,2437	0,2833	0,3183	0,2343	0,2094	0,1823	0,2072	92,42	-7,58
Nord-Est (N-E)	IND_4	1.632	1.977	1.804	1.606	1.572	1.668	1.775	1.730	106,00	6,00
	IND_5	3.269	3.387	3.244	2.966	3.190	3.277	3.372	3.332	101,93	1,93
	IND_6	0,0962	0,1181	0,1083	0,106	0,1037	0,1092	0,1158	0,1119	116,32	16,32
	IND_7	0,1928	0,2024	0,1947	0,1957	0,2105	0,2145	0,2201	0,2155	111,77	11,77
Sud-Est (S-E)	IND_4	1.006	746	749	669	503	543	454	435	43,24	-56,76
	IND_5	1.776	1.267	1.331	1.302	1.096	1.133	1.088	1.211	68,19	-31,81
	IND_6	0,0871	0,0646	0,0653	0,0649	0,0506	0,0543	0,0467	0,046	52,81	-47,19
	IND_7	0,1538	0,1096	0,116	0,1263	0,1102	0,1133	0,1119	0,128	83,22	-16,78
Sud – Muntenia (S-M)	IND_4	2.074	1.928	1.711	1.691	736	1.221	1.787	1.594	76,86	-23,14
	IND_5	2.724	2.823	2.372	2.342	1.321	1.823	2.385	2.160	79,30	-20,70
	IND_6	0,1413	0,1298	0,1184	0,1234	0,0589	0,0952	0,1365	0,1207	85,42	-14,58
	IND_7	0,1855	0,1901	0,1641	0,1709	0,1056	0,1422	0,1821	0,1635	88,14	-11,86
Bucuresti – Ilfov (B-I)	IND_4	9.807	9.993	9.426	9.176	7.883	8.958	9.182	9.059	92,37	-7,63
	IND_5	14.361	14.347	13.399	13.225	11.398	13.131	12.652	12.468	86,82	-13,18
	IND_6	0,9631	0,9679	0,9051	0,8616	0,7338	0,8448	0,8833	0,8531	88,58	-11,42
	IND_7	1,4103	1,3897	1,2866	1,2418	1,061	1,2383	1,2171	1,1741	83,25	-16,75
Sud-Vest Oltenia (S-V)	IND_4	1.120	973	951	840	1.347	1.243	1.254	934	83,39	-16,61
	IND_5	2.175	2.071	2.082	2.127	1.700	1.608	1.612	1.625	74,71	-25,29
	IND_6	0,109	0,0936	0,0922	0,089	0,1424	0,1316	0,1397	0,1018	93,39	-6,61
	IND_7	0,2116	0,1992	0,2018	0,2253	0,1797	0,1702	0,1796	0,1771	83,70	-16,30
Vest (V)	IND_4	1.078	896	1.234	1.693	1.457	1.355	1.626	1.619	150,19	50,19
	IND_5	1.857	1.681	2.531	2.951	2.300	2.716	2.923	2.626	141,41	41,41
	IND_6	0,1291	0,1083	0,1513	0,2205	0,1913	0,1782	0,2137	0,2111	163,52	63,52
	IND_7	0,2223	0,2032	0,3104	0,3843	0,302	0,3572	0,3842	0,3424	154,03	54,03
Romania (RO)	IND_4	18.808	19.394	19.271	19.780	16.080	18.016	18.576	18.109	96,28	-3,72
	IND_5	30.740	30.864	30.645	30.707	25.489	27.838	27.600	27.535	89,57	-10,43
	IND_6	0,2127	0,2184	0,2189	0,2381	0,1976	0,2191	0,2271	0,2194	103,15	3,15
	IND_7	0,3477	0,3475	0,348	0,3697	0,3132	0,3386	0,3374	0,3336	95,94	-4,06

Source: Based on Eurostat,

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd\\_p\\_persreg&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_p_persreg&lang=en).

Firstly, the NUTS2 regions were clustered based on the multicriteria similarities of the seven indicators considered. The number of clusters was determinate by using the Hierarchical Cluster Analysis with Ward's method, and then for regions classification, the K - means Cluster algorithm. Ward's method is „similar to other linkage methods in that it begins with N clusters, each containing one object, it differs in that it does not use cluster distances to group objects. Instead, the total within-cluster sum of squares (SSE) is computed to determine the next two groups merged at each step of the algorithm. The error sum of squares (SSE) is defined (for multivariate data) as:

$$SSE = \sum_{i=1}^K \sum_{j=1}^{n_i} (y_{ij} - \bar{y}_i)^2 \quad (1)$$

where  $y_{ij}$  is the  $j$ th object in the  $i$ th cluster, and  $n_i$  is the number of objects in the  $i$ th cluster” (Ferreira and Hitchcock, 2009, p4) For both procedures, the data were processed with SPSS v.20.0.



The NUTS2 regions were hierarchized in the second stage. From a large class of hierarchy techniques were used, the real rank method, which is based on the gapes to the best performance as the referential value, relative to the amplitude variation. This technique assumes that, depending on the nature of the indicator, the calculation of the real rank for each indicator is performed with a specific formula. (Nelea, 2006) We used for the seven indicators analyzed, the formula:

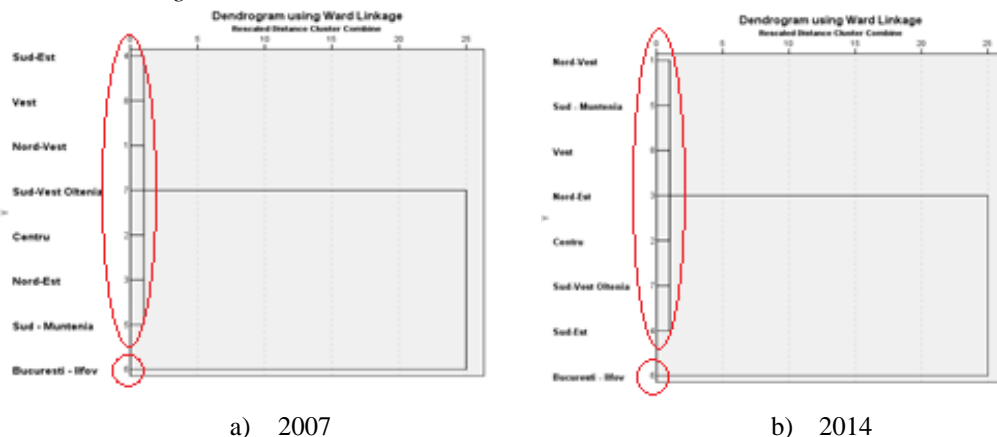
$$R_j^i = n - \frac{a_j^{max} - a_j^i}{a_j^{max} - a_j^{min}} (n - 1), i = 1, 2, \dots, n; j = 1, 2, \dots, m \quad (2)$$

where:  $a_j^i$  - the value of the  $j$  indicator for the territorial unit  $i$ ,  $n$  - the number of territorial units,  $m$  - the number of indicators considered,  $a_j^{max}$  - the maximum value of indicator  $j$ , the "best" depending on the nature of the indicator. Final real ranks are calculated as average values. The method allows the calculation using the weighted arithmetic average model, the weights being determined according to the importance of each indicator considered in the study. In this case, the weights were considered equal. The hierarchy has been ranked according to the rank level, allowing for the identification of changes between and within regions. To highlight the evolution and structural changes of the R & D sector at the territorial level, from the perspective of the considered indicators, the results for the years 2007 and 2014 were compared.

### 3. Results and discussion

For both the 2007 and the 2014 situation, the clustering result revealed the major gap between the București-Ilfov Region and the other Romanian 7 NUTS2 regions, which remain grouped as similar.

Figure no. 1. Dendrograms



Source: SPSS 20.0 Outputs for Hierarchical Cluster Analysis with the Ward's procedure

Note only two clusters formatted both in the year 2007 and 2014, too. Cluster 1: București - Ilfov Region, and Cluster 2: all the rest seven regions. The results of the clustering in 2 cluster using SPSS K - means Cluster procedure highlights the large distances between the two cluster centers and the role of the chosen variables in classifying. By using Ward's method, the two clusters have been formatted to maximize the differences among the eight regions, so the F tests from ANOVA table are used only for descriptive purposes. In this case, the observed significance levels indicate that there are not indicators, among the 7 indicators considered in the multicriteria analysis, with large F values which can provide a greater separation between the two clusters. However, note a smaller distance between cluster centers, only 12915.826, in 2014, versus 14739.567 in 2007. That can explain a reduction in disparities. Because of all of that, it was necessary to hierarchize the eight development regions using real ranks method to put in evidence the real distances between them.

Finally, was analyzed the cumulative influence of the seven indicators in re-ranking regions in the national hierarchy.



Regarding the hierarchy based on the indicators of *Group 1- "Expenditures"* note the advance of the București-Ilfov Region compared to all the others. București - Ilfov placed in the first position, with "best performance" since 2007. The other regions are positioned especially on the final positions, 7-8 in terms of real ranks, both for each indicator, as well as multicriterial. Only Sud-Muntenia Region seems to be placed closest from București-Ilfov, but only on the 6,85 position (See Table no. 3.). Remark Centru Region placed in the last position for all indicators, and Vest Region on the 7,53 position in terms of real ranks, but the position 5 in the final ranking.

For the year 2014, București - Ilfov remains in the first position, while four of the other regions are advancing in the hierarchy, although insignificant, grouping on positions 6-7, and only three places in positions corresponding to 7-8. Looking at the hierarchy changes for each region, in 2014 compared with 2007, in terms of real rank, can note that, excepting București -Ilfov Region, which remained in the first place, and Sud-Est Region, which had an insignificant decrease but remained in the last place, the other six regions recorded easy improvements in positions, climbing in the hierarchy. In terms of final hierarchy, Bucuresti-Ilfov maintained the first position; Sud-Muntenia maintained the second place, too.

When all the other regions have advanced one place in 2014 compared with 2007, only the Centru Region climbed 5 positions, from the last one, the 8th, in the hierarchy in 2007, to the position 3 in the hierarchy in 2014, indicating the efforts of the region to alleviate the major gap in 2007 faced by the region with respect to the others in terms of Total R&D expenditure.

Table no. 3. The algorithm of hierarchizing concerning the group -1 of indicators, for the years 2007 and 2014

Region	Indicator_2007			Indicator_2014			Ranks_2007					Ranks_2014				
	IND_1	IND_2	IND_3	IND_1	IND_2	IND_3	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	R <sub>Real</sub>	R <sub>Final</sub>	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	R <sub>Real</sub>	R <sub>Final</sub>
N-V	58,00	21,3	0,38	45,92	17,7	0,27	7,3	7,4	6,5	7,07	3	7,19	7,3	5,96	6,82 ↑	4 ↓
C	22,26	8,8	0,15	52,82	22,4	0,32	8	8	8	7,98	8	7,03	7,05	5,47	6,52 ↑	3 ↑
N-E	49,03	13,2	0,36	43,08	13,2	0,28	7,4	7,8	6,7	7,29	4	7,26	7,54	5,86	6,88 ↑	5 ↓
S-E	24,17	8,5	0,18	10,91	4,4	0,06	7,9	8	7,8	7,91	7	8	8	8	8 ↓	8 ↓
S	69,49	21	0,45	66,73	21,6	0,37	7	7,5	6,1	6,85	2	6,71	7,1	4,99	6,26 ↑	2 →
B-I	376,0	168,5	1,24	313,8	137,5	0,78	1	1	1	1	1	1	1	1	1 →	1 →
S-V	20,32	8,9	0,2	16,47	8,1	0,15	8	8	7,7	7,89	6	7,87	7,81	7,13	7,6 ↑	7 ↓
V	33,45	17,4	0,27	25,28	13,9	0,18	7,7	7,6	7,2	7,53	5	7,67	7,5	6,83	7,33 ↑	6 ↓

Source: Calculated by the authors using MS Excel, based on data from Eurostat database [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd\\_e\\_gerdreg&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdreg&lang=en)

Regarding the *Group 2 - "Researchers"* included four indicators, in 2007, București - Ilfov Region placed in the first position, with "best performance". All the other regions are positioned especially on the final positions, from 7,467 to 7,959 in terms of real ranks as a multicriterial view. Almost half of the Romanian researchers are concentrated in București - Ilfov Region in 2007. In the year 2014, we found a slight movement of real positions, from 7,467 to 7,959, to 6,82- 7,63. The Vest Region occupied the second position, after București - Ilfov Region - "the best performance", and Sud-Est Region, the last one.

Table no. 4. The algorithm of hierarchize concerning the group - 2 of indicators, for the years 2007 and 2014

Region	Indicator_2007				Indicator_2014				Ranks_2007						Ranks_2014					
	IND_4	IND_5	IND_6	IND_7	IND_4	IND_5	IND_6	IND_7	R <sub>4</sub>	R <sub>5</sub>	R <sub>6</sub>	R <sub>7</sub>	R <sub>Real</sub>	R <sub>Final</sub>	R <sub>4</sub>	R <sub>5</sub>	R <sub>6</sub>	R <sub>7</sub>	R <sub>Real</sub>	R <sub>Final</sub>
N-V	2321	1254	0,2023	0,1093	1453	2280	0,12	0,19	7,7	7,67	7,73	7,79	7,724	4	7,17	7,34	7,32	7,56	7,35 ↑	4 →
C	2257	837	0,2242	0,0832	1285	1832	0,15	0,21	7,73	8	7,61	8	7,836	7	7,31	7,61	7,14	7,48	7,39 ↑	5 ↑
N-E	3269	1632	0,1928	0,0962	1730	3332	0,11	0,22	7,17	7,38	7,78	7,9	7,558	3	6,95	6,68	7,43	7,42	7,12 ↑	3 →
S-E	1776	1006	0,1538	0,0871	435	1211	0,05	0,13	8	7,87	8	7,97	7,959	8	8	8	8	8	8 ↓	8 →
S	2724	2074	0,1855	0,1413	1594	2160	0,12	0,16	7,47	7,03	7,82	7,54	7,467	2	7,06	7,41	7,35	7,77	7,4 ↑	6 ↓
B-I	14361	9807	1,4103	0,9631	9059	12468	0,85	1,17	1	1	1	1	1	1	1	1,01	1	0,97	1 →	1 →

S-V	2175	1120	0,2116	0,109	934	1625	0,1	0,18	7,78	7,78	7,68	7,79	7,758	6	7,59	7,74	7,52	7,68	7,63 ↑	7 ↓
V	1857	1078	0,2223	0,1291	1619	2626	0,21	0,34	7,95	7,81	7,62	7,63	7,756	5	7,04	7,12	6,57	6,57	6,82 ↑	2 ↑

Source: Calculated by the authors using MS Excel, based on data from Eurostat database

[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd\\_p\\_persreg&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_p_persreg&lang=en).

In terms of changes in real ranks generated by the Group 2 of indicators – “Researchers”, excepting Sud - Est Region, which fell a from the position 7,96 in 2007 to 8 position in 2014, all the others advance their real position. However, in terms of changes in the national hierarchy, four regions maintained in 2014 their places from 2007 (București - Ilfov – in the first place, Sud - Est – in last place, Nord - Est in the 3rd place, and Nord – Vest in the 4th place). Other two regions have descended into the hierarchy (Sud-Muntenia from the second position in 6th place, Sud - Vest Oltenia Region from the 6th place in 7th place) and only the Vest Region registered the performance to climb from position 5 to position 2 (See Table no. 4.). Regarding the changes in hierarchy generated by all seven main indicators, the algorithm of real ranks reveals that București - Ilfov Region maintained as the best region in 2014 as in 2007. Only two regions, Sud - Muntenia and Sud - Est, worsed their positions in the hierarchy, and the other four regions, Nord - Vest, Centru, Nord - Est, Sud - Vest Oltenia, and Vest Region registered better positions in 2014 as in 2007. (See Table no. 5)

Table no. 5. NUTS 2 Changes in hierarchy

NUTS2 Regions	Real Ranks						Changes in Ranks	Final Ranks		Changes in Ranks
	2007			2014				2007	2014	
	IND_1-3	IND_4-7	IND_1-7	IND_1-3	IND_4-7	IND_1-7		IND_1-7	IND_1-7	
Nord-Vest	7,07	7,72	7,395	6,82	7,35	7,085	↑	4	4	→
Centru	7,98	7,83	7,905	6,52	7,39	6,955	↑	7	5	↑
Nord-Est	7,29	7,55	7,42	6,88	7,12	7	↑	3	3	→
Sud-Est	7,91	7,96	7,935	8	8,00	8	↓	8	8	→
Sud – Muntenia	6,85	7,46	7,155	6,26	7,40	6,83	↓	2	6	↓
Bucuresti – Ilfov	1	1	1	1	1	1	→	1	1	→
Sud-Vest Oltenia	7,89	7,76	7,825	7,6	7,63	7,615	↑	6	7	↓
Vest	7,53	7,75	7,64	7,33	6,82	7,075	↑	5	2	↑

Source: Calculated by the authors

However, in the national hierarchy by final ranks, remark two regions that registered the performance to climb in the hierarchy, Centru Region from position 7 to position 5, and Vest Region from position 5 to position 2. Sud - Muntenia Region descended into the hierarchy from the second position in the 6th place. Only regions Centru and Sud - Muntenia manage to get closer to București - Ilfov in 2014 as in 2007, placing themselves in the positions 6,955 and 6,83. The Sud - Vest Oltenia Region descended into the hierarchy from the 6th place in 7th place, even if in real ranking had a better performance in 2014 as in 2007. Nord - Vest and Nord - Est Regions, with better performances in 2014 as in 2007, remained in the same places in the national hierarchy. (See table no. 5.)

## 5. Conclusions

The identification and measuring the regional gaps, tendency to sustain or increase regional disparities with territorial concentration effects, can be a useful tool in the development policy of a state by forecasting, preventing, and correction the socio-economic disparities. It is well-known that supporting research leads to increased attractiveness of a region for investments, given that there is an availability of knowledge and professional human resources there. București - Ilfov is such an example in Romania, București, the capital of the Romania, being included in the region.

The clustering could only highlight the great gap between the București - Ilfov Region and the rest of the NUTS2 regions, which was maintained throughout the analyzed period. That can be explained by included Romania's capital in this region, the largest city with the highest standard of living. Eurostat statistics placed only București - Ilfov Region, as NUTS 2 region in Romania, above the European average in terms of GDP per capita, in 2014, (129%), while among the other 7

only two others were slightly above half of the European average: the Vest region - by 58%, and the Centru - by 52%. Development of Research and Development sector can be one explanation.

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## The European Union: Challenges and Perspectives

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### Abstract

*We can say that the European Union can be considered, as a whole, a regionally integrated institution in which the relations between states can be considered to a large extent an example of globalization. The attitude manifested in the framework of the World Trade Organization and in the process of bilateral cooperation once again demonstrates the European Union's attachment to the values imposed by the phenomenon of globalization. All these lead to an increase in the dependency and implicitly to the vulnerability both among the EU states and in the relations they develop with countries outside the European Union. At the same time, the complex mechanism of functioning developed at the level of the European Union, the exaggerated claims of some countries like Hungary, the reckless economic behavior of some countries like Greece determine the amplification of the effects in the event of a crisis.*

*If to all these we add the protectionist measures that the new president of the United States wishes to implement, as well as some deterioration in the European Union credibility generated by Brexit, the bureaucratic aspects that characterize the European institutions, etc., we can outline the context of the European Union, which requires a series of measures to ensure the progress of the European Union as a whole and, in particular, the effective integration of each Community country.*

**Key words:** crisis, trust, solidarity, economic growth, Brexit

**J.E.L. classification:** F15, F69

### 1. Introduction

The end of the Second World War meant for Europe, in the period that followed, a lot of poverty, destroyed economy, high inflation, etc. In this context, for humanitarian reasons and for strategic reasons as well, the United States has provided humanitarian and financial aid to Western Europe while also trying to promote the idea of a federation of European states following the American model. The American experience of developing free among its own countries has led to prosperity, and that is why it has been extended to Europe. The idea was embraced by Western European states, even though the UK has shown some reluctance stemming from the desire to preserve the colonial empire and the privileged relationship with the United States of America.

Both the founding countries of the European Union and the United States of America were determined to initiate the European Project also out of the fear of communism spreading including through free elections. The initiative proved to be a success, as demonstrated by the economic development, prosperity and the manifestation of democracy that followed.

Europe in recent years has been characterized by strong crises that have affected the European Project conceived and put into practice after the end of the Second World War. At present, the agendas of the Community countries are somewhat different, as a result of the loss of public confidence in the common European project.

## **2. The European Union in the context of the global financial crisis**

Consolidation of the globalization process over the last 30-40 years has been characterized by the liberalization of goods and capital movements and to a somewhat limited extent of labor force. By increasing interdependency among national economies, countries have become more vulnerable to crises that have erupted in different parts of the world. This has resulted in many phenomena of crisis contagion.

The global financial crisis which broke out in the United States, has severely affected the European Union and the entire world, and it has been driven, amongst other things, by the strong rise in housing prices, as more and more citizens have had access to credit loans.

There are a number of experiences before the 2000's when the price of certain products grew unnaturally. Obviously, the consequence was the collapse of the price of those products and the impoverishment of the majority of those involved in transactions. Something similar happened with the housing price that collapsed in 2008 and 2009. Unfortunately, the decision makers did not learn anything from the previous similar situations. The policy that followed in response to the crisis was not a unitary one, with states imposing their influence in concordance with their level of economic development.

The most influential Community country has been Germany for years as a result of the economic performance it has achieved. At the same time, Germany is strongly dependent on the common market, with the German economy being massively export-oriented. In 2015, the share of exports of goods and services in Germany's gross domestic product was 46.3%. Out of Germany's total exports more than a half is heading to the EU countries, which logically determines this country's interest in its development within the European Union. The austerity policy promoted by Germany and proposed to be extended to the European Union was strongly condemned by countries with huge external debt such as Greece, Spain or Portugal. After the onset of the crisis, the unemployment rate in the European Union has increased, among young people in certain EU countries this indicator exceeding 50% in certain periods. Missing any opportunity, some of the unemployed have become criminals or even worse, terrorists.

The viability of the anti-crisis measures adopted by many EU countries, which generally consisted in increasing government spending to keep unemployment at acceptable levels, is questioned. The difficult economic growth registered in the period since the crisis began can prove this.

One of the measures most commonly adopted in the EU countries was to increase budget allocations to boost investment in general and infrastructure investments in particular. In order to maintain an acceptable level of living standards for their own citizens, governments have acted in the direction of making investments to maintain or increase the number of jobs. There was a strong increase in budget deficits in the early years of the crisis. New jobs have been created mainly in the budgetary sector, but across the European Union the unemployment rate has increased significantly, with some countries reaching worrying proportions (Spain, Italy, Greece, etc.). The increase in the budget deficits resulted in an increase in the level of public indebtedness across the European Union, by 20 percentage in 2009 compared to 2008 (Pană, 2013, p.50). Some countries, including Romania, have reached the "performance" to double their public debt at the beginning of the crisis.

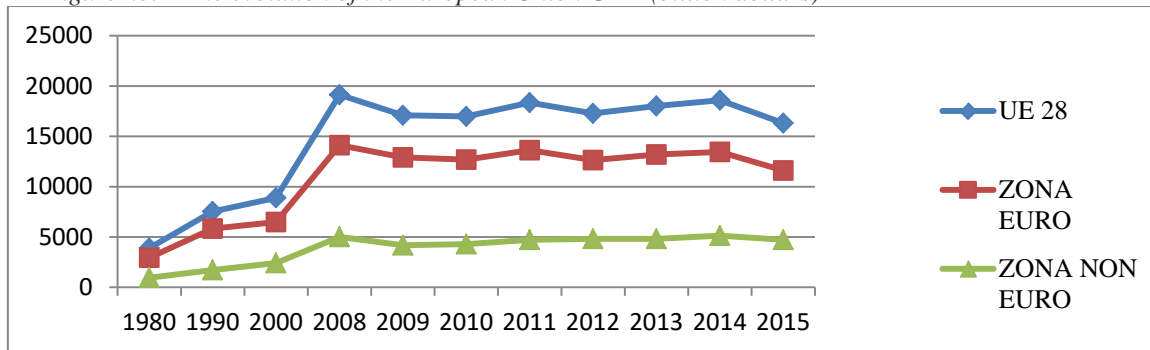
Turning to austerity measures as Germany's initiative, by putting a share of less than 3% of the budget deficit in the gross domestic product is also questionable. It should be stressed that austerity is actually an effect of a crisis and not a solution to solve it. The austerity measures that have mainly affected the level of in-house staff revenue have led to a reduction in consumption with negative consequences on the activity of private firms.

As austerity was chosen, this choice should have been implemented from the very beginning and not after major budget deficits with direct negative consequences on macroeconomic balances.

We can argue that the European Project from the very beginning has proved to be successful, making a major contribution to rebuilding the economies of the Western countries destroyed during the Second World War. Very good results in terms of economic growth have been recorded by each Community country and also across the European Union during the period of the globalization

phenomenon. The EU28 Gross Domestic Product was, according to UNCTAD statistics, 4.9 times higher in 2008 than in 1980.

Figure no. 1 The evolution of the European Union GDP (billion dollars)



Source: <http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=96>

For the European Union economy, really complicated problems have arisen with the expansion of the global financial crisis. It can be seen that the EU28 as a whole has failed to reach the level of gross domestic product registered in 2008. The same unfavorable trend was registered by euro area countries. Only 9 of the 19 euro zone countries have succeeded in reaching the level of Gross Domestic Product registered in 2008 in the years following the crisis, including Germany, Belgium, etc. On the whole, the situation of the non euro countries is better, with the gross domestic product in 2014 slightly above the gross domestic product in 2008. Out of the nine countries of the non euro area, 5 countries have managed to recover from the perspective of gross domestic product. In this regard we can mention the UK, Sweden, Poland, etc.

The banking crisis in the European Union seems to be far from over. With a non-performing loan exposure of nearly \$ 400 billion, Italian banks are in a severe liquidity crisis. In a similar situation, we can say even more serious, was the banking system in Cyprus. The European Union has rejected the loan requests for re-launching Italian and Cypriot banks. The position of the European Union was determined by Germany in an attempt to avoid using the German source of financial sources for loans in the euro area. Paradoxically, Deutsche Bank, with more than twice as much as EU28 GDP, has also encountered the same situation. To make things even more complicated, the United States gave a 14 billion dollar fine to Deutsche Bank for the role played by this bank in triggering the global financial crisis. It must be said that this huge fine is very close to the value of Deutsche Bank's share capital. The fine imposed by the United States can also be considered as a response to the 13 billion euro fine imposed by the European Commission on Apple company for violation of legislation. (Marchievici, 2016, cotidianul.ro)

### 3. Other phenomena that have affected the evolution of the European Union

Beginning with the desire to gain certain advantages at the level of the European Union, but especially for reasons of electoral image, **the UK's exit initiative** was turned into reality by the British vote. It is fair to say that the initiators of this approach bet on another unfolding of the events, manifesting themselves like that in a public way. Of course, both the European Union and the UK will suffer from Brexit, but the major disadvantages are on the side of Great Britain. The problems for London are becoming more and more complicated if we consider the Scottish separation tendencies expressed on that occasion.

It has to be said that Britain has had a somewhat privileged status within the European Union. The fact that the UK was not part of the euro zone enabled it to use the exchange rate to mitigate the negative effects of the global financial crisis. The unemployment rate in the years 2009, 2010, 2011 and even today is much lower in the UK than in France, Spain, Italy, etc. In the period prior to the British referendum in June 2017, the European Union was in the difficult situation of granting some concessions to Britain - hoping that it would not leave the European Union - but at the cost of forcing the principles underpinning this organization.

We can say that the UK is animated by interest, both in its relations with the European Union and with the United States of America. According to statistical data, most of the UK's exports are into the EU countries, taken as a whole, but its most important individual trading partner is the United States. From a political point of view, Britain proved to be a trustful ally of the United States of America, participating with military forces in the invasion of Iraq, in contradiction with Germany and France which opposed this initiative.

By supporting the US initiatives, the UK is trying to play an active, often subsidiary role in solving global issues, with all the benefits of this position.

The exit of Great Britain from the European Union gives Germany the opportunity and the challenge to play the first role in resizing the community architecture. The hectic mechanism involved in Britain's withdrawal from the European Union determines that a new European project can be adopted in a few years. The situation is complicated if we consider corruption, the attack on the rule of law and the economic imbalances in some of the former socialist countries currently members of the European Union, as well as the weak performances that characterize some countries with enhanced democracy (Spain, Portugal, Greece, etc.).

The isolation of America and the protectionist measures promised and to some extent implemented by **Trump** are meant to cause the US diminished trade flows both in its relationship with China and with the European Union. For China, it might be beneficial from a certain point of view; the diminishing US trade presence in Asia will allow the Chinese government to further promote its commercial interests in this area. Instead, for both the European Union and the United States of America, breaking the transatlantic alliance would have difficult geopolitical and economic effects, which would imply a new international order in which the role of the two entities mentioned above as well as the traditional partners (Japan, Canada, Australia, etc.) would be considerably reduced, while increasing the influence of Russia, China, Brazil, etc.

Marked by the bizarre positions of president Trump, America cannot be excluded from the EU's development strategies, and on the other hand, an America's non-economic relationship with the European Union would be less likely to maintain its status as the most powerful world economy.

**Liberalization of people's movement**, even if it does not amount to the level of liberalization of goods and capital movement, is much more dynamic today than 20-30 years ago. This phenomenon has led to population's migration from poor areas (with remarkable natural growth) to wealthy countries with an aging population.

The pressure generated in the major metropolises by emigrants mainly from former colonies and former socialist countries, on employment and on wages, has led to obvious discontent among many Europeans. Moreover, children from traditional families in Europe are facing tough competition for jobs and enrollment in famous Western colleges and universities against immigrant children, the latter being often very successful.

Over one million migrants from conflict zones who entered the EU in the last three years are the largest population exodus in this area over the last 50 years. Most of them have a **refugee status**. The European Union has allocated considerable sums to provide humanitarian assistance both to migrants in the European Union and outside the European Union (Turkey, Iraq, etc.). In many cases, on the basis of image considerations, the leaders of the EU countries have been engaged in a series of disputes on migration issues. Germany's position, favorable to the reception of a large number of refugees, was complemented by the initiative to establish a quota of refugees for all EU countries, which was highly criticized by many European leaders.

It is worth mentioning that the EU countries have been affected differently by this refugee crisis, most asylum applications targeting Germany, Italy, Sweden, etc.

After the Second World War, the cold war followed, the present generations witnessing a real urban guerrilla warfare triggered by **terrorist actions**, mostly carried out by European citizens with grandparents and grand grandparents from the Middle East.

The massive presence of law enforcement in the streets of the world's major capitals is the immediate and necessary reaction in such situations, but we must not forget that solving the problems of increasing economic inequalities, restricted access to education, etc. could improve the current situation in the future.

When discussing the present and the prospects of the European Union, we must also take into account **the geopolitical situation** in which we are.

The war in Syria has a tendency to become chronic, and military conflicts in Russia are far from a viable solution. To all these we can add Turkey's worrying "games" as a military and economic power in the area, coupled with the fact that Turkey is the only Muslim country that is a NATO member. The internal events that have triggered a worrying manifestation of authoritarianism in Turkey complicate an already tense international climate.

President Erdogan's calling the behavior of some of the EU countries as being Nazi or fascist comes to emphasize the diplomatic crisis between Brussels and Ankara.

While some powers have over time managed to have a global influence using a relatively broad range of means, Russia has succeeded in doing so, but only through the influence of weapons, threats and arrogance. Improving European countries and especially the Central and Southeast European countries' perception on Russia seems at present to be a utopia given the way in which the Kremlin finds the solution to the main internal but especially external problems.

Although Russia is no longer the military giant of the Cold War, it currently holds the most powerful army in Europe, which, along with the possession of huge natural resources, gives it the status of a country with great influence in the area. Russia's intervention in Ukraine and the amputation of the Ukrainian territory, the maintenance of some frozen conflicts in Europe, the great European powers' careful behavior in their relationship with Russia, see for example Germany, are some arguments in this regard.

Although it is far from Europe, the conflict in the China Sea must not be neglected. In this context, the relationship between the United States and Japan is amplified in the idea of blurring China's global expansionary trends.

#### **4. The future of the European Union**

Without the UK, the European Union is overtaken by the United States in its gross domestic product. This phenomenon cannot lead to the dissolution of the European Union, but it will increase the problems faced by this organization. Unfortunately, Brexit is not an isolated phenomenon. A significant number of citizens in many EU countries would sympathize with organizing referenda on the exit or desegregation of the European Union. It is worth noting the competitiveness that Germany is trying to impose at European Union level, which could have positive long-term effects both for the whole European Union and for the majority of the EU countries' population. The viability of the European Union depends to a large extent on the application of new economic and social policies, both at State and Community level, so that the citizens of the Union can perceive directly and fully the effects of the measures taken.

There are a number of scenarios about the European prospects, some particularly interesting ones being those synthesized by Georgiana Ciceo:

- a deeper Europe in the form of a federation governed by a diminished-size government, but much more prompt in action, with a common army and foreign policy;
- a flexible but differentiated Europe given the varying degrees of development of its constituent states, the most well-known model from this perspective being that of a Europe with more speeds;
- a pragmatic Europe, which requires a clear delineation of the issues that must remain on the Brussels agenda, of the problems faced by the governments of the countries of the European Union, so that the degree of satisfaction of the Community citizens increases;
- a Europe without the European Union, an idea supported above all by extreme right-wing parties in many EU countries and fueled by both Brexit and the decrease in credibility of the European Political Project. (Ciceo, 2017, p.148, p.156)

Of course, other scenarios about the future of the European Union can also be envisaged, and it is essential that Community decision-makers take steps to increase the solidity and confidence in the European project.



## 5. Conclusions

Dominated by national interests and supranational interests, which in some cases are contradictory, the European Union seems to have a future, being artificially kept alive for bringing together states; if the European Union were not to exist, it would generate an arms race in Europe and a series of worrisome economic and military alliances with partners like Russia or China. In essence, by maintaining the European Union, a number of specialists appreciate that, from a military perspective, the prevention of wars among European countries is being pursued.

George Friedman captures the highly contradictory feelings that characterize the European Union today, as follows: "Europeans want peace and prosperity. They want to preserve their national sovereignty, but they do not want these sovereign states to fully exercise their sovereignty. They want to be one people but not to share the fate of others. They want everyone to speak their own language, but they do not think this is a barrier to mutual understanding. They want triumph, but they do not want to risk. They want to be fully safe, but they do not want to defend themselves". (Friedman, 2016, p.324-325)

There is a crucial link between the European Union and democracy. In practice, a European Union lacking democracy would lead to the transformation of the European Union into a structure in which powerful countries are imposing their will to the detriment of the least developed ones. Conversely, sovereign states even marked by democracy, without the European Union, would turn Europe back many years ago. We would come back to the logic of balance among the main European states which has nevertheless generated two world wars with catastrophic effects.

Maintaining and strengthening the spirit of solidarity among the EU countries, plus the need to increase confidence in European institutions, are key challenges at the level of the European Union's leadership.

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# Regional Development Through Investments in the Health Infrastructure in Romania, 2007-2013 Programming Period

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## Abstract

*The inadequate quality of healthcare services infrastructure is one of the key issues identified in the National Development Plan of Romania 2007-2013, whose solution was pursued through the use of structural and cohesion funds. The allocation of funds from the European Regional Development Fund, from the State budget or as a contribution from the beneficiaries, meant for Romania a sign of commitment to solving this problem. However, the insufficiency of funds, the problems encountered especially in terms of the human resources deficit in this area, have made the need for improving the medical system to persist within the 2014-2020 programming period.*

*This paper presents the situation of the financed projects implemented with the financial support of Regional Operational Programme 2007-2013. The available data are presented using the statistical analysis. The comparative results are presented for each region..*

**Key words:** regional development, EU structural funds, statistics, regional disparities, health infrastructure

**J.E.L. classification:** H75, R10, R58

## 1. Introduction

The health status of the population is an essential element in ensuring demographic balance and providing adequate work resources. That is why the field is presented and analyzed both in the programming documents made at national (NDP 2007-2013, 2006), as well as at regional or local level. The sanitary infrastructure, the endowment with advanced equipment and technology are needs identified in the regional development plans adopted at the level of the development regions for the 2007-2013 programming period (RDP Bucharest –Ilfov, RDP Center region, RDP North – East 2007-2013). The plans also include goals and priorities that target the healthcare field, whether as a health infrastructure (RDP South-Muntenia 2007-2013, 2006, p.110) or included in the social field (Regional Development Strategy for South-East Region 2007-2013, 2006). However, in addition to infrastructure, there is a need for adequate and sufficient human resources (Regional Strategic Framework, North – West 2007-2013, 2006, p.117). They have responded to strong challenges such as brain drain. Only in certain situations has the effect been diminished, the growth poles being the framework where interventions were much better completed and sustained. The Regional Operational Program 2007-2013 has responded to the regional needs, managing to some extent their resolution, taking into account the limited level of financial resources.

## 2. The financial support for health infrastructure

The European Fund for Regional Development was the most important financial source for the infrastructure development at regional level, including the one in the healthcare field. The total amount allocated to Romania was of 8,976,466,066 euro, as opposed to 6,552,423,028 euro allocated from the Cohesion Fund and 3,684,147,618 euro the European Social Fund.

The total financial allocation for the Regional Operational Program 2007 - 2013 was 4,568,341,147 Euro, out of which 3,726,021,762 Euro from the European Regional Development Fund (ERDF), the rest representing national public funds and private funds (ROP 2007-2013, p.162). The rehabilitation / modernization / equipping of the health services infrastructure is the first key area of intervention of priority axis 3 of the ROP 2007-2013 aiming at creating the necessary premises for ensuring the population with essential services, thus contributing to the achievement of the European objective of economic and social cohesion and to reduce the regional disparities. This aspect has generated different opinions (Antonescu, 2012), the role of the EU funds in reducing regional disparities being challenged (Boldea, 2012)

Through the rehabilitation, modernization and equipping of county hospitals, as well as through the rehabilitation, modernization, development and equipping of outpatient clinics (hospitals and specialty facilities), the quality of healthcare services and their territorial - regional distribution were balanced on the territory of the country, to ensure equal access of citizens to health services.

The Regional Operational Program through the KAI 3.1 supported the implementation of the National Health Strategy adopted in 2004 in order to achieve its objective, namely to improve the health status of the Romanian population and to ensure a high level of protection of human health. (see Table no.1)

The indicative financial allocation for this area of intervention was 173,588,779 Euros, out of which 147,550,461 Euros from the ERDF and 26,038,318 Euro national co-financing (from public sources) out of a total allocated for Priority Axis 3 of 657. 53 million EUR, of which EUR 558.90 million from the ERDF and the remaining national co-financing.

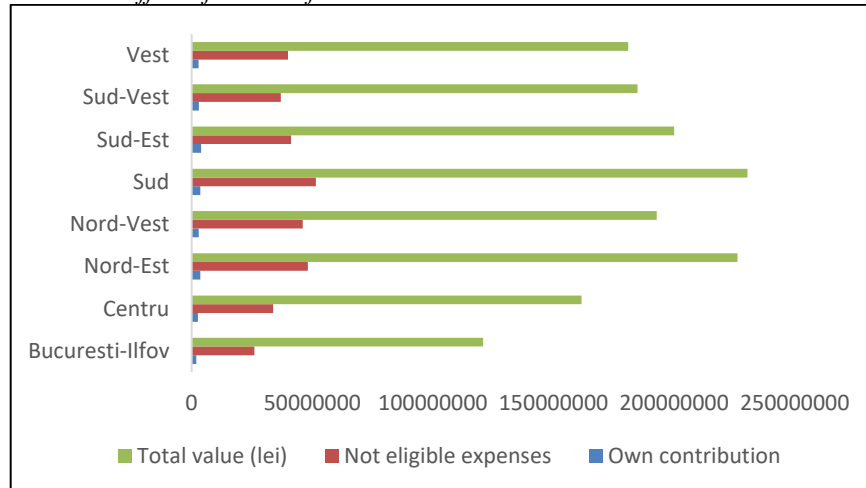
*Table 1: Projects and values per region, ROP 207-2013, KAI 3.1 Health Infrastructure*

<b>Region</b>	<b>No of projects</b>	<b>ERDF</b>	<b>State Budget</b>	<b>Total value (lei)</b>
Bucuresti-Ilfov	3	80619753,23	12330079,91	120821850
Centru	13	108715331,6	16627050,72	161621863
Nord-Est	14	151411875,3	23157110,33	226253905,1
Nord-Vest	14	124723618	19075377	192789956
Sud	10	152045897	23237740	230367800
Sud-Est	18	134544427	20360212	199981821
Sud-Vest	13	125718943	19197815	184812856
Vest	19	119867265	18332640	180955261

*Source:* Data processed by the author based on the data available on <http://www.inforegio.ro/ro/implementare/proiecte-finantate.html> (accessed on May 15th, 2017)

For the realization of these projects, the beneficiaries contributed with financial resources (see Figure no.1), covering the requested own contribution, as well as the non-eligible expenses. Thus, of the total value of 1497605312 lei attracted at regional level, 24235534.58 lei represents the beneficiaries' contribution. 323404873.7 lei represented the non-eligible expenses, borne from the local budget. The region with the most non-eligible expenditure was the Centre region, which supported a value of 33721473.64 lei, and the lowest value was registered in the South-West region, respectively 36908217 lei. This can be the consequence of a good management in the elaboration of the documentation for obtaining the financing, but also of the implementation of the project.

Figure no. 1 Financial effort of the beneficiaries



Source: Data processed by the author based on the data available on <http://www.inforegio.ro/ro/implementare/proiecte-finantate.html> (accessed on May 15th, 2017)

### 3. Human Resources in the healthcare field- Example the Growth Pole Brasov

The Growth Pole Braşov includes the municipalities of Braşov, Codlea and Sacele, the cities of Ghimbav, Predeal, Rasnov, Zarnesti, Bod, Cristian, Crizbav, Feldioara, Halchiu, Harman, Prejmer, Sanpetru and Tarlungeni part of the Braşov Metropolitan Area. The total population of the Growth Pole is of 406611, according to the data from the 2011 census (Integrated Development Plan, 2009). The evolution of the stable population at the level of the Braşov Growth Pole registered an upward trend during the period 2008-2013, the average annual growth rate being of 0.15%, the growth over the entire period being of 0.73%.

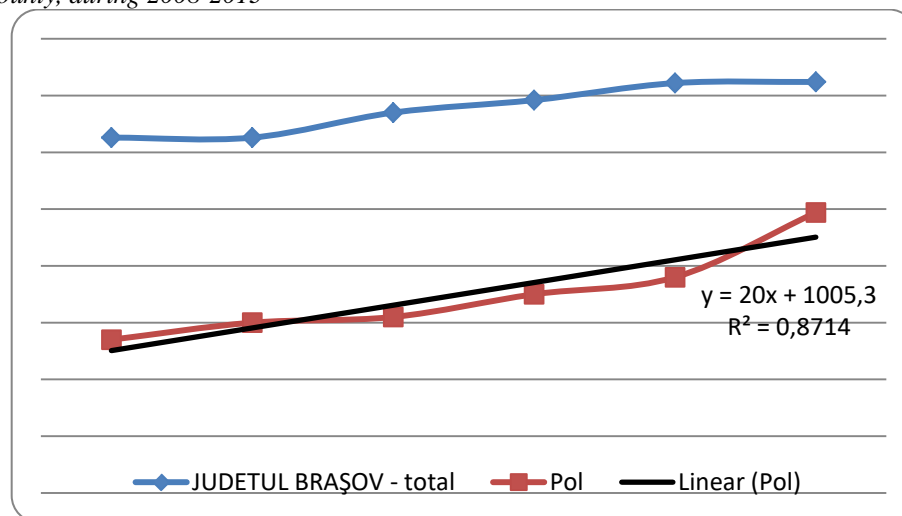
As far as the health infrastructure is concerned, the project "Modernization, rehabilitation and equipping of the health services infrastructure within the Ambulatory - Clinical Hospital of Obstetrics Gynecology Dr. IA Sbarcea - Braşov ", was realized in Braşov, the beneficiary being Braşov County through Braşov County Council. The total value of the project was of 2,169,120 lei, of which ERDF 1,445,170 lei, the State budget 221,026 lei, own contribution 34,004 lei and non-eligible expenses 468,920 lei.

At the level of the Braşov Growth Pole, 25 projects were implemented with funding from the ROP 2007-2013, Priority Axis 1, with ERDF funding of 288,708,622 lei, to which are added from the State budget 63,398,983 lei, own contribution from the beneficiaries of 71,010,950 lei. The general conditions that generated an increased level of infrastructure quality at the growth pole level have also influenced the evolution of the medical staff as in other EU regions (Rodríguez-Pose, 2004).

A comparative analysis of the dynamics of the health care personnel (physicians and healthcare personnel) at the level of the Growth Pole in the total of the county reveals positive evolutions for both categories, more pronounced for doctors (from 85.3% in 2008 to 90.9% in 2013), with a significant contribution of Braşov (a 15% increase over the same period).

The analysis of the evolution of the number of doctors in the county and the Braşov Growth Pole shows (see Figure no.2) an upward trend throughout the 2008-2013 period, the increase being more pronounced at the level of the pole (by 11%), compared to the whole county (where the increase is of 4%) . This positive trend registered at the pole level can be sustained by the effect of the socio-economic development public policies of the area and mitigates the effects of the phenomenon of "brain drain" in the healthcare sector.

Figure no.2. The evolution of the number of physicians at Brasov Growth Pole level and the total of the Brasov County, during 2008-2013



Source: Author' processing based on NSI data

In the case of the average health personnel, the situation is different, with a trend of accentuated diminishing over the whole analyzed period 2008-2013, both at the county level (21.2%) and the pole level (20.7%). Exceptions to the general tendency of decreasing the number of the healthcare personnel are the localities: Predeal (about six times), Feldioara (about three times) and Tarlungeni (about two times).

Intervening within the Key Area of Intervention 3.1 of ROP 2007-2013 was to improve the quality of health care services and to ensure a balanced territorial distribution of the population, in order to increase the accessibility of the population to health services.

The factors that have contributed to the success of funded projects include: identifying health needs by consulting stakeholders - health service partners (local authorities, healthcare professionals) and their direct involvement in projects, as well as by surveys and studies on the demand and potential benefits of the intervention. The project management quality is another element of success, respectively the responsible project management team, with the necessary knowledge and training in the field of healthcare services, adequate capacity for project implementation, good collaboration between beneficiaries and hospital management.

#### 4. Conclusions

The interventions financed by the ROP related to the KAI 3.1 have contributed to the diversification of health services, the increase of their quality, the number of patients treated and their satisfaction in the medical units that benefited from this funding. It also improved the level of user satisfaction and a positive perception of change in terms of infrastructure and service quality after project implementation. KAI 3.1 has also produced tangible results for people living near hospitals and in remote or underprivileged areas, by increasing access to health services, particularly in ambulatory and hospital settings, and by improving the quality of the services provided.

For the 2014-2020 programming period, in order to contribute to promoting social inclusion and combating poverty, ROP 2014-2020 includes Priority Axis 8 - "Developing Health and Social Infrastructure". Thus, it is ensured the correlation with the National Health Strategy 2014-2020, which identifies the directions of development that Romania has to follow in order to ensure equitable access to quality healthcare services as close as possible to the needs of the individual and the community. The Investment Priority 8.1 - Investment in health and social infrastructure contributes to reducing inequalities at national, regional or local level in terms of health status and promotes social inclusion by improving access to social services. Thus, there will be made investments in infrastructure regional emergency hospitals and in Emergency Receiving Infrastructure units/ components of the functional Regional Emergency Operational Units and

within the strategic interest components of the Emergency Hospital Unit Networks. The amount allocated for this axis is of 763.45 million euro.

Hence, although substantial, the financial allocations from the programming period were insufficient and therefore financial support is also provided for 2014-2020 (RDP Bucharest – Ilfov, RDP South-East and RDP South – Muntenia 2014-2020). Further effort is needed from local authorities in improving health infrastructure, although the dynamics of adequate human resources is an attribute of the national public policy. Infrastructure investment is not enough, the complementary human resource ensuring its capitalization.

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# The "Europenity" Index. Statistical Survey on Five Target Groups

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## Abstract

*The research aims to evaluate the perception of the population, represented by five target groups, on "European citizenship". We propose an evaluation methodology according to four criteria: the opportunity of Romania's adherence to the European Union; the interest in European themes; identity of European citizenship; complementarity between national and European identity. The survey was conducted on a sample of 800 people from various social backgrounds.*

**Key words:** europenity, national identity, European identity, integration, governance

**J.E.L. classification:** F010

## 1. Introduction

There is no consensus on defining the concepts of Europeanization and the European citizen. Some speak of the Europeanisation of the internal policy of the member states, others of the Europeanization of society, sometimes Europeanization is approached as a phenomenon adjacent to the enlargement process etc. (Bărbulescu & Răpan, 2009, p.345). A more elaborate treatment gives the concept a wider sense: Europeanization as a transfer of good practice; Europeanization as a process of political unification; Europeanisation as an adaptation of national systems to European institutions; Europeanization as an extension (Olsen, 2002, p.921-952; Qualia, 2007, p.407; Ion, 2013, p.203).

There are opinions that Europeanization is not a theory but only a process that can be explained by theory (Radaelli, 2009, p.113). Claudio Radelli considers that "Europeanization must not be confused with convergence or harmonization" (Radaelli, 2009, p.108) and it is not equivalent to integration because "we do not assume that a greater degree of Europeanization leads to a more efficient process of the implementation of public policies" (Anderson & Eliassen, 2001, p.12).

The most common definition of Europeanization is that it refers to the processes of construction, dissemination, institutionalization of formal and informal rules, procedures and policies (Ion, 2013, p.204).

It should be made clear that the Treaty of Maastricht was the one that gave the citizens of the Member States the supreme title of "European citizen", which also implies a change in the way we design our national and European affiliation. Through such an interpretation, "the community ideal of supranationalism evokes and reflects the ideas of Illuminism, privileging the individual" (Weiler, 2009, p.253).

## 2. The "Europenity" Index. Objectives and methodology of the research

From the perspective of our research, we consider that there are two directions of approach.

A first direction is the appreciation of the Europenity index at the level of the administrative-territorial units: municipalities, towns, communes.

A second direction focuses on how the population understands being European: the advantages / disadvantages of Romania's integration into the EU; the visibility of European issues and the interest of citizens in these themes; cultural, civic and instrumental identity.

Concerning the first direction, we highlight the research conducted by the Group of Applied Economics (GEA) within a project for four major cities, county residences: Cluj, Timisoara, Iasi and Constanta. The European Index was structured into three sub-indices: administrative; economic; socio-cultural. The scale used was 1 - 4, 1 being a low degree of Europeanity, 4 a high degree of Europeanity. The conclusion of the GEA study was that Timisoara has the highest European index followed by Cluj and Constanta (GEA).

In our work we will focus on the second direction of research.

*Objectives of research:*

- The perception of the population about the opportunity of Romania's adherence to the European Union (I1);
- People's interest in European themes (I2);
- Identity of the European citizen on the studied population (I3);
- Complementarity between national identity and European identity (I4)

*Evaluation method:* statistical analysis based on questionnaire.

*The sample* has studied five target groups:

- students from the University of Medicine and Pharmacy "Victor Babeş" Timișoara (UMFT) with a weight of 25%;
- students from West University of Timișoara (UVT) with a weight of 25%;
- resident physicians in the cities of Timisoara, Arad, Oradea, Lugoj with a weight of 7% (R);
- top-management of companies in the cities of Timisoara, Arad, Oradea, Lugoj with a weight of 10% (M);
- employees from the private system in Timișoara, Arad, Oradea, Lugoj with a weight of 33% (S).

The distribution of the questionnaires was done directly for students and residents and electronic for top-management and employees.

*Methodology:*

- the European Index (I) =  $\sqrt[4]{I_1 \times I_2 \times I_3 \times I_4}$
- evaluation grid: on a scale of 1 to 5, the perception of the target group on opportunity, interest, identity and complementarity (the four objectives set) was measured where: 1 - very low level; 2 - low level; 3 - average level; 4 - high level; 5 - very high level.
- structure of the sample: a total of 1000 questionnaires were distributed, validated were 800, 80% of which we considered good.

*Table no. 1 The structure of the sample*

<b>Total respondents</b>	<b>UMFT</b>	<b>UVT</b>	<b>R</b>	<b>M</b>	<b>S</b>
<b>800</b>	200	210	56	70	264

- sample representativity:

$$n = \frac{t^2 \times p \times q}{e^2} = \frac{t^2 \times p(1 - p)}{e^2}$$

Extracting the sample with a probability of 95% where:

- n - the size of the sample;
- t - the statistical confidence rating considered (t = 1.96 corresponding to a confidence level of 0.95 in the statistical tables);
- p - the frequency of occurrence of the phenomenon studied in the sample (we consider p = 0.50 for a dispersion with the maximum possible value);



- $q = 1 - p = 1 - 0.50 = 0.50$ ;
- $e$  - allowed tolerance margin.

Result:  $n = 384.16$ , therefore our sample is statistically representative.

### 3. Conclusions

*Conclusion no. 1:* The perception of the population about the opportunity of Romania's accession to the EU

Table no. 2 Received answers

Respondents category		Mark awarded					Scoring
		1	2	3	4	5	
1	UMFT	-	-	-	80	120	920
2	UVT	-	-	20	60	130	950
3	R	-	-	-	6	50	274
4	M	-	-	20	40	10	270
5	S	20	10	34	80	120	1064
Total		20	10	74	266	430	3476
							800

Table no. 3 Statistical indicators

$\sigma$	$v$	$m$	$m_1$	$m_2$	$m_3$	$m_4$	$m_5$
0,886	20,3%	4,345	4,60	4,52	4,09	3,86	4,00
$\sigma$ – average square deviation; $v$ – coefficient of variation; $m$ – overall average; $m_1$ – UMFT average; $m_2$ – UVT average; $m_3$ – R average; $m_4$ – M average; $m_5$ – S average							

Interpretation:

- The value of the coefficient of variation (20.3%) shows that the series is homogeneous being statistically validated;
- The overall average of 4,345 across the sample shows that the investigated population has a very favorable perception of the opportunity of Romania's EU adherence. The answers have a logical explanation:
  - The majority of the population was favorable to Romania's adherence to the EU (65% at national level);
  - The sample we study represents the population, mostly with higher education, from large western cities with a higher level of perception of EU integration.
- There are no significant differences between the average sample size and the groups we have studied. Except for top-management, all responses are in the upper quartet. The explanation given by some company directors disapproves the policies practiced by the Romanian government by granting facilities to foreign companies.

$$I_1 = 4,34$$

*Conclusion no. 2:* The interest of the population in European themes

Table no. 4 Statistical indicators

$\sigma$	$v$	$m$	$m_1$	$m_2$	$m_3$	$m_4$	$m_5$
0,863	31,0%	2,777	2,95	3,142	3,285	4,00	1,924

- The average value on the whole sample of 2,777 is closer to the lower quart. The bottom line is that at least the investigated population shows a low interest in European themes. Our question may not have been perceived correctly, but the distribution of responses by respondents would not confirm this hypothesis. A logical explanation would be that European

themes are debated in the media when the subjects have a negative connotation. Very little is debated about real issues - projects, European programs. The lack of concerns about European issues is also confirmed by the fact that few are the ones who know the names of the Romanian MEPs, and even less the programs launched by them.

- Employees show the least interest (1,924), while top management is in the upper quartet (4,00). An explanation would be that managers, in the interest of companies, are obliged to connect to European problems.
- The higher level of medicine residents (3,285) would be explained by their concern to work in EU countries.
- As far as students are concerned, the perception is around the average, which we believe corresponds to reality.

$$I_2 = 2,777$$

*Conclusion no. 3: The identity of European Citizen*

*Table no. 5 Statistical indicators*

$\sigma$	v	m	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	m <sub>4</sub>	m <sub>5</sub>
0,573	17,2%	3,33	3,25	3,047	3,107	2,85	3,787

- The average value of 3.33 gives the following significance: although European integration has been and still remains an option for most Romanians, the same majority finds that between the German citizen and the Romanian citizen there is no factual equality (pay, access to work , etc.). This difference is not always done by competence, but simply that the German lives in Germany and the Romanian in Romania. The value is close to the national level (66%) according to the Eurobarometer of 2017.
- What seems surprising to us is the perception of top-management below the average level (2.85). Discussions have shown that they perceive the phrase "European citizen" from the perspective of business relations with companies in EU countries.
- At first glance, the perception of employees above average (3,787) was a surprise. The explanation came from personal discussions: young people are practically "hunted" by foreign companies. They feel European because the companies appreciate their competence.

$$I_3 = 3,33$$

*Conclusion no. 4: The complementarity between national and european identity*

*Table no. 6 Statistical indicators*

$\sigma$	v	m	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	m <sub>4</sub>	m <sub>5</sub>
0,656	17,8%	3,682	3,25	3,809	4,107	3,714	3,810

- The average perception of 3,682 approaches the superior quart, pointing out that the population surveyed considers that the relationship between national identity and European identity is in terms of coexistence.
- Residents are close to the superior quart, which means they share the idea of a beneficial coexistence between national and European identity. This is probably explained by the fact that more and more Romanian doctors work abroad and accommodate them in other countries of the Union.

$$I_4 = 3,682$$

*Conclusion no. 5: The Europenity Index (I)*

$$I = \sqrt[4]{4,34 \times 2,77 \times 3,33 \times 3,682} = 3,49$$

According to our methodology, if  $I \geq 2.5$  means that the population perceives positively integration, considering that the EU has common values, conferring a European identity and civic identity. From our statistical research ( $I = 3,49$ ) we conclude that, with all the shortcomings, the population perceives the advantages of integration to a fairly high level.

In conclusion, the five target groups believe that the European Union remains an option with favorable prospects.

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# The Strategy for Development of the Railway Transport in the Dobrogea Region. The Passengers Transport

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## Abstract

*In this paper, a railway transport analysis is carried out in the Dobrogea region, one of the most important regions in Romania, but where no major investments have been made in this type of transport for a very long time. Taking into account the steps taken in the European Union to stimulate the development of railway transport, it is important to know the real situation in Dobrogea in order to propose strategic development directions, that are not on paper but are taken into account and used by the central and local authorities.*

**Key words:** transport, strategies, railways, passengers, development

**J.E.L. classification:** E61, R11.

## 1. Introduction

Rail transport has developed very much in Romania after 1970, when electrification of main railways began between major cities and industrial areas. In this direction, the Dobrogea region had among the first electrified railway lines on the Bucharest, Cernavoda, Medgidia and Constanta route. The electrified line was extended from Constanta station to Constanta port and especially to the southern port area, to the Danube-Black Sea Canal at Agigea and the container terminal. The main data on the situation of Romanian railways are presented in Table no 1.

*Table no 1. Situation of rail transport infrastructure*

The length of the railway network	10.818 km	Number of crossings with rail (number of automatic ones).	5.119 (1.082)
Double line	2.909 (27%)	Number of switches	20.868
Simple line	7.771 (72%)	Train control (signaling) infrastructure: -Electronic interlocking systems. -Relay centralization systems. -Installations without centralization. Automatic line block: -Number of installations.	28 618 354 577
Electrified (over 25 Kv)	4.002 (37%)	Non electrified	6.816 (63%)
Number of stations	965	Number of tunnels	177
Number of bridges	4.216	Length of tunnels	6.809
Number of floors (little bridges)	13.961	-	-

*Source:* N.C. „CFR” Sp.A., information on the railway network.

## 2. The situation of rail transport in the European Union

It follows from the European Union documents that "the absence of an international market has made initially no liberalization and integration initiatives for this type of land transport" (EC, 1992, pg. 7). In 1969 a Council Regulation (EEC-II, 1969, pg. 30) emerged, which established common accounting mechanisms for the national railway companies (EEC-III, 1977, pg. 7). In 2000, the

European Parliament and the European Council adopted a "Proposal for a Regulation" on the statistical record of rail transport. During the period 1981-1996 the desire for cooperation between the national railway companies in the case of international goods and passenger traffic intensified (EEC-I, 1969, pg. 3). After 1995 there were proposals for the liberalization of railway transports, and in 1996 a strategy was published regarding the revitalization of the railway transport, because the lagging behind of them and the loss of the market share were noted. In order to guarantee free access to the railway market, the European Union's leadership, economic recovery and integration of national networks were proposed in a European network. Thus, four Directives, drafted by the European Commission:

-Directive European Parliament - Council no. 2001/12/EC of 26.02.2001 amending Council Directive no. 91/440/EEC on the development of the Community's railways. This Directive has been followed: liberalization, free access of valid license holders, guaranteeing the independence of national railway companies, internal management, administration and control.

-Directive European Parliament - Council no. 2001/13/EC of 26 February 2001 amending Council Directive 95/18/EC on the licensing of railway transport.

-Directive European Parliament - Council no. 2001/14/CEE of 26.02.2001 promoting "Integration of rail transport and increasing competitiveness".

-Directive European Parliament - Council no. 2001/16/EC on "Interoperability of the European Rail System".

Through this genuine "infrastructure package", the European Commission has pursued the opening of rail freight markets, creating an optimal framework for access conditions for railway companies to national networks. In 2002, the European Commission proposed a new package of measures designed to revitalize railways through the rapid construction of an integrated railway area in Europe.

In 2004, the European Commission adopted a third package of measures aimed at furthering the rail sector reform by opening up international passenger transport services to the European Union, strengthening passengers' rights, establishing a certification system for train drivers locomotive and improving the quality of rail freight services. Rail transport has been a worrying decline in Europe over the last thirty years, notably the transport of goods. In 1970, the share of railways was 21% of all goods transported in the 15 EU countries before the union expanded. In 2000, this figure dropped to 8.1%. Over the same period, the share of road freight transport increased from 30.8% to 43.8%. The rail sector is the only one to decline, all the others have improved their performance. Rail passenger traffic has fallen, but not as dramatic as freight. The main cause of this state of affairs is that the rail sector is not as competitive as road transport. Rail transport is less secure than road transport in terms of delivery terms, which are less predictable. On some international routes, delivery terms have doubled or even tripled in recent years. This is mainly due to the very long stops on the route, as other trains, especially for passengers, have priority, and border procedures are complicated because train crews and locomotives have to be changed due to differences in signaling systems from a country to country, etc. Terms of delivery are very important for many sectors of activity. Railways have a number of advantages in this way: it is a safe and clean way of transport, a train can carry 50-60 trucks. The railway infrastructure covers a lot of territory and is in good condition, but it does not meet the requirements of the customers.

### **3. The situation of rail transport in Romania**

Following the analyzes carried out by the Ministry of Transport, I found a series of issues, related to the real situation of the railway transports in Romania and several development perspectives. First of all, the situation of the rail freight transport is interesting, as it is presented in the program documents of the Ministry of Transports. Thus, it is considered that "rail transport covers the entire area of the country", "it is more advantageous to transport goods over long distances by rail, because rail transport provides economies of scale better than road transport" (MT, 2015, pg. 213). In the documents drawn up, it is recognized that "the Romanian rail freight transport has been in decline for some time, partly due to the fact that traditional industries such as the metallurgical industry have been affected by a significant decrease in production". A second particularly interesting appreciation is that "rail freight transport will continue to lose market share

if there is no involvement in new, more dynamic industries". Equally important is the recognition that "the road sector has been a serious competitor for rail transport, offering lower prices, lower mileage and higher punctuality". Nothing new in the documents of the Ministry of Transport, information was taken from the documents of the European Union. These assessments, together with the detailed analyzes carried out for each railway sector in the country, highlight the disaster of freight transport by rail. Concerning passenger transport by rail, in the same document drafted by the Ministry of Transport, it is estimated that "the number of passengers has decreased between 2004 and 2012, from about 100 million to 58 million per year" (MT, 2015). "The great decrease in the utilization rate of the Romanian railways between 2004 and 2009 is the largest decrease registered in the Member States of the European Union". The demand for rail transport in Romania, measured in kilometers traveled/passenger, is 2-3 times lower than in other countries. Average in the European Union is 650 km/passenger/year, and in Romania the equivalent indicator is 66% lower. In a comparative analysis of the mileage/passenger ratio in Romania it is 239 km/passenger, much lower than other EU Member States. This means that compared to countries with similar rail network capacity, based on the number of inhabitants, it is clear that the Romanian railways use rate for passengers is very low.

Another important analysis is related to the situation of the large railway companies, whether they are profitable or not, whether they bring revenues to the state budget or vice versa, live on government subsidies. Following the synthetic statements in the Balance Sheets (CFR, CFRM, CFRC, 2017), I compiled table 2, with the main indicators of the company's assets. From this table it follows that in the year 2016 the national companies "CFR" and "CFR Călători" had profit, and "CFR Marfa" had losses. Following the situations presented in their supporting documents, there is a clear downward trend in the revenues of the three major companies, which has important causes for each type of business. I believe that at this moment the situation of "CFR Marfa" is serious, with fewer possibilities for recovery by its own forces or by government subsidies. Looking at the debt situation for "CFR", other companies which are using the railway infrastructure, the image of the heavy rail transport situation is more than obvious. This can be explained by the tendency for rail transport to fall, both freight and passengers. In this context, does the natural question arise, whether the rail network is still needed, if infrastructure, locomotives, freight wagons or travelers are still needed? As a result of simplified analyzes, it is clear that, without the real involvement of the state government, the government through the ministries responsible for transport, economy, tourism and finance, there can be no real re-launch of rail transport. Taking into account the situation at European level and especially the strategies provided by the European Union, for the re-launching of this type of transport, only responsible, concrete and consistency political decisions can save the Romanian railways and the businesses they generate.

Table 2. Main indicators of Railway trade companies in 2016

No	THE COMMERCIAL SOCIETY	Revenue	Costs	Net profit (+) / Loss (-)
				lei
1.	National Railway Company "CFR" SpA.	3,183,823,180	2,491,942,820	+501,300,000
2.	National Railway Freight Transport Company "CFR Marfa" SpA.	745,505,290	939,806,745	-128,673,548
3.	The National Railway Passenger Company "CFR Călători" SpA.	2,174,748,000	2,125,655,000	+48,964,000

Source: author's study, official companies documents.

#### 4. Developing passenger transport by rail in the Dobrogea region

As can be seen from Figures 1, 2 and 3, Dobrogea is crossed by a railway network as follows:

-Electrified railway from Bucharest, Cernavoda, Medgidia, Constanta, Agigea and Constanta South - Agigea port, figure 1.

-Constanta - Navodari railway, the city of Constanta, the non-electrified railway, figure 1.

-Constanta - Mangalia railway line, to the commercial port Mangalia, unelectric railway, figure 1.

-The Medgidia - Negru-Voda railway, non-electrified railway, Figure 1.

-The Medgidia Railway - Tulcea, unelectric railway, Figures 2 and 3.

These figures show that the railroad arrangement in Dobrogea cuts the region on two main axes, on the west-east (electrified) and north-south (non-electrified) directions. The electrified railway was put into use in 1970, but since then the Romanian state has not electrified the other railways in Dobrogea. There was an electrification project up to Mangalia, but it was not completed. At present, with the Ministry of Transport, in the Master Plan elaborated for the development of transports, no investments in the Dobrogea railway line are foreseen. All documents refer only to maintenance and repairs. At this point, the question may be whether it is a correct approach to the situation or is it wrong? Beginning with the business philosophy that sometimes "supply - create demand ", currently used in China at state policy level, regarding infrastructure development in central and western China, areas undeveloped (WS, 2016), I believe that the Romanian state must develop the railway infrastructure in Dobrogea and offer economic operators and travelers the possibility to use it at European quality standards.

For this purpose, for the development of passenger transport, the following railway investments can be made:

-Electrification of the line between Navodari and Constanța, modernization of the railway to introduce an over ground metro, starting from the Midia-Năvodari petrochemical platform (Midia head), with passenger stations at Năvodari, Lumina, Ovidiu, Constanța west (Aurel Vlaicu street, in the commercial and industrial area), to Constanta main station.

-The electrification of the line between Agigea and Mangalia, the modernization of the railway and the transformation of the passenger trains into the over ground metro, leaving the commercial port of Mangalia, with stations in "2 May", Limanu, South Mangalia, to Mangalia main station and from there to Constanta. The metro line could unite the Mangalia port, with the Midia-Navodari platform. This could practically link the entire coastal area from "May 2" village to Midia's head.

-Transformation of the "Palas" tunnel, which was carried out between 1895-1900, by Anghel Saligny, on a access road in the port, linking the "CET" area with the port of Constanta, which would reduce the traffic on the Aurel Vlaicu and Caraiman streets up to Gate no 5 of the port.

-Electrification of the line between Medgidia, Babadag and Tulcea. Due to the low number of localities in the three main cities, it is not necessary to introduce an over ground metro, but increasing the speed of travel and reducing the journey time would favor the development of rail travel.

-Modernization of railway stations, connection with the means of road transport, connecting the railway stations with social and economic objectives, through partnerships concluded with the road transport operators.

-Planning a timetable to take into account the interests of commuters, their needs to get to the workplace, at school or college on time and safely (Iordanoaia, 2017, pg. 48).

Figure no. 1. The center and southern area of Dobrudja.

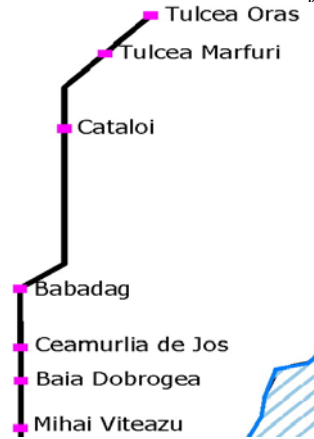


Source: [http://tren.transira.ro/index\\_files/harta/Romania\\_rail.jpg](http://tren.transira.ro/index_files/harta/Romania_rail.jpg)

Figure no. 2. The center area of the region



Figure no. 3. The northern area of the region



Source: [http://tren.transira.ro/index\\_files/harta/Romania\\_rail.jpg](http://tren.transira.ro/index_files/harta/Romania_rail.jpg)

Taking into account the increasing speed of the trains between Bucharest and Constanta, a speed line between Bucharest and Tulcea would favor the development of tourism in the “Danube Delta” area and other insufficiently explored tourist areas, such as the Geological Reserve “Gorge of Dobrudja”, Nature Reserve “The Mouth of Dobrudja”, the “Slava Cercheza” – “Slava Rusa” area, the Nature Reserve “Babadag Forest”. These would become known to tourists from the country and abroad, but will also make the “Danube Delta” tourist areas more attractive, starting from Ceamurila de Jos (which has a railway station) to Jurilovca and “Golovița” Lake and the “Mouth of Portiței”.

## 5. Conclusions

For the development of passenger rail transport in the Dobrogea region, Constanta and Tulcea counties, consider the following steps and measures:

-Planning and realization of a joint development project of the two counties. The project must be carried out by the Constanta County Council and the Tulcea County Council. Involvement of Local Councils and Town Halls in the project to provide legal support for infrastructure investments, modernization of roadways linking main roads to railway stations. Funding can come from the European Union.

-Realizing the public-private partnership, with the passenger transport companies, on the railway track and for the continuation of the road journeys. Scheduled by mutual agreement.

-For the Medgidia - Negru-Voda railway, with the connection in Bulgaria via Kardam to Dobrici, steps must be taken with the district authorities in the Dobrici region to develop a joint project on the development of the common rail transport between the center and the southern part of the county of Constanta and the northern district of Dobrici. Funding a cross-border project can be with European funds.

-Supporting the company "CFR Călători", through government subsidies, for the acquisition of light trains for the over ground metro.

Without a real partnership between all those interested in this type of transport, with no combined effort, nothing will change for the better. The problem is not only of costs and congestion, but also of permanent pollution by means of the road transport. Also, the citizens of Constanta County have changed their behavior using personal cars to gain time and shorten the journey, which contributes decisively to agglomeration, pollution and a certain type of daily stress related traffic. If during the cold season, fewer tourists arrive in Constanta County, but during the summer season, the increase in the number of participants in cars traffic creates serious problems in several critical areas of the Black Sea coast, from Vama Veche to Navodari. Moving travelers and commuters, from road to rail, in high-quality conditions and low-time for travel, would lead to decongesting road traffic and reducing pollution. Also, for each person, it would reduce transport costs by using subscriptions.



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## Comparative Assessments of the Seasonality in "The Total Number of Overnight Stays" in Romania, Bulgaria and the European Union

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### Abstract

*It is thought that tourism started to display a significant activity only towards the end of the nineteenth century. At the international level, its development has been almost explosive since the 1960s; therefore, the current period is characterized by a real revolution in travel. However, in most countries, tourism is characterized by a seasonal evolution. The objective of this paper is represented by the comparative analysis of the seasonality in the tourism activities from Romania and Bulgaria, with a reference to the average seasonality registered in the EU member countries.*

*For the quantitative research carried out in this study, we processed a database consisting of the monthly values of "the total number of overnight stays" indicator, recorded between January 2005 and December 2016, using the moving average method, the seasonality coefficient and EViews 5. The results led to the formulation of comparative assessments regarding the seasonality in the tourism activities from Romania and Bulgaria and their situation compared to the average of the seasonality recorded in the EU.*

**Key words:** number of overnight stays, tourism seasonality, seasonality indicators

**J.E.L. classification:** C10, C21, C53, M21, J63, Y32, Z33

### 1. Introduction

Each country has a certain tourist potential, and the extent to which it is capitalized depends on the role that the tourist activity plays in the structure of the respective national economy. Romania and Bulgaria are two countries with a similar tourist offer, considering aspects such as geographical location, relief forms, climate and temperature conditions, natural resources; therefore, between the two countries, considered as tourist destinations, there is a direct competition. The research shows that the seasonality in tourist activities manifests differently in the two countries. Thus, besides the natural and anthropic factors, there are also other categories of factors that influence differently the tourist activities from the two countries and, implicitly, their tourism seasonality. At the same time, the results of the study gave us the opportunity to outline the tourist profile of the two countries and to observe some specific aspects of the tourists' behavior.

### 2. Literature review

According to Minciu (2004, p. 11), tourism officially became an activity towards the end of the nineteenth century, being especially dependent on natural factors. Professors Snak, Baron, and Neacsu (2001, p.18) consider that tourism is a "social-economic phenomenon specific to the modern civilization, strongly anchored in the society and as such influenced by its evolution". Another author (i.e. Bigovic 2011, p.16; 2012, p.102) appreciates that tourism has become a phenomenon typical of the modern world; at the same time, he states that "one of the most visible

features of modern tourism" is seasonality. Most specialists define seasonality by referring to its negative aspects, i.e. "systemic change", irregular during the year (Hylleberg, 1992, p.4); "time imbalance" – in terms of the number of visitors, traffic on highways and other transportation and employment means (Butler, 1994; 2001, p.5); the "concentration tendency" of tourist flows over a relatively short period of the year (Allcock, 1989, p.387); "significant oscillations" between periods of maximum and minimum activity (Fernandez-Morles, 2003, p.942). In the context of these definitions, it is noteworthy that Bigovic (2012) and Grigorescu (2003) propose that the analysis of tourism seasonality should also tackle (in addition to repeatability) two other important aspects, i.e. the intensity and dynamics of the seasonal concentration of tourism activities.

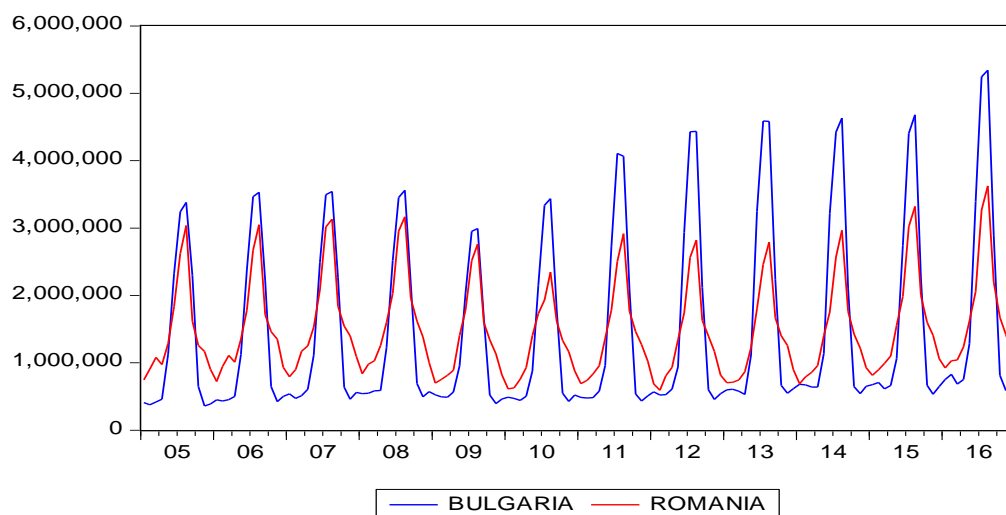
### 3. Research methodology

In our quantitative research, we processed a Eurostat database, comprised of the monthly values of the "total number of overnight stays" indicator recorded from January 2005 to December 2016, using the moving averages method for the calculation of the deseasonalized series and of the seasonality coefficients for concentration assessment; data processing was performed by EViews 5. This scientific approach provided the support for both the analysis of the intensity and dynamics of the seasonal concentration characterizing the tourism activities conducted in Romania, Bulgaria and the EU, as well as for the qualitative interpretations regarding the tourist profile of the analyzed destinations.

### 4. Results and discussions

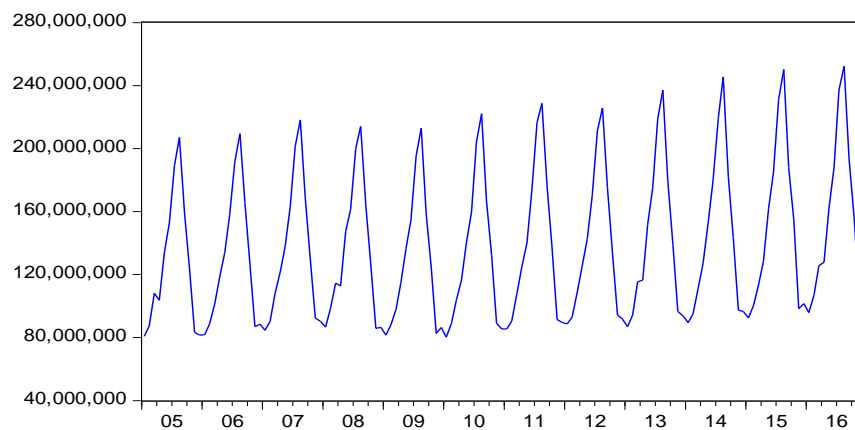
The coronograms of the "total number of overnight stays" indicator recorded between January 2005 and December 2016 for Romania, Bulgaria and EU-28, obtained by EViews, are represented in Figure 1 and Figure 2.

Figure no. 1 Evolution of the "total number of overnight stays" indicator in Romania and Bulgaria (initial series)



Source: Author's own results obtained by processing Eurostat data, by EViews

Figure no. 2 Evolution of the "total number of overnight stays" indicator in the EU (initial series)  
European Union (28 countries)



Source: Author's own results obtained by processing Eurostat data by EViews

Comparing the graphical representations in figures no. 1 and no. 2, it can be noticed that:

- the tourist activity (expressed by "the total number of overnight stays"), both in Romania and Bulgaria, on the one hand, and the average tourist activity in the EU, on the other hand, underwent a seasonal evolution throughout the studied period, but the trends are different;
- the EU average of "the total number overnight stays" indicator shows smaller variations from one year to the next, and the trend is slightly upward throughout the 2005-2016 period;
- it can be said that the evolution of the tourist activities from Romania and Bulgaria was similar and constant between 2005 and 2008;
- in 2009, the indicator dropped significantly, reaching almost the same value in the two countries; however, starting with 2010 (and until 2016), a gap was created between Romania and Bulgaria, which grew constantly;
- the minimum values of the total number of overnight stays were registered in Romania in 2010, in Bulgaria in 2009, and in the EU in 2005;
- the global economic crisis from 2007-2008 was felt in the EU by an insignificant decrease in the average of the total number of overnight stays in 2008 and 2009, while Romania and Bulgaria faced an obvious decrease of this indicator in 2009. Only in Romania, the tourist activity continued to decline in 2010. In this context, we consider that other factors influenced the reduction of the tourist activity from Romania, outside the economic crisis;
- an upward trend in the total number of overnight stays has been recorded since 2011. However, the increases were different; they were modest in Romania, significant at the EU level (as an average), and in Bulgaria there were recorded significant increases of this indicator.

In order to compare the intensity in the seasonality of the tourist activities from Romania, Bulgaria and the EU, we calculated the seasonality coefficients for the "total number of overnight stays" indicator. These values are shown in Table 1. The higher the value of the seasonality coefficients (i.e. the more than 1 or 100), the more pronounced the seasonality of the tourist activity.

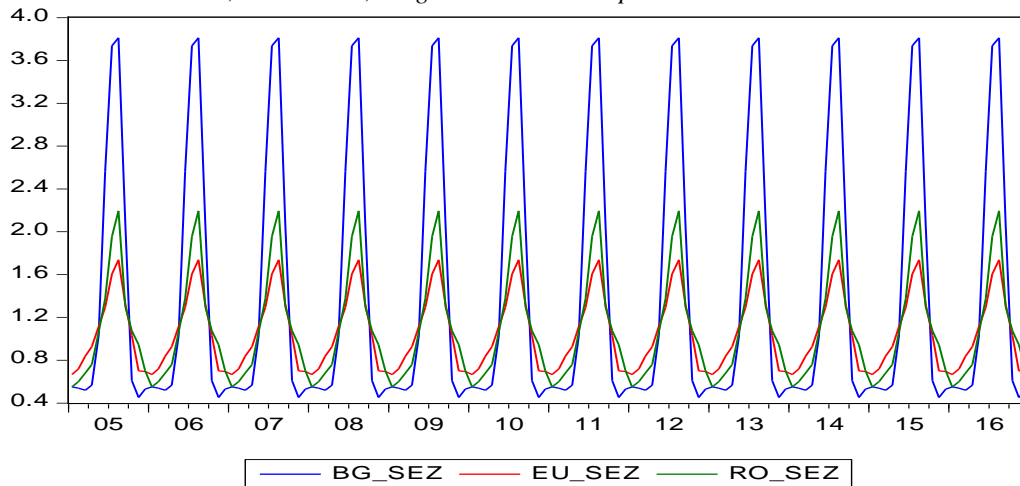
Table no. 1 Seasonality coefficients for "the total number of overnight stays", per month, between 2005 and 2016, in Romania, Bulgaria and the European Union

Months	Seasonality coefficients in Romania	Seasonality coefficients in Bulgaria	Seasonality coefficients in EU
Jan	0.551279	0.552507	0.666571
Feb	0.601238	0.538508	0.720673
Mar	0.680667	0.519277	0.839587
Apr	0.761139	0.568360	0.927167
<b>May</b>	<b>1.059498</b>	<b>1.026232</b>	<b>1.113543</b>
<b>Jun</b>	<b>1.374637</b>	<b>2.560151</b>	<b>1.293595</b>

<b>Jul</b>	1.956709	3.735818	1.604723
<b>Aug</b>	2.196215	3.810548	1.738537
<b>Sep</b>	1.303158	2.082252	1.325354
Oct	1.077340	0.610777	1.032146
Nov	0.944566	0.451952	0.700331
Dec	0.701634	0.529730	0.694586

Source: Author's own results obtained by processing Eurostat data, by EViews

Figure no. 3 Evolution of the seasonality coefficients for "the total number of overnight stays", per month, between 2005 and 2016, in Romania, Bulgaria and the European Union



Source: Author's own results obtained by processing Eurostat data, by EViews

By analyzing the values of the seasonality coefficients (indicators) presented in Table 1 and their representation in Figure no. 3, the following aspects arise:

- the seasonality of the tourist activities from Romania is close to the average seasonality from the EU (see Figure 3). Tourist activities are concentrated over a six-month period, both in Romania and in the EU, from May to October (see Table no. 1). The values of the seasonality coefficients show that between January and April the tourist activity in Romania is more developed than in Bulgaria, but it is situated below the EU average level. A particular aspect is that in Romania, in November and December, there are registered the highest values of the seasonality coefficients (close to 1), compared to Bulgaria and the EU average, which shows that there is an important tourist activity. In this context, we may notice that Romania is an attractive destination due to the diversified offer of its tourism forms: mountain, sports, spa, events etc. The season peak is recorded in July (1.95) and August (2.19), the seasonality coefficients being closer to the EU average and lower than the values recorded in Bulgaria;

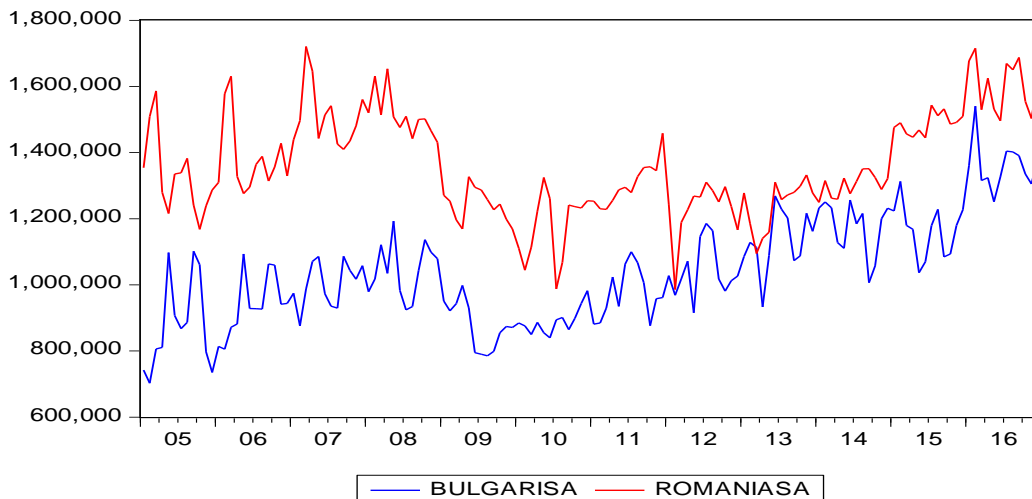
- Bulgaria has the most pronounced seasonal nature for the "total number of overnight stays" indicator (see Figure 3). Its tourist activities are concentrated over a five-month period, i.e. from May to September (the shortest period compared to Romania and to the EU average). In Bulgaria, the tourist season starts suddenly (see Table no.1); in April, the seasonality coefficient is 0.56 and it increases in May to 1.02; then, it drops sharply from 2.08 in September to 0.61 in October. This country records the greatest differences in seasonality coefficient values, i.e. the minimum value of the seasonality coefficient is 0.45 (in November), and in the peak season it reaches the values of 3.73 in July and 3.81 in August. In off-season periods (January-April and October-December), Bulgaria records the smallest values of seasonality coefficients, compared to Romania and the EU average.

- the tourist activity carried out in the EU has the most moderate seasonality compared to Romania and Bulgaria. At the EU level, the differences between the seasonality coefficient values (in both season and off-season periods) are the lowest. There is a concentration of the number of overnight stays in a six-month season, from May to October, and the peak is recorded in July (1.6)

and August (1.73). These values are, however, lower than those recorded by Romania and Bulgaria.

In order to obtain the deseasonalized data series, we used the moving average method, the multiplicative variant, in order to process the initial database (the monthly values of the "total number of overnight stays" per month, from January 2005 to December 2016, recorded in Romania, Bulgaria and in the EU). The representations in figures no. 4 show that, even when analyzing the deseasonalized data series, in Romania and Bulgaria, the seasonal nature of the tourist activity is more pronounced compared to the EU average.

Figure no. 4 The seasonally adjusted series for "the total number of overnight stays", 2005-2016, in Romania and Bulgaria



Source: Author's own results obtained by processing Eurostat data, by EViews

## 5. Conclusions

The evolution of the tourist activity (assessed by the "total number of overnight stays"), over the period 2005-2016, differed in Romania compared to Bulgaria, but also compared to the average evolution registered in the EU member countries. The decrease in the "total number of overnight stays" in 2009 recorded in Romania and Bulgaria could be the consequence of the 2007-2008 world economic crisis. On the other hand, the reduction recorded in this indicator in 2010 only in Romania should warn us that other factors in our country might have triggered the decrease in the total number of overnight stays, over a longer period.

Over the period 2005-2009, the evolution of the tourist activity in terms of total number of overnight stays was similar in Romania and Bulgaria. After 2010, however, there was a significant gap (which also remained in the years to come) between the two countries. Knowing/ identifying the factors that generated the increase of the tourist flows towards Bulgaria and the decrease of these flows towards Romania could represent starting points in the reorganization of the tourist activity carried out in Romania and in conceiving future strategies of tourism development in our country.

The comparative analysis of the seasonality coefficient values shows that in Romania the seasonality is quite similar to the EU average, while Bulgaria records the most pronounced seasonality. It is noteworthy that Bulgaria's tourist activity, viewed from the perspective of the "total number of overnight stays", concentrates during the warm weather season; therefore, we consider that the coast is the main touristic attraction, and the sea and sun tourism represent the predominant tourism form. In the off-season, the tourist activity is very limited, being below the level recorded in Romania and in the EU.

Even though the total number of overnight stays recorded in Romania is lower than in Bulgaria, the lower seasonality registered by our country shows that Romania's tourist destinations attract tourists more constantly throughout the year. In this context, we appreciate that Romania's tourism

profile is represented by a diversified offer of tourism forms: business, cultural, seaside, agro-tourism, spa, sports, mountain, etc. This aspect could be used as a comparative advantage of Romania's tourist destinations, but it needs a better tourist promotion.

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# **The Global Economy and Religion: Contents, Specifications and Alienating Influences. Brief Considerations on the Phenomenon of Globalisation from an Orthodox Perspective**

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## **Abstract**

*In his well-known and shocking discourse to the Harvard University in 1978, Alexandr Solzhenitsyn (1918 – 2008), in a surprising/controversial approach, lamented, under the effect of the new economic-political and socio-cultural conditions in the West, the new desiderate/idol of this world, for a better life, which imprint many Western faces with worry and even depression, which closes though it is customary such feelings of spiritual development ( The entire discourse is permanently available on the following address*

<http://www.americanrhetoric.com/speeches/alexandersolzhenitsynharvard.htm>).

*In the ranks below, we will try to highlight some aspects, specifications and influences of the global economy, influencing the alienation of the religious consciousness of the modern man.*

**Key words:** globalization, post-modernity, anxiety, depression, internationalisation

**J.E.L. classification:** A12; A13a; A14

## **1. Introduction**

The tough diagnosis of anxiety and depression, of the Russian dissident, weighting heavy on the shoulders of the people in the global post-industrial society, which started from the reductionist opinion of a *homo economicus*, who, in order to continuously satisfy the individual welfare and the accumulation of material goods (Achimescu, 2013, p. 413), is willing to abandon the natural tendency to religiosity in the favour of a new secularising materialist idol. Under these conditions we observe that our approach is of great topicality by the fact that, after almost three decades from the discourse of the Soviet dissident, the anxiety and the depression of the Catholics and Protestants in the western world of those times entered in the world of the Eastern Orthodoxy as well. From this perspective, the necessity of the research under the phenomenological aspect of the economic-financial component of globalisation is not only necessary, but also opportune.

## **2. The global economy – A. content, B. specificities and C. influences**

**A. Contents.** From the start we observe, in general, the dynamics of the globalisation process and, especially, the dynamics of the economic-financial globalisation, by their reductionist features, generate special effects in the religious field and on the faith and the religious practice. Globalisation, as macro-economic, industrial, financial, technological and military process, presents a powerful socio-cultural dimension (Cescon, 2003, pp. 71-72) , a phenomenon which, as highlighted by the Italian Catholic economist Stefano Zamagni, a member of the Pontifical academy of Sciences, started to gain distinct outlines at the beginning of the 70's, when two political-economic decisions adopted by the USA had a major impact on the industrialised western world, also on the former socialist countries and the developing countries (Zamagni, 2002, p. 455):



- The unilateral cancellation of the direct international convertibility of the United States dollar to gold – in 1971, the so-called Nixon shock – that renounced to the value report to gold of the American currency, as previously stated in the Breton-Woods agreement in 1944; it abandoned the old international monetary policy, which practically maintained constant the value of the dollar by connecting it to the value of the gold;
- The liberalisation of the capital market, eliminating any restrictions in the circulation of the financial resources worldwide (1974).

These two fundamental causal factors will determine the genesis of the new economic world order, *followed, in our opinion, by a series of coagulant formative factors in the 80's and the 90's, among which we enumerate:*

- The progressive decrease of the economic role and significance of the heavy industry, the main element of any economy until the 60's, and its substitution with new branches of electronics, automatics, biotechnology and many others, based, more and more, on scientific and technologic progress, requiring on a large scale a more qualified and specialised working force;
- The rapid development of the computer hardware and of the informatics, which changed radically the content of the modern economic activities, limiting drastically their dependence to the modern factors as space, time or limited/difficult access to technical, scientific and financial data and information;
- The collapse of the socialist model of production, which, by the profound statist feature of the market economy, limited in an obvious manner and even programmatically the free circulation of the capital, technologies and working force, inhibiting the expansion of the globalisation process.

**B. Specificities.** In his analysis on the new world economy, Stefano Zamagni considers that the main constituent of globalisation is a pure economic one, the formation of a global financial market and of a global society, where the global expansion of the credit and of the investments, corroborated with the foundation of a global outlet market, leads to the coagulation of new financial circuits, able to influence the world economy. The new capital market is followed as significance by the development of the informational technology, not possible to eliminate from any modern economic-financial activity. This is followed as importance by other two economic factors: 1. the deepening of the concurrence – hyper-concurrence – as a result of the rapid multiplication of the producers of goods and services; 2. the affirmation of the culture of the contract – the generalisation and the uniformisation of the contract in the regulations of the exchanges related to investments, production and sale, eliminating any local customary and traditional element from the economic activity. The new global socio-religious culture appeared during the globalisation is the last from the major factors of this phenomenon, because any culture depends majorly on the economic-social structure of the society (Zamagni, 2002, p.45-465). In other words, globalisation will impose a new design in the action patterns of the modern economic agents, constrained to connect to an evolution difficult to anticipated in the post-industrial age, by: a. the new internationalisation of the productive activities (Dahrendorff, 2002, p. 451); b. the affirmation to a global level of the multinational company – the economic entity producing and selling goods and services on a large or even world scale, in the detriment of the national economies. In the new globalising dynamics, the raw materials will be exploited in the third world or in the emergent countries with a low life level, materials processed in the economically advanced countries and, in final, distributed worldwide with a maximum of economic efficiency.

**C. Influences.** This will lead to a set, relatively limited, of old economic-socio-political values, whose operationalisation provokes a huge rollover in the traditional/community/national axiological references, until the point when the collective consciousness of a social group loses part of its consistency (Raiu, 2012, p.15). This evolution is in fact a social-cultural-economic involution through the new reductionist uniformisation and the flattening of the identity factors consecrated by the classic modern industrial societies, which favoured rapidly the national landmarks, including those from the fields of culture and religion. The internationalisation of the production, the coagulation of the global markets and the international division of the work, significant elements identified by the dedicated literature, became the new compulsory (non)values in the post-industrial world, because their refuse equals the self-conviction to economic failure and, implicitly, to

pauperisation, leading to economic autarchy and political isolation. Similarly, the generalisation of the work productivity, the economic efficiency and the search for profit show that the phenomenon of globalisation *expects the triumph of the economic efficiency* (Ică, 2005, p. 689), willing to pay any price, including the *decrease of the common knowledge (reciprocal – A/N) of the people* (Raiu, 2012, p.16) leading to the *destruction of the social cohesion, the disintegration of the states and nations, and to the dissolution and fragmentation of the culture, by accenting the inequality and the social chaos* (Ică 2005, p. 689) These consequences of the dynamics of the globalising phenomenon must not be understood/ perceived as presenting a theoretical/potential feature, because, as shown in 1995 by the Japanese management specialist Kenichi Ohmae, *the traditional state-nations have become unnatural, even impossible, economic units in a global economy, thus the global market produces a cross-border civilisation, capable of generating profound cultural cleavages* (Tomlinson, 2002, pp. 27-28) similar to the case of the first category of factors, the refuse of the state/national actors to accept the criteria circumscribed to the globalising pragmatism and economic efficiency leads the nations to poverty and marginalisation. These conditions favour inclusively the appearance of a new culture, of the supply and demand, based on the criteria of management and marketing, determining inclusively the moral-spiritual values of the community – especially the religious values – to remain in the individual background (Achimescu, 2013, p.215), and the religious faith to be indifferent to the postmodern world. Everybody may believe whatever they desire to. In these conditions, the modernity and the post modernity seem to cohabitate, participating to the globalising process – because modernity is inherently globalising inside the network (Tomlinson, 2002, p. 73) and vice versa – and imposing a culture lingering in a horizontal immanent dimension, with no possibility to affirm a vertical transcendent credible principle (Patapievici, 2001, p.87). The globalisation facilitates the transfer of spiritual values from one side to another (Achimescu, 2013, p. 444) and the course to spiritual uniformisation/levelling – in fact the course to westernisation – seems natural, while affecting irreversibly the most intimate part in the cultural-religious identity of the communities. Similar, the globalisation did not set aside the new profile of the man animating it, a man with no authentic spiritual roots/demiurge, who, willy-nilly, must assume the new social values of the world he lives in. To this man, the post-industrial society seems to solicit first of all the technical integration an efficient production system (Achimescu, 2013, p. 183); the economy and the technique seem to be now-a-days incompatible with the ideas of the traditional spirituality and religiosity (Ică, 2005, p.692) , a factual state that imposes to the postmodern man to concentrate and report quasi-exclusively to the landmarks of the productivity and efficiency imposed by society. From the point of view of its content, this consequence of the globalisation is identical with the impact generated on the human behaviour and on the attitude of the man toward work, announced by the Calvinist thesis on predestination (related to the teachings on 1. the unconditioned choice – God establishes from eternity who is destined to Heaven and who is destined to Hell, being impossible to overcome His decision; 2. the limited redemption – the sacrifice and the Resurrection of the Saviour are truly efficient and valuable only for the chosen ones, with no soteriological significance for the others; and 3. the irresistible grace – as divine mercy/ goodness *given freely*, ensuring the salvation of the chosen people in spite of the possible attitude of their disconnection from faith). Those following them – the Reformed, the Presbyterians, the Congregationalists, etc. – considering, unofficially, outside the Creed and of the private Faith confessions, that the success obtained in the earthly life [...] is a premonitory sign for gaining the eternal life, inside a psychological mechanism that promoted what was called the ethics of the work, in the detriment of the religious moral values and oriented the people to success (Achimescu, 2013, p.16).

### 3. Conclusions

In order to be functional, the conditioning mechanism operated by the alienating globalisation economy should have imperatively put at the disposition of the postmodern man – whose intellectual and physical resources fully exploits – a new set of motivational factors, able to stimulate his engagement and involvement and to determine him to prove loyalty and support for the economic-social order of the post-industrial and postmodern world. Because globality overlaps the modernity emptied by spirituality, hostile to religion and refusing any possible vertical axis of

the existence, the solution was the consumerism and its immediate corollary – the continuous measurable growth of the individual/ family welfare. Thus, it seems that a secular consensus is established between the man and the global society, a two-way connection, which seems to be reciprocally advantageous: the man is required productivity, efficiency and creativity and he gets in exchange the hope, often materialised, at least in the West, represented by the earthly heaven of welfare, comfort and consume. These will be the new axiological post-modern universes exclusively horizontal pseudo-landmarks/idolaters for the global economy, where the verb *to be* is substituted by the verb *to have*.

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# Is Innovation the Premise of Social Progress?

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## Abstract

*Improving the quality of life involves a complex and multidimensional effort, and previous efforts to measure progress simply did not create a sufficiently nuanced picture of what a healthy society looks like.*

*Social progress is the capacity of a society to meet the basic human needs of its citizens, to establish the areas that enable citizens and communities to improve, respectively to support the quality of their lives and to create the necessary conditions for all individuals to reach the full potential.*

*At the same time, progress can be considered dependent on the ability to innovate and the ability to adopt innovation. Thus, after analyzing and comparing the data for the Global Social Innovation Index and the Global Innovation Index, we are looking to answer the question which gives the title of these papers: Is innovation the premise of social progress?*

**Key words:** Global Innovation Index, Social Progress Index, Economic progress, Globalization.

**J.E.L. classification:** F6, O1, O35

## 1. Introduction

The three major objectives promoted by the Europe 2020 strategy: smart growth, sustainable growth and inclusive growth are aimed at combating the economic crisis in the short term and economic development, in the long run, corroborated with the European Commission's goal of creating a knowledge-based Europe, on rapid and sustainable growth and on social progress. On the other hand, innovation and the transfer of knowledge associated with it are tools of vital development for the global economy.

Can we therefore consider innovation as a factor of social, economic and, why not, ecological progress? A more detailed understanding of the human aspects behind innovation is essential for developing policies that help promote economic development and the more prone to innovation at the local level.

## 2. Social Progress Index

Calculated from 2013, the Social Progress Index aims to measure social progress. Based on this, we can analyze the correlation between economic and social development without using classical economic indicators.

Starting from the premise that any previous effort to analyze social progress has been channeled in particular to the observation of poor countries, the Social Progress Index is a holistic indicator, representing practically a global measure of social progress that accumulates several aspects of health in a society. This also results in an analysis of economic progress from a different perspective compared to other indicators, SPI measuring the health or welfare of a country, and not social policies or spending on social assistance programs.

Speaking of a global index, another significant feature of SPI is that it allows the measurement of results in a granular way, which is especially important because we can analyze the weaknesses or strengths of each nation. Practically, using this indicator will allow us to create personalized policies on specific domains or subdomains, because based on granular data analysis, we will not

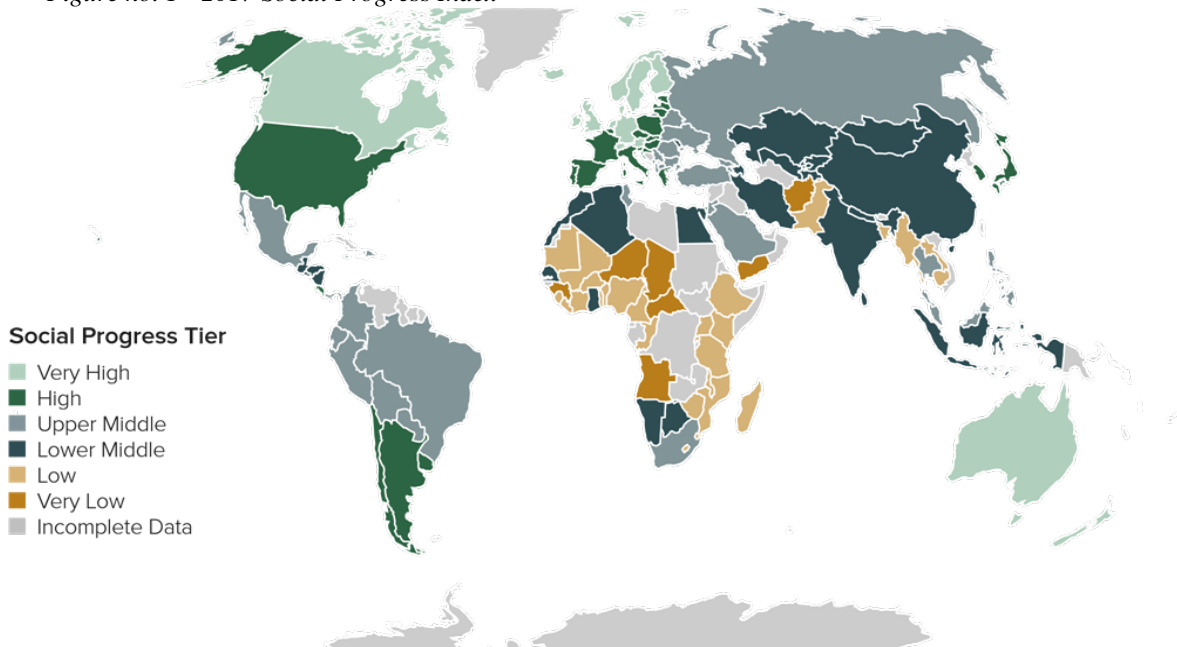
only get a final score, but we will also have partial scores for each analyzed subdomain. These will highlight the most delicate issues of each country.

For the calculation of the Social Progress Index in 2017, as an aggregate index, social and environmental indicators were used for the 128 analyzed countries. It measures the welfare of a society using 50 indicators per country, pointing to social progress in three dimensions:

- Fundamental human needs - determining the assessment of the resources of a country needed for survival (food, water, shelter, safety);
- Welfare fundamentals - Measuring access to elements that can improve people's livelihoods: (education, access to information and healthcare as well as a sustainable environment);
- Opportunity - assesses the degree to which each of us has the chance to fulfill his / her goals (personal rights and freedoms, freedom of choice, freedom from discrimination and access to the most advanced forms of education).

Each of the above mentioned components is an indicator that measures the performance of each country. An important feature of the Social Progress Index is that as an aggregate index of real performance indicators, it quantifies the quality of people's lives or measures whether people in a country are discriminated against and does not measure the expenditure incurred by each country for healthcare or, if governments adopt anti-discrimination laws.

Figure no. 1 - 2017 Social Progress Index



Source: Social Progress Index 2017

Each dimension is divided into four subdivisions that include the specific components of each component. The selection of thematic categories allows a multidimensional analysis of data that studies social progress in each country, and the general framework of the Social Progress Index determines a better understanding of global trends (including regional ones).

Basically, the main purpose of the Social Progress Index is to provide data to help create long-term policies specific to each nation with a strong impact on the development of economic progress.

### 3. Global Innovation Index

Aggregate indicators include the Global Innovation Index (GII), which analyzes innovation from a multidimensional perspective and can help improve economic development policies. The Global Innovation Index in 2017 is calculated for 127 countries, has a longer history than the SPI, and the report co-published by Cornell University, INSEAD and WIPO (World Intellectual Property Organization) shows the rankings of competencies and innovation outcomes for them

If in terms of the Social Inclusion Indicator we were talking about three dimensions, the Global Innovation Index is based on two dimensions, each of which is subdivided:

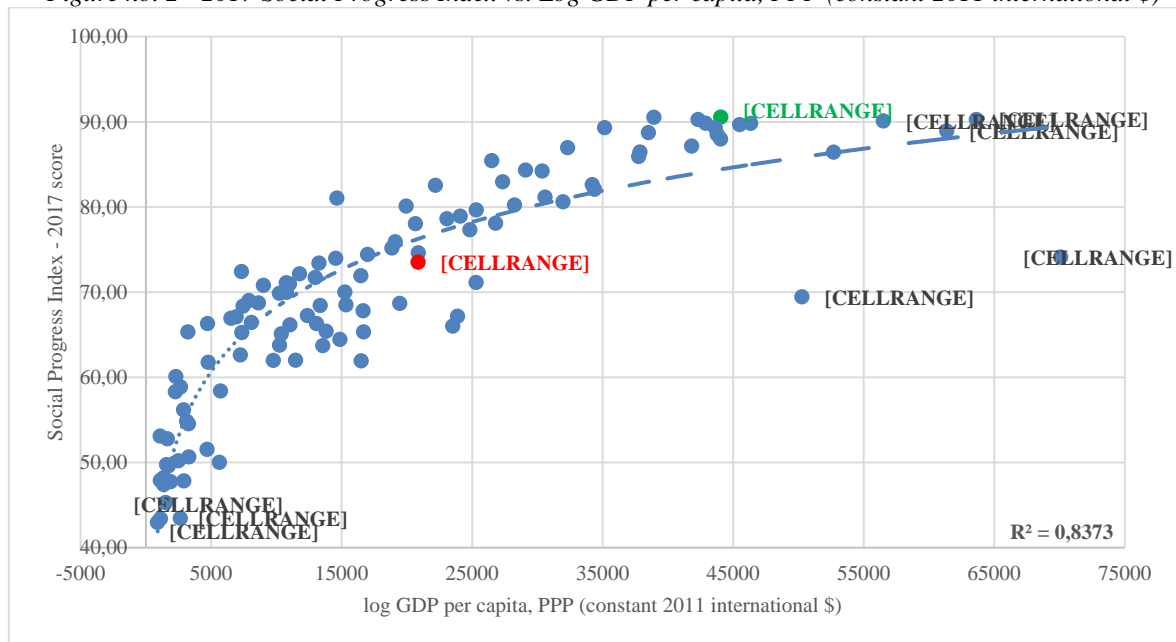
- Innovation Input – includes economic indicators reflecting innovative activities grouped into five other subcategories: Institutions, Human capital and research, Infrastructure, Market sophistication and Business sophistication;
- Output Innovation - is an output pillar grouping innovation performance indicators into two categories: Knowledge and Technology Production and Creative Outcomes.

From year to year, the calculation methodology is improved to know whether we can have a viable scenario on economic growth in the next year, both at the level of each nation and globally. Practically, policies can be created to create new sources of innovation for shaping the future of the economy.

#### 4. Data analysis

Collecting data for aggregate indicators is a tedious process, and selecting common indicators is difficult. For the data analysis, 110 countries were selected for 2014-2017 scores for both indicators.

Figure no. 2 - 2017 Social Progress Index vs. Log GDP per capita, PPP (constant 2011 international \$)



Source: Social Progress Index 2017 (own processing)

In 2017, from the point of view of social progress, Denmark ranks first (out of the 110 selected countries), and at the opposite pole Niger. Noteworthy that the top five positions are European countries.

Continuing the analysis, using the comparison with an economic indicator (GDP per capita), we see that Denmark has a higher GDP than Niger. On the other hand, the highest level of GDP is Kuwait, which is in a much lower position than Denmark.

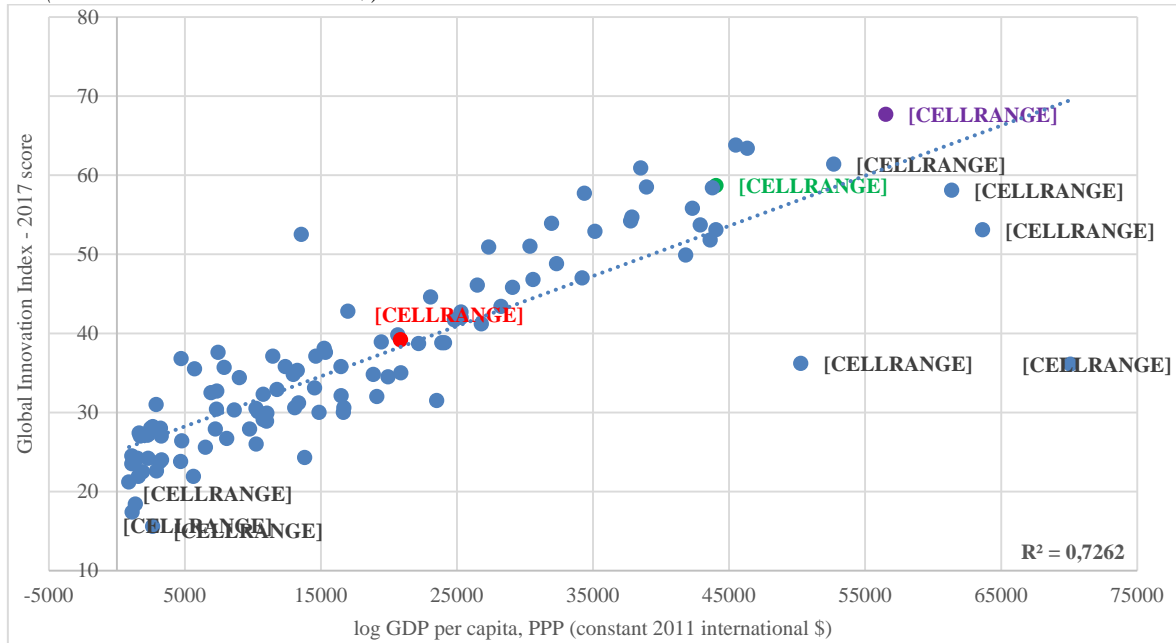
Norway, with a GDP level immediately below that of Kuwait, is ranked fourth in terms of the Social Progress Index, while Kuwait is ranked 42th!

Analyzing the trend of the regression line, we see that the poor countries are quite steep, indicating that a minimum GDP growth and reinvestment in services to improve living standards would mean an increase in social progress.

On the other hand, the trend at the top of the chart indicates that, after a certain level, one extra dollar of GDP brings less social progress.

A comparative analysis of the Global Innovation Index with the same economic indicator (GDP per capita) will have similar results, but this time, as shown in figure 3, the "protagonists" are different.

Figure no. 3 - 2017 Global Innovation Index vs. Log GDP per capita, PPP (constant 2011 international \$)

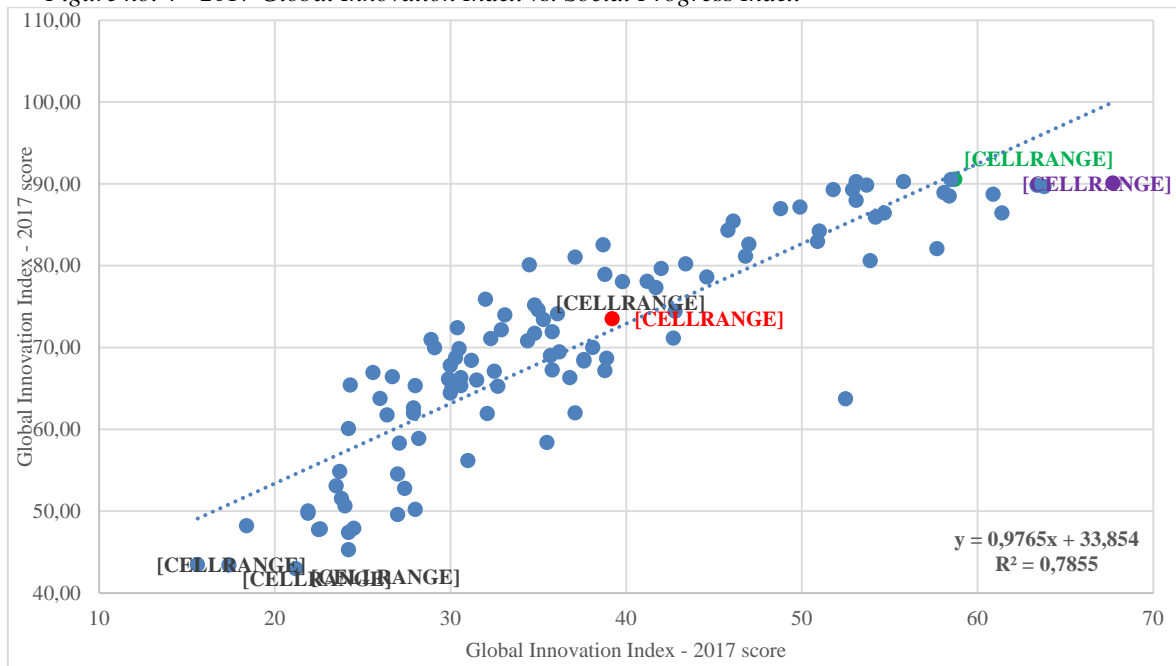


Source: Global Innovation Index 2017 (own processing)

Norway, with a level of GDP just below Kuwait, ranks 16th in terms of the Global Innovation Index while Kuwait is 49th!

The answer to the question that gives the title of this paper is an analysis of the correlation between the two indicators. If, in previous analyzes, Kuwait was noted as the country with the highest GDP per capita, in Figure 4, we notice its position in the lower half of the regression line.

Figure no. 4 - 2017 Global Innovation Index vs. Social Progress Index



Source: Social Progress Index and Global Innovation Index 2017 (own processing)



ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	15022.39	15022.39	395.4101	6.87E-38	
Residual	108	4103.129	37.99193			
Total	109	19125.52				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	33.85436	1.919982	17.63265	1.44E-33	30.04862	37.6601
Global Innovation Index 2017	0.976523	0.049109	19.88492	6.87E-38	0.879181	1.073865

In the hypothesis of a linear correlation, we see a strong dependence between the two indicators and the fact that the regression model built is valid.

In conclusion, we can state that the Global Innovation Index has a significant influence on social progress.

## 5. Conclusions

Can we consider the Social Progress Index as having a higher significance than GDP per capita?

We usually appreciate that the country that "lead" suits it also has the highest level of GDP. The Social Progress Index shows that such an analysis of the standard of living is erroneous, for example in the SPI 2017 ranking, Italy is in a higher position than Costa Rica (three places), although it has a GDP per capita three times great.

In the case of Romania, which has roughly the same GDP as Croatia, the discrepancy is even greater: Romania is at a difference of 7 places compared to Croatia (44 vs 37). Besides, if we speak at the level of the European Union, Romania is at the lower level of the ranking.

If we are talking about social progress, we also think about economic development that, as shown by the previous analysis, is based on innovation. Creating or identifying new sources of innovation is now vital to transforming the current economy. Over time, this is reflected in economic growth over a long period of time.

The Global Innovation Index is an indicator that helps to create policies to promote long-term growth in production, productivity growth and more jobs. At the same time, Global Innovation Index contributes to creating an economic environment where innovation factors are continually evaluated, basically we are talking about an evolving project based on previous editions and constantly updated with the latest data on the latest research on measurement innovation.

On the other hand, the analysis of Social Progress Index indicators helps us to identify performance at country or regional level. Moreover, the Social Progress Index has been adopted by some countries as part of the national development strategy, and the European Commission published it at the regional level of the European Union member states. It is worth noting that it has also been accepted and adopted by private companies to establish their investment strategies.

Recognizing the key role of innovation as the driving force of economic growth and prosperity and the need for a broad horizontal vision of innovation for emerging and emerging economies, we also recognize the role in developing social progress.

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- <https://www.globalinnovationindex.org/>
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## Appendix

Country	Country Code	GDP per capita, PPP (constant 2011 international \$)	SPI 2017	GII 2017	Country	Country Code	GDP per capita, PPP (constant 2011 international \$)	SPI 2017	GII 2017
Denmark	DNK	44042	90.57	58.7	Jordan	JOR	10240	69.85	30.5
Finland	FIN	38941	90.53	58.5	Saudi Arabia	SAU	50284	69.45	36.2
Iceland	ISL	42325	90.27	55.8	Armenia	ARM	7907	69.01	35.7
Norway	NOR	63650	90.27	53.1	Paraguay	PRY	8639	68.73	30.3
Switzerland	CHE	56517	90.10	67.7	Turkey	TUR	19460	68.68	38.9
Canada	CAN	42895	89.84	53.7	Thailand	THA	15347	68.51	37.6
Netherlands	NLD	46354	89.82	63.4	Dominican Republic	DOM	13372	68.42	31.2
Sweden	SWE	45505	89.66	63.8	Ukraine	UKR	7457	68.35	37.6
Australia	NZL	35159	89.30	52.9	Belarus	BLR	16662	67.80	30
Australia	AUS	43631	89.30	51.8	South Africa	ZAF	12393	67.25	35.8
Ireland	IRL	61378	88.91	58.1	Russia	RUS	23895	67.17	38.8
United Kingdom	GBR	38519	88.73	60.9	Philippines	PHL	6938	67.10	32.5
Germany	DEU	43788	88.50	58.4	Bolivia	BOL	6531	66.93	25.6
Austria	AUT	44048	87.98	53.1	El Salvador	SLV	8096	66.43	26.7
Belgium	BEL	41826	87.15	49.9	Moldova	MDA	4742	66.31	36.8
Spain	ESP	32330	86.96	48.8	Lebanon	LBN	13089	66.31	30.6
Japan	JPN	37875	86.44	54.7	Sri Lanka	LKA	11048	66.16	29.9
United States	USA	52704	86.43	61.4	Kazakhstan	KAZ	23522	66.01	31.5
France	FRA	37775	85.92	54.2	Algeria	DZA	13823	65.41	24.3
Portugal	PRT	26514	85.44	46.1	Azerbaijan	AZE	16699	65.33	30.6
Slovenia	SVN	29097	84.32	45.8	Kyrgyzstan	KGZ	3225	65.33	28
Czech Republic	CZE	30381	84.22	51	Morocco	MAR	7365	65.25	32.7
Estonia	EST	27345	82.96	50.9	Indonesia	IDN	10385	65.10	30.1
Italy	ITA	34220	82.62	47	Botswana	BWA	14876	64.44	30
Chile	CHL	22197	82.54	38.7	Egypt	EGY	10250	63.76	26
Korea, Republic of	KOR	34387	82.08	57.7	China	CHN	13572	63.72	52.5
Cyprus	CYP	30604	81.15	46.8	Guatemala	GTM	7253	62.62	27.9
Costa Rica	CRI	14647	81.03	37.1	Mongolia	MNG	11478	62.00	37.1
Israel	ISR	31971	80.61	53.9	Namibia	NAM	9778	61.98	27.9
Slovakia	SVK	28254	80.22	43.4	Iran	IRN	16507	61.93	32.1
Uruguay	URY	19952	80.09	34.5	Honduras	HND	4785	61.76	26.4
Poland	POL	25323	79.65	42	Nepal	NPL	2312	60.08	24.2
Greece	GRC	24095	78.92	38.8	Tajikistan	TJK	2661	58.87	28.2
Latvia	LVA	23080	78.61	44.6	India	IND	5730	58.39	35.5
Lithuania	LTU	26807	78.09	41.2	Senegal	SEN	2274	58.31	27.1
Croatia	HRV	20664	78.04	39.8	Kenya	KEN	2901	56.17	31
Hungary	HUN	24831	77.32	41.7	Bangladesh	BGD	3137	54.84	23.7
Argentina	ARG	19126	75.90	32	Cambodia	KHM	3278	54.54	27
Mauritius	MUS	18864	75.18	34.8	Malawi	MWI	1112	53.09	23.5
Panama	PAN	20885	74.61	35	Rwanda	RWA	1655	52.78	27.4
Bulgaria	BGR	17000	74.42	42.8	Pakistan	PAK	4706	51.54	23.8
Kuwait	KWT	70107	74.12	36.1	Côte d'Ivoire	CIV	3300	50.65	24
Brazil	BRA	14555	73.97	33.1	Tanzania	TZA	2510	50.21	28
Romania	ROU	20848	73.53	39.2	Nigeria	NGA	5639	50.01	21.9
Serbia	SRB	13278	73.41	35.3	Burkina Faso	BFA	1593	49.75	21.9
Jamaica	JAM	7333	72.42	30.4	Uganda	UGA	1738	49.59	27
Peru	PER	11786	72.15	32.9	Togo	TGO	1372	48.21	18.4
Mexico	MEX	16490	71.93	35.8	Mozambique	MOZ	1120	47.90	24.5
Colombia	COL	12988	71.72	34.8	Cameroon	CMR	2926	47.83	22.6
Malaysia	MYS	25312	71.14	42.7	Mali	MLI	1905	47.75	22.5
Tunisia	TUN	10770	71.09	32.3	Madagascar	MDG	1376	47.40	24.2
Albania	ALB	11015	70.97	28.9	Ethiopia	ETH	1530	45.29	24.2
Georgia	GEO	9016	70.80	34.4	Yemen	YEM	2649	43.46	15.6
Montenegro	MNE	15254	70.01	38.1	Guinea	GIN	1135	43.40	17.4
Ecuador	ECU	10777	69.97	29.1	Niger	NER	897	42.97	21.2

## Education in Romania under Crisis

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### Abstract

*Europe's recovery after the economic crisis cannot be discussed without promoting high-quality education and training.*

*The disparities observed in conventional relationships between education and socio-economic structure are examined in this paper using a combination of data and education indicators for both Romania and the EU member countries. Educational systems, although having the same purpose, are analyzed and evaluated differently in each country. In the current global context, educational policy debates focus on the need to raise educational standards both in EU countries and globally, with emphasis being placed on enhancing performance based largely on skills and competencies.*

*Thus, in order to promote social cohesion and to create a smart national economy, policies and strategies for the development of education (especially at tertiary level) are needed.*

**Key words:** education, globalization, economic crisis.

**J.E.L. classification:** A2, I20, I21, J60

### 1. Introduction

To emphasize the importance of education in the creation and development of social inclusion policies, it is important to know the social context.

The changes that followed the global financial crisis have redefined the fundamental style of life, people's values and behavior. Lack of economic collapse has higher social consequences, the risk of social exclusion has increased considerably, and the society suffered a loss of human resources. This may involve a high level of social exclusion that leads to increased social tensions.

A nation with higher levels of social exclusion means a population with a decline economy, where one may easily see a low level of education, productivity and innovation, as well as a rising unemployment rate. In this way, the most important thing is to commit to additional efforts and resources to strengthen social inclusion policies.

### 2. Social Context

The social consequences of the global financial and economic crisis are felt in all the Member States of the European Union. On the other hand, the economic crisis has strengthened the value of education.

While the level of education has always had a huge impact on employment opportunities, the financial crisis has reinforced this effect even more. On average, between OECD countries, 4.6% of people with higher education were unemployed in 2016, compared with 11.7% of those with secondary education. Noteworthy that in 2013 there was a maximum of 5.3% for the unemployment rate among people with higher education.

Following the 2008 financial crisis, a significant number of countries have cut public spending on education. Between 2009 and 2010, public spending on education institutions fell by one third and in 2014 reached an average of 4.9% for EU countries. Approximately during the same period, between 2009 and 2011, teacher salaries "froze" what can discourage performing students from aspiring to the teaching profession. According to studies and analyzes conducted in 2008 and 2011, the unemployment rate for low-educated adults increased by almost 3.8 percentage points, while

the unemployment rate for those with higher education increased by only 1.5 percentage points.

Education and training systems need to change their priorities to ensure that all the people have the knowledge, skills and competencies needed to meet the challenges and demands of jobs and modern life.

In 2010, education and training were introduced as key elements of the EU 2020 Strategy. In 2014, the Commission and EU countries reviewed the progress made, according to the 2012 joint report on which the European Commission proposed new priorities for cooperation in the field of education at European level for the period 2016-2020.

### **3. Data analysis**

Since 1980, there has been a general trend to increase the length of compulsory education in almost all education systems in order to guarantee the knowledge of key competences. In some countries, compulsory education starts a year earlier - or even two years earlier in Latvia, while in other countries the length of compulsory education has been extended by one or two years, and in Portugal, following recent reforms, three years.

Preschool education (ISCED 0) is designed to respond to the educational and development needs of children aged 3 years or older. In pre-school education, staff must have specific qualifications in education. The crèches, playgroups and kindergartens are not included, as the staff has no obligation to have a qualification in the field of education. Primary education programs (ISCED 1) are designed to provide a basic education in reading, writing and math, along with an elementary understanding of other disciplines.

This is partly explained by the requirement to hold a general education certificate rather than a professional certificate to continue with university studies.

In the period 2000-2009, on average in the EU-27, the rates of participation of 3, 4 and 5-year children in pre-primary or primary education increased by 15.3%, respectively 7% and 6.3%, reaching around of 77%, 90% and 94% in 2009. The participation of 3-year-old children in pre-school education was almost generalized in Belgium, Denmark, Spain, France and Iceland in 2009, over 95%.

At the level of upper secondary education, there is a balanced distribution of students between general and vocational education programs. At EU-27, between 2000 and 2009, the share of students in general education increased by 5.5 percent to 50.4% in 2009, as a percentage of the total number of pupils in upper secondary education.

The collection of data on the number of enrollments covers the national education systems regardless of the form of ownership of the institutions. All standard education programs are included, as well as adult education programs with content similar to standard education programs or resulting in qualifications similar to those obtained through the appropriate standard programs. The special education is also covered. Apprenticeship programs are included, but not all forms of workplace education or training with no supervision from a formal education authority.

Vocational education covers the education through which participants are trained to practice specific occupations without any form of vocational training. General education programs are not designed for a specific class of occupations, and less than 25% of the content of the program is professional or technical. At least 25% of the content of the pre-vocational programs is professional or technical but these are mainly designed to familiarize the participants with the professional world and do not lead to a relevant professional or technical qualification. Students are included in both day and part-time education.

Most 15-year-old students in Europe attend schools with a large number of pupils. In half of the countries surveyed, the average number of pupils per school increased by 50 to 100 pupils compared to 2003. In Belgium (the German-speaking community), Austria and Poland, there is a decrease of over 70 pupils per school. As a general trend, between 2003 and 2009, the number of pupils in very large schools registered a slight decrease (OECD, PISA 2009).

In 2009, almost 90% of 17-year-old Europeans were still included in education, and rates of participation in post-compulsory education improved or remained stable over the last ten years.

The annual growth index is calculated by dividing the number of students for the year in question by the number of students in 2000 and multiplying the result by 100. All full and part-time students are included at ISCED levels 5 and 6. This indicator shows the enrollment rate in education (all ISCED levels) for each country, at the end of compulsory education up to date. Students are included in both full-time and part-time education; the table shows the number of people. The collection of data on the number of enrollments covers the entire education system regardless of the form of ownership of the institutions. All standard education programs are included, as well as adult education programs with content similar to standard education programs or resulting in qualifications similar to those obtained through the appropriate standard programs. All special education is also covered. Apprenticeship programs are included, but not all forms of workplace education or training with no supervision from a formal education authority.

Bulgaria, Malta and Romania, the three countries with the lowest participation rates one year and two years after the end of compulsory schooling in 2000, are among the countries with the most significant improvements over the last decade. However, the turnout rates in these countries were still under 80% in 2009, one year after the end of compulsory education.

#### **4. Romania**

In the EU countries, there has been an increase in demand for education, mainly at vocational school level, improvement courses and higher education. This has been observed especially among people over 25 years of age.

The number of EU-27 graduates in 2010 was nearly 4.5 million. By domains, the social, economic and legal sciences group holds the first place, with 35.7% of all graduates, higher than the equivalent of the students enrolled in these fields (34%), which can be highlighted either that the number of candidates for these areas has fallen in recent years, or that abandon rates in other areas have been higher.

It should be noted that in Romania the trend was opposite, the share of social, economic and legal sciences being over 60% of the total number of students.

At the EU-27 level in 2011, the share of graduates with higher education in the total number of employees in the 15-64 age group was about 30%, with significant variations between states.

Ireland (46.4%), Lithuania (42.1%), Cyprus (41%), Finland (40.9%) and Luxembourg (40.4%) are the best. There are also developed Western European countries where the share of employees with higher education is very low, such as Italy (17.2%), Austria (18.1%), and Germany (26.4%).

In Romania, the share of graduates in the total number of employees is 24.2% and is comparable Central and Eastern Europe countries (Czech Republic, Slovakia, Hungary and Bulgaria). The statistical figures on the share of graduates with higher education in the total number of employees would be much better if all graduates could be properly trained. However, there is a significant proportion of graduates working on medium-sized jobs as well as those who are over-qualified for their work. Their share may reach about 20% (according to Eurydice), especially after the completion of studies.

In Romania we can appreciate that the share can be much higher, especially in the conditions of the economic crisis. This clearly affects the public performance of education, but quantitative studies are still not available to estimate the number of graduates who are over-qualified for the jobs they have. The share of students enrolled in math, science and technology is another important indicator for the economic development of a country and which counts for progress in achieving development strategies.

Although Romania has registered a relatively high proportion of enrolled students in the early 2000s, it dropped rapidly over the past, reaching 17% at present, below the European average, but close to that of the neighboring countries.

In the Horizon 2020, it is estimated that approximately 35% of jobs will be for graduates with higher education (CEDEFOP 2010), so we can talk about a positive outlook for the higher education market in the European Union.

## 5. Conclusions

In terms of incentive measures, their targeting is mainly to vocational education, advanced training and higher education. We can see this evolution as normal given that the labor market situation requires first and foremost measures with short- and medium-term effects.

In the case of Romania, the trend is considered relatively similar. While it is noticed that in recent years a slight increase in the level of enrollment in education and a drop in school drop-out rate, on the other hand, the EU through the Sectorial Operational Program Human Resources Development (SOP HRD) available to Romania 3.5 billion euros in the 2007-2013 period for skills upgrading and growth programs.

But let us not forget the demographic decline that Romania faces in the past 20 years, a process that causes a drop in the school population at all levels of education. Certainly this situation will persist and worsen in the years to come.

In Romania, as in many countries, the crisis has led to the acceleration of the pace of reforming the education system, with policies adopted to bring major changes to the educational system, with long-term effects.

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## The European Union Strategy for the Danube Region – Framework for Promoting Clusters

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### Abstract

*Clusters play an important role in fostering competitiveness, innovation and creation of jobs in our country, in general, and in the Romanian Danube region, in particular. These partnerships of the „triple helix” type can support regions in stimulating innovation, by facilitating cooperation between the academia, the business environment and the local administration. Clusters could be used both in the development phase, as well as in the implementation of smart specialization strategies, contributing to identifying the strengths of an economic sector in the region, and determining the priorities in making correct political decisions. Today clusters reflect the cross-sectorial nature of the value chains and innovation systems. The paper presents some concerns regarding the evolution of clusters promotion in Romania as part of Danube Region, based on experienced gained by author during the projects conducted in the framework of South-East Europe and Transnational Danube Programmes.*

**Key words:** industrial clusters, competitiveness, cohesion policy.

**J.E.L. classification:** R11

### 1. Introduction

The current challenge for all the Member States of the European Union is to manage and change the rhythm of economic competitiveness, to have a common approach in order to develop an industrial eco-system that should be competitive at a global level. It is necessary to provide coherence to European policies for supporting development and industrial relaunch.

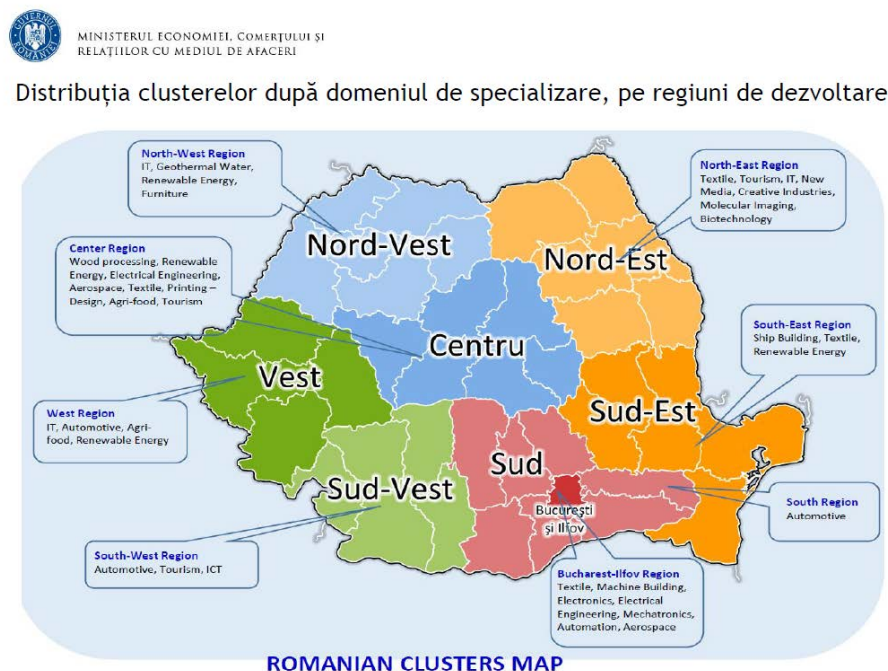
Clusters play an important role in fostering competitiveness, innovation and creation of jobs also in Danube Region, in general, and in our country in particular (Păuna, 2013). These partnerships of the „triple helix” type can support regions in stimulating innovation, by facilitating cooperation between the academia, the business environment and the local administration.

### 2. Innovation - the engine of the cluster

Innovation is mainly influenced by four factors: the general conditions, like the macro-economic environment, the fiscal system and access to funding, the scientific and technical institutions, the mechanisms for the transfer of information and competences between various stakeholders in the innovation system and innovative SME-s. These four factors relate to some specific fields of political interventions. The Government should take measures to overcome the potential barriers in each of the four domains in order to decide on the priorities to be set. The correlations among stakeholders (Porter, 1998) are very important for the system of innovation. Modern policies pursuing to implement a business eco-system favorable to innovation and entrepreneurship, where new winners might come up, which could support the development of new industrial value chains, as well as in emerging industries. Modern policies pursue a systemic approach, combining various policies, programmes and instruments. The traditional policy was mainly channeled towards research and development, whereas the current innovation policy is focusing on technological eco-systems and clusters.



Figure no. 1. Distribution of clusters based on their specialization field at regional level



Source: <http://economie.gov.ro/images/domenii/clustere.pdf>

Cooperation and internationalization of Romanian clusters by means of the networks cover a wide range of activities which have an influence on the Romanian Danube region in the following way: access to knowledge, to new markets, to key infrastructures, new opportunities of cooperation etc. The exchange of good practices between the cluster networks which have been created in various economic sectors contribute to identifying some specific aspects for the region and to finding viable solutions to challenges. Transnational cooperation is much more difficult than cooperation at a national level.

From this perspective, the European Union Strategy on the Danube Region – EUSDR, the political initiative of Romania and Austria (promoted in June 2008 with the European Commission) by means of the priority axis no.8 (EUSDR, PA 8, 2014), provided support for the competitiveness of enterprises, including by developing clusters, this axis being the responsibility of Croatia and the German land of Baden Württemberg – which is a benchmark in the promotion of clusters, both in Germany and in the European Union.

In Romania, the Ministry of Education and Scientific Research is dealing with education, science, technology, research, development, innovation and funding of innovative clusters, whereas the Ministry of Economy, Commerce and Liaison with the Business Environment is responsible for the development fields of the SME-s, for the competitiveness and industrial policies, as well as for the direct foreign investment and foreign trade. There are numerous bodies responsible for the wide scope application of the innovation policy: universities, research-development institutes, scientific and technological parks, technological transfer centers etc.

The national efforts for supporting clusters also benefit from the transnational cooperation programmes, as instruments of funding the EU Strategies.

The Romanian clusters were partners in successful European projects (some underway), which have created the prerequisites for implementing the EU Strategy on the Danube Region:

- Adriatic Danubian Clustering-ADC ([www.adcproject.eu](http://www.adcproject.eu)) (The Transnational Programme of South-East Europe 2007-2013), with the purpose of improving knowledge on the potential of cross-border cooperation and to give greater visibility to SME-s in the region, to participate in the networks created in the four sectors (logistics, mechatronics, agri-food and modern housing) and to promote the Danube-Adriatic area, as part of an integrated production system meant to attract

international investors (The Institute for Economic Prognosis of the Romanian Academy – a partner in the project);

- ClusteriX – Clusters for European innovation ([www.clusterix.info](http://www.clusterix.info), <http://www.interregeurope.eu/clusterix2/>) co-financed by the European Fund for Regional Development (in programmes like: Interreg IV C and Interreg Europe, respectively) with the purpose of allowing the regional authorities to identify, analyze and explore the potential for future strategic development of clusters, by means of exchange of good practices among nine partners of eight different EU countries, and to contribute to increasing the competitiveness of regional players by improving cluster policies and implementing smart specialization policies;

- SEENECO- The South-East European Network of the Excellence Cluster Organizations,
- CLUSTARS: Excellence in cluster management (<http://www.clustars.eu/>),
- CLUS3 “Cluster Excellence”, projects co-financed by the Competitiveness and Innovation Programme (CIP) ([www.cluster-excellence.eu](http://www.cluster-excellence.eu)) with the purpose of promoting cluster management excellence, by designing a set of training of trainers instruments, a benchmarking instrument and a set of indicators for measuring management performance and creating a platform of collaboration for clusters;

- ClusterPoliSEE – Smarter cluster policies for South-East Europe, declared by the European Commission (<http://www.clusterpolisee.eu/ro>) – Flagship project of the EU Strategy for the Danube Region ([www.clusterpolisee.eu](http://www.clusterpolisee.eu)) financed by the South-East European Transnational Programme with the purpose of increasing the competitiveness of the European regions and the innovation potential, by re-channelling cluster policies and using smart specialization strategies. In this pilot activity supported by the Institute for Economic Prognosis of the Romanian Academy a catalogue for promoting sectorial networks was created (automotive, logistics; ITC; energy, environment technology; mechatronics, electrotechnics, plastics, metal processing; agro-food, tourism, farming machinery; creative and cultural industries, and textiles; construction, green houses, wood and furniture; high tech, health, medical sciences) in the South East region of Europe, as part of the global value chains and a platform of collaboration was set up in the field of cluster policies;

- DanuBioValNet - Cross-clustering partnership for boosting eco-innovation by developing a joint bio-based value-added network for the Danube Region (<http://www.interreg-danube.eu/approved-projects/danubiovalnet>), as part of the programme Intereeg Danube Transnational Programme, 2016-2019.

The smart specialization strategies help regions to concentrate their resources on some key priorities (for instance, the regions in the Romanian Danube area – smart cities and high tech clusters, the agro-food sector, renewable energy, furniture, textile-creative, tourism, health, and logistics, maritime). Clusters could be used by these regions as platforms (Constantin &All, 2011) that gather and mobilize the local players in order to elaborate and implement successfully the smart specialization strategies, to attract innovative enterprises and create jobs at a local and regional level.

### **3. A possible programme for clusters and networks of SME-s in Romania as part of Danube Region**

On the basis of the economic realities in the Romanian Danube Region and the favorable conditions created by the European transnational programmes of collaboration among the Danubian countries, as well as following the analyses and the documents of position designed by the Association of Clusters in Romania CLUSTERO (Coșniță D., Leucuța C., 2016), on the basis of the recommendations included in the most recent European document – Baden Agenda (September 2016), as well as on the experience of the mentioned projects, in which the author took part, we propose that a Program of support with national and European funds be set up to increase the competitiveness of clusters and SME-s in the Danube region in the period 2016-2020, whose specific objective should be: to finance management entities of clusters/competitiveness poles:



- from state budget funds by means of:

The National Programme for Increasing Competitiveness of Clusters (proposal) which is about to be drafted and implemented by the Ministry of Economy, Commerce and Liaison with the Business Environment and

The National Programme of Research, Development and Innovation III (NPRDI III) - a de minimis matrix for innovative clusters

- from structural funds in the Competitiveness Operational Programme 2014–2020, The Regional Operational Programme 2014 2020 and the Operational Programme on Human Capital 2014 -2020.

The proposal - supported by CLUSTERO – comes in the context in which the programming documents and the financing guidelines (already published) cover the necessary financing potential for clusters in Romania, by means of the Competitiveness Programme 2014 – 2020 (Priority Axes: AP1 and AP2).

Funding the Management Entities of clusters in Romania by means of the National Programme for Increasing Cluster Competitiveness (proposal) according to a de minimis matrix will allow them to structure more effectively their activity, first identifying the location, and then covering the current expenses for creating an efficient networking in the European eco-system of clusters, by financially supporting activities beneficial for the development of clusters: training, marketing, etc.

Funding the management entities of clusters/competitiveness poles from national and European funds should be corroborated with the implementation of the recommendations of the Baden Agenda for Danubian countries in the Romanian Danube Region, as follows:

- Connecting the SME-s with the research institutes and integrate them in the networks set up via the European Institute for Technology and Innovation - EIT, in the sectors dedicated to climate changes (EIT Climate), digitalization (EIT Digital), food and agriculture industry (EIT FOOD), health (EIT Health), renewable energy (EIT InnoEnergy), and efficient exploitation of raw materials (EIT Raw Materials), coordinated by the respective Excellence Centers (Knowledge Innovation Communities - KICs) (<https://eit.europa.eu/>);
- Integrated approach of economic activities, including social responsibilities;
- Increasing cross-border cooperation in the field of research (by means of the EUREKA programme);
- Cooperation in the fields of smart specialization along the Danube;
- Creation of an adequate framework for entrepreneurs and Business Angels;
- Strengthening cooperation among the chambers of commerce;
- Improving the public governance capacity in support for enterprises and cooperation among them.

Clusters should be encouraged to develop without any constraints in the Romanian Danube Region, which could thus become the most attractive market in Europe. In this respect, the cluster strategy in the Romanian Danube Region should focus on the following:

- Drawing up and updating an atlas of clusters in the region, by using the model of the German land of Baden-Württemberg in order to get to know which are the potential partners in the clustering initiatives, and to provide transparency to cluster support (the first edition of the atlas will include the current 45 clusters)
- Internationalization of clusters following the setting up of meta-clusters and platforms of discussions in order to generate projects in the network, and promoting Romanian clusters on international markets; collaboration of clusters in the Romanian Danube region in domains of smart specialization: bio-economy, eco-design, green industries, social innovation in a regional context by creating a Regional Index for Social Innovation; digital industries; creative industries, mobility technologies; industries of experiences (tourism, arts etc), logistics services etc.
- Promotion of excellence clusters in the sense of obtaining results in increasing the efficiency of the SMEs activities in the clusters, following the improvement of the cluster management (professionalization of the cluster management to the benefit of SME-s in the clusters)
- Correlation with smart specialization strategies in the Danube Macro region and approach on 3 levels: the cluster policy level (better policies; more adequate implementation of RIS3, new instruments for policy implementation, better schemes for cluster support); the cluster management level (higher professionalism, better services, new services, a more powerful role/position, higher

acceptance) and the company level (road mapping/foresight, a more profound training for future challenges, higher efficiency in business and transnational cooperation).

#### 4. Conclusions

The lack of funding from national funds for the development of clusters, and for the excellence cluster management, internationalization, investment in research, innovation, as well as not adjusting the applicant's guide to the calls open in Operational Programmes to the economic realities in Romania will conduct to a reduced efficiency of material, financial and human investments.

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- <http://www.clusterpolisee.eu/ro>
- <http://www.interreg-danube.eu/approved-projects/danubiovalnet>
- <http://economie.gov.ro/images/domenii/clustere.pdf>

## Regional Approaches to Global Uncertainty

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### Abstract

*Drawing on the literature and current trends, the authors set forth a hypothesis that crisis has led to regional responses among policy makers, multinational companies, and entrepreneurs. The authors more specifically posit that national policy makers are shifting focus by redefining or withdrawing from larger alliances and solidifying regional coalitions. Multinational corporations operate regionally with narrower supply chains, financial management to insulate them from currency concerns, and regional products. Entrepreneurial financing is increasingly more regional and entrepreneurial firms are more regional and less global. This discussion concludes with the suggestions for further research.*

**Key words:** Crisis, Regionalism, Entrepreneurship, Brexit

**J.E.L. classification:** F63

### 1. Introduction

The current global environment has experienced a wave of successive events that many scholars feel has brought the global economic system beyond the critical stage to a period where crisis is the new normal (El-Erian, 2010; Hitt et al., 2016). The elements of this ongoing crisis include the Greek/European financial crisis, the Great Recession, the rise of economic isolationism in the United States and Great Britain, the Arab Spring/North African refugee crisis, the Syrian refugee crisis, and other regional crises. The results of these sequential crises have led to a marked increase in economic uncertainty; globalization and global business have become more risky. It is also quite likely that we have not seen the end of these crises; prior events generated a contagion effect that multiplied across countries over time. Responses to the contagion often created more problems than solutions. It is evident that we are writing from the middle not the end of this phenomenon. The effects from these concurrent multiple crises are profound. Many nations are experiencing lower economic growth, lower employment/higher unemployment (Vuksic, 2014), lower worker mobility (Autor, et al., 2016), lack of financial liquidity (El-Erian, 2016), reduced foreign direct investment (World bank, 2017), and reduced consumer confidence.

Prior to the turn of the millennia, there had been an increasing trend toward globalization. At the nation level, countries were surrendering sovereignty to participate in multilateral agreements like the MERCOSUR, NAFTA, and an expanding EU. Political-economic policy had moved past free trade to common currencies and the free movement of human resources across national borders. The ongoing crises have caused a dramatic slowing if not a reversal of this era of trade liberalization.

To mitigate risks in this difficult context, business leaders and policy makers need to continually craft pathways toward business and economic growth. It is common practice among economic development professionals to look at economic growth as coming from three equally important sources: attracting external firms (FDI), helping existing firms to grow and prosper, and creating a context that facilitates entrepreneurship (Blakely and Bradshaw, 2002; Puia, 2014),

## 2. Common approaches to growth and uncertainty reduction

Crises present policy makers and economic agents with opportunity windows. Depending on the nature of the crisis and nature of the country, turbulent environments provide policy makers the opportunity to make large scale institutional change; changes that can be positive or negative. There are known political risks associated when crisis driven policies. Absent a coordinated government response, history has shown that extremism can become the normative response to crisis environments (Klapisis, 2014). For example, de Bromhead et al., (2013) demonstrated large increases in votes for far-right anti-system parties in 21 European countries following the stock market crash of 1929. In the same article, the authors saw a shift to the far-right following the 2008 financial crisis.

This paper posits that nations, multinational firms, and entrepreneurs are developing strategies to grow while mitigating risks driven by global crises, and that these strategies may have common characteristics. In looking to reduce risk while exploring the three economic development strategies of FDI, local firm growth, and enhanced entrepreneurship, the authors are beginning to detect a move away from global agreements to regional ones. This paper sets forth one grand hypothesis summarized below. The paper further presents three smaller hypotheses that relate to the grand hypothesis.

*Grand Hypothesis: Crisis has led to regional responses among policy makers, multinational companies, and entrepreneurs.*

## 3. Globalization or a new regionalism among nations?

All countries, but especially developing ones, derive economic benefit from cross border trade. Trade presents the prospects of larger markets, better sources of labor and materials, and access to potential new investors to highlight a few of its benefits. While countries and companies benefit from trade, the benefits of full globalization may be much fewer. Trade is driven by companies, and few companies' possess the resources to operate at an integrated global level (Rugman, 2005). Additionally, elements in the current wave of crises are re-shaping national attitudes toward globalization making it difficult to sustain (Corbu, and Stefanita, 2013; Stocker, 2016). One evidence of this is the US withdrawal for the Transpacific Trade Agreement – TPA.

At the government level, there is evidence to suggest that developing nations are moving from globalization toward to a new regionalism, one where regional partnerships provide the basis for better security and trade arrangements. Once such example would be the Shanghai Cooperative Agreement (SCO). Russia, China, and Central Asia call this a 'partnership' and not an alliance. While outsiders have viewed this as potentially a military alliance, it really forms the basis of a broad trade and financial alliance (including the Petroyan).

Similar to the SCO is the China-South Korea Free Trade Agreement (CKFTA). The 2015 agreement promises to reduce tariffs on 90% of goods between the two countries within 20 years at a time when South Korea's trade with China has already surpassed its trade with Japan, the United States and EU combined (Ye, 2017). At a time of great uncertainty, the CKFTA agreement represents a diplomatic sea change away from the West toward neighboring China.

Europe provides another example. To derive the benefits of trade, nations need to be relatively competitive. While there has been an expectation that harmonized EU policies would lead to equivalent levels of national competitiveness, this has not been the case (Potts and Puia, 2011); differences in competitiveness among EU members states has declined slowly (Balcarova, 2016).

It is difficult to write of a European approach to regionalism in this timeframe as the business landscape is evolving so quickly. Less than two years after the addition of Croatia, Latvia, and Lithuania to the EU, the UK voters endorsed Brexit. Additionally, the refugee crises have severely strained sentiment toward the Schengen agreement. While there is great uncertainty in regards to trade and economic growth as a result of Brexit, there is scholarship that suggests that reduced uncertainty and positive outcomes in the longer term are quite feasible (Whyman and Petrescu, 2017). Further, in normally stable Germany, we have witnessed the great difficulties the incumbent leader has faced in building a coalition government. While there is not liquidity crisis as yet, the

problems of government formation in Germany do not bode well for a system that has relied heavily on the German central bank for its financial stability.

These regional approaches suggest significant new directions in economic development. Government policy makers may be moving from a global trade platform to a regional one. In this new regionalism, one could imagine business attraction/FDI occurring more regionally than globally. It is easy to imagine China investing in innovative capacity in Korea and raw materials development in Russia, or in the reverse direction, Korea and Russian eyeing business growth in China's industrial markets.

These trends and the corresponding literature lead us to the following proposition (hypothesis one – h1):

*H1: In response to the ongoing crises, national policy makers are shifting focus by redefining or withdrawing from larger alliances and solidifying regional alliances.*

#### **4. Multinational Corporations: going global or going regional?**

Similarly, there has been an ongoing trend for MNCs to pursue regional rather than global strategies (Rugman, 2005). Additionally, anecdotal evidence seems to suggest that firms are also exploring regional supply chain solutions as a means to minimize risk inherent of lengthy supply networks in times of crisis. Further, in the search for talent, as nations like the United States and Great Britain begin to limit global immigration, regional workers may become the major source for talent that is absent in the local economy.

At the firm level, O'Hagen-Luff & Berril (2016) noted half the MNCs in their research reduced overall foreign sales but with few decreases in the regions in which they operate. They saw the majority of firms in their sample pursuing a semi-global strategy. Multiple scholars have identified trends away from global business interactions toward regional ones. In his work, Rugman (2001) argued that we were already reaching the end of globalization and a move toward new regional economies. Additionally, the literature suggests that firms benefit from shorter and more agile supply chains in the face of potential disruptions (Kleindorfer and Saad, 2005). These trends lead us to a second hypothesis (h2):

*H2: In response to crisis, multinational corporations operate regionally with narrower supply chains, financial management to insulate them from currency concerns, and regional products.*

#### **5. Regional entrepreneurship as a response to crisis**

Government policy makers tend to underestimate entrepreneurs for two reasons: entrepreneurs have less political capital than large established firms, and their impact on the economy is less immediate. The literature identifies 'high-impact' entrepreneurs as those who can create 20 new jobs in five years (McDougal-Covin et al, 2014). While the short-term impact of entrepreneurs is modest, the long-term impact can be transformational. Further, in times of crisis, entrepreneurs may represent a transformation force for change. In comparison to governments or even MNCs, entrepreneurs can move more quickly, require less capital, and are by definition willing to accept more risk.

Regionalism is not a new concept to entrepreneurs; it is the normative way in which start-up enterprises internationalize (Johanson and Vahlne, 1977). In their more recent work, Johanson and Vahlne (2009) view the business environment as a web of relationships rather than an arms-length market. As such, outsidership is the root of uncertainty; the more distant a business is from its customers, the greater the uncertainty. With these thoughts in mind, the new China-South Korea agreement opens opportunity vistas for their national entrepreneurs, giving entrepreneurship in stabilizing the economy post-crisis.

Despite the importance of entrepreneurship to European growth goals and the push toward common policy frameworks, significant differences still exist between individual countries in their support of entrepreneurship in terms of regulatory and investment contexts. Empirical evidence suggests that lower entrepreneurial regulation, more flexible regulation of entrepreneurial finance,

and access to early investment resources results in higher levels of patented innovation and business start-ups (Potts and Puia, 2018). It is important to note however that early stage entrepreneurial funding varies greatly across nations in general and European nations in specific. National entrepreneurs likely need to access emerging regional angel and venture funds to secure growth financing.

These trends lead us to our third hypothesis (h3):

*H3: In response to crisis, entrepreneurial financing is increasingly more regional and entrepreneurial firms are more regional and less global (i.e. fewer firms are being born global but are acting more bilaterally or regionally in terms of customers and suppliers); fewer entrepreneurs are addressing global needs as opposed to bilateral or regional ones*

## 6. Conclusions

As the ongoing crisis environment becomes a new reality, policy makers, executives and entrepreneurs face a challenging new frontier. In terms of growth through cross-border business attraction, *global* FDI has fallen. In this context, policy makers and firms are beginning the process of building new regional alliances. While regional investment has not replaced lost FDI to date, the realignment of partnerships suggests that FDI will follow these configurations.

In the political environment, it is hoped that policy makers will not forget the lessons learned in the past three decades in regards to trade and entrepreneurship. Reducing the burdens of unsuitable regulations, maintaining or lowering tax rates, finding ways to support entrepreneurship despite potential opposition from incumbent firms, and discovering ways to support business growth are basic elements of success. It may also prove valuable to explore at least in the short-run regional alliances that reduce risk while providing the benefits of trade.

At the firm level, research posits that executives will benefit from reducing their global expectations and focusing upon opportunities within a limited set of regions. Shorter supply chains can reduce uncertainty. Neighboring markets reduce the liability of foreignness. MNCs can benefit from a regional approach.

Entrepreneurship may provide the greatest challenges and the highest potential long-term rewards. In the event of a liquidity crisis, nations are likely to have far more urgent priorities than entrepreneurial funding. Further, they may feel pressure to raise government income through tax increases. Reduced levels of funding and higher taxes have a well-documented negative effect on entrepreneurship and innovation. Because the return on investment in entrepreneurship is not immediate, entrepreneurship may not make it to the top of a government's priority list. This could have severe long-term consequences.

Significant research is necessary to test our hypothesis, specifically to our hypothesis regarding policy makers (h1). It is important to discover if changes in policy result shift nations toward regional trade or merely result in a reduction in trade. Similarly, shifting national fortunes could create significantly greater volatility in exchange rates. It will be interesting to explore if economic actors pursue the use of cryptocurrencies (e.g. bitcoin) as a mechanism for individuals and firms to navigate increased financial market fragmentation by policy makers.

Regarding multinational corporations (h2), we ask if there is significant evidence that multinationals are abandoning global product lines or supply chains. One might find empirical support for this if there is a decline in the significance of global brands and increasing importance of regional or local brands. It will be important to investigate if multinational firms are abandoning doing business in selected regions altogether.

To address our entrepreneurship (h3) study is needed to identify if there is evidence that less firms are being born global? Is there evidence that fewer firms are forming to address global needs (e.g. antivirus software, material science), but rather regional or cultural needs (e.g. prepared foods, clothing). Further, there is need to investigate the extent to which entrepreneurs will seek regional rather than global customers and/or suppliers.

Clearly, we are mid-chapter in terms of adjustments to the new-normal crisis environment. The current research is still somewhat ambiguous as to the direction that nations must take to maintain and grow their respective economies and to reduce the environmental uncertainty that makes business decisions more complex. Research can contribute to policy makers, executives and entrepreneurs as they face this complex and dynamic environment.

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## Classification of EU Countries in Terms of the Level of Sustainable Development

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### Abstract

*This article has classified the EU countries in terms of the level of sustainable development. The study was based on main sustainability indicators developed by Eurostat. In empirical research, one of the methods used was Cluster Analysis - Ward's method. Grouping methods make it possible to distinguish countries with a similar level of sustainability which is particularly useful for monitoring the progress of individual EU countries in implementation of the Sustainable Development Strategy. For specific groups of countries, appropriate control instruments and strategies can be proposed. The research period is 2016. As a result of the research, 6 clusters of countries were obtained. For specific groups of countries, their characteristics were defined.*

**Key words:** sustainable development, the indicators of sustainable development, level of development, European Union.

**J.E.L. classification:** C80, C82, O11

### 1. Introduction

Sustainable Development stands for meeting the needs of present generations without jeopardizing the ability of futures generations to meet their own needs – in other words, a better quality of life for everyone, now and for generations to come. It offers a vision of progress that integrates immediate and longer-term objectives, local and global action, and regards social, economic and environmental issues as inseparable and interdependent components of human progress [<http://ec.europa.eu/environment/eussd/>].

Sustainable development is one of the EU's most important goals and ways in which it is achieved are defined in the EU Sustainable Development Strategy (EU SDS). Progress towards the EU SDS objectives and targets is evaluated using a set of indicators (EU SDI set).

The aim of the article is to classify EU countries in terms of the level of sustainability. Leading indicators for sustainable development created by Eurostat constitute the basis of assessment. The research was carried out by means of cluster-method analysis.

The research period is 2016.

### 2. The indicators of sustainable development in EU countries

The term „sustainable development” is very widely used, hence publications in the subject area abound with varying approaches and concepts. This constitutes both cognitive and practical difficulties since sustainable development can be understood and interpreted in various ways. Discussions on this issue have been extensive and have yielded immense definitions of sustainable development. There, currently exists dozens of definitions and interpretations of sustainable development. Consequently, sustainable development has become a fluid and ambiguous category, saddled with degrees of subjectivity. Concepts of sustainable development are, to a large extent, relative to an authors point of view. The popularity of the term very often makes it difficult to

ascertain whether one is dealing with a real economic and ecological category or just a marketing ploy (Grzebyk, Stec, 2015; Jeżowski, 2009).

Specific objectives of sustainable development should include the following (Kośmicki, 2010):

- environmental objectives: protection of Earth’s atmosphere, protection of wildlife, protection of resources, protection of human health, mobility within natural environments;
- economic objectives: full employment with acceptable quality of labour, adequate incomes and economic growth within natural environments, balance in international relations and progressive work, price stability, sustainable state budgets that is sufficiently furnished with collective (substantive) goods;
- socio-cultural objectives: social security, democracy and rule of law, internal and external security, social inclusion and equitable life opportunities, quality of life and quality of health.

Majority of definitions contain several common elements that can be defined as sustainable paradigms (Kistowski, 2003). Amongst them are the following assumptions (Stanny, Czarnecki, 2011):

- sustainable development is a type of socio-economic development (realized both for human and by human, pursuing environmental and socio-economic egalitarianism);
- sustainable development is a process integrating all human activities, commonly brought to three dimensions: economic, social and environmental, and less widespread by spatial or institutional (political) dimension.
- sustainable development means a desirable living environment and a responsible society pursuing the concept of internal and intergenerational governance.

In other words, sustainable development is a kind of compromise between the environmental, economic and social objectives of the present and future generations. The economic aspect of sustainable development means not only meeting today's needs, but also securing the resources needed to meet the needs of future generations (natural capital, material, man-made, intellectual and social). The ecological aspect means that the limits of the natural system for human activities are not established and not to be exceeded. On the other hand, the social aspect is identified with education and the ability to solve major social problems and participate in the development processes of the whole system (Ciegis *et al*, 2009; Stanny, Czarnecki, 2011).

European Union monitors advances in sustainable development through the application of sustainability indicators, divided into three levels:

1. Headline indicators,
2. Operational indicators, and
3. Explanatory indicators.

Headline indicators monitor the overall objectives related to the key challenges of the SDS. They are widely used indicators with a high communicative and educational value. They are robust and available for most EU Member States.

Table 1 presents a summary of theme groups and headline indicators for monitoring sustainable development in EU countries.

*Table no. 1. Theme areas and headline indicators of sustainable development*

<b>Theme</b>	<b>Headline indicators*</b>
1.Socio-economic development	X1-Growth rate of real GDP per capita (Percentage change on previous year, EUR per inhabitant) (S)
2.Sustainable consumption and production	X2-Resource productivity (2000=100) (S)
3.Social inclusion	X3-People at-risk-of-poverty or social exclusion (D)
4. Demographic changes	X4-Employment rate of older workers (S)
5.Public health	X5-Healthy life years and life expectancy at birth, females (S)
6.Climate change and energy	X6-Greenhouse gas emissions (1990=100) (D) X7-Primary energy consumption (D)
7.Sustainable transport	X8-Energy consumption of transport relative to GDP (2010=100) (D)
8. Natural resources	Common bird index Fish catches taken from stocks outside safe biological limits: Status

	of fish stocks managed by the EU in the North-East Atlantic
9.Global partnership	X9-Official development assistance as share of gross national income (S)
10.Good governance	No headline indicator

\* Headline indicators applied in the study denoted with the symbols X1-X9. S-stimulating, D-non-stimulating. No indicator was considered for the area of "Natural resources" due to lack of data from EU countries.

Source: Own elaborations based on: Eurostat (<http://ec.europa.eu/eurostat>)

### 3. Empirical Results

The lead indicators in table 1, which were collected for the 28 EU countries in 2016, are the basis for grouping EU countries in terms of sustainability (Due to lack of data for 2016, for chosen countries data were included for 2015). Statistical data were standardized according to the formula:

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{S_j}$$

where:

$z_{ij}$ - standardized value of  $j$ -th feature in  $i$ -th object,

$x_{ij}$ , -value of  $j$ -th feature in  $i$ -th object,

$\bar{x}_j$  - mean value of  $j$ -th feature,

$S_j$  -standard deviation of  $j$ -th feature.

Grouping of EU countries in terms of sustainability was conducted using the Ward method and STATISTICA program. Foundations of the Ward method can be found, among others in the works: (Lance, Williams, 1967; Ward 1963).

As a result of the Ward method, the EU dendrogram for the 2016 indicators for sustainability (Figure no.1) was obtained.

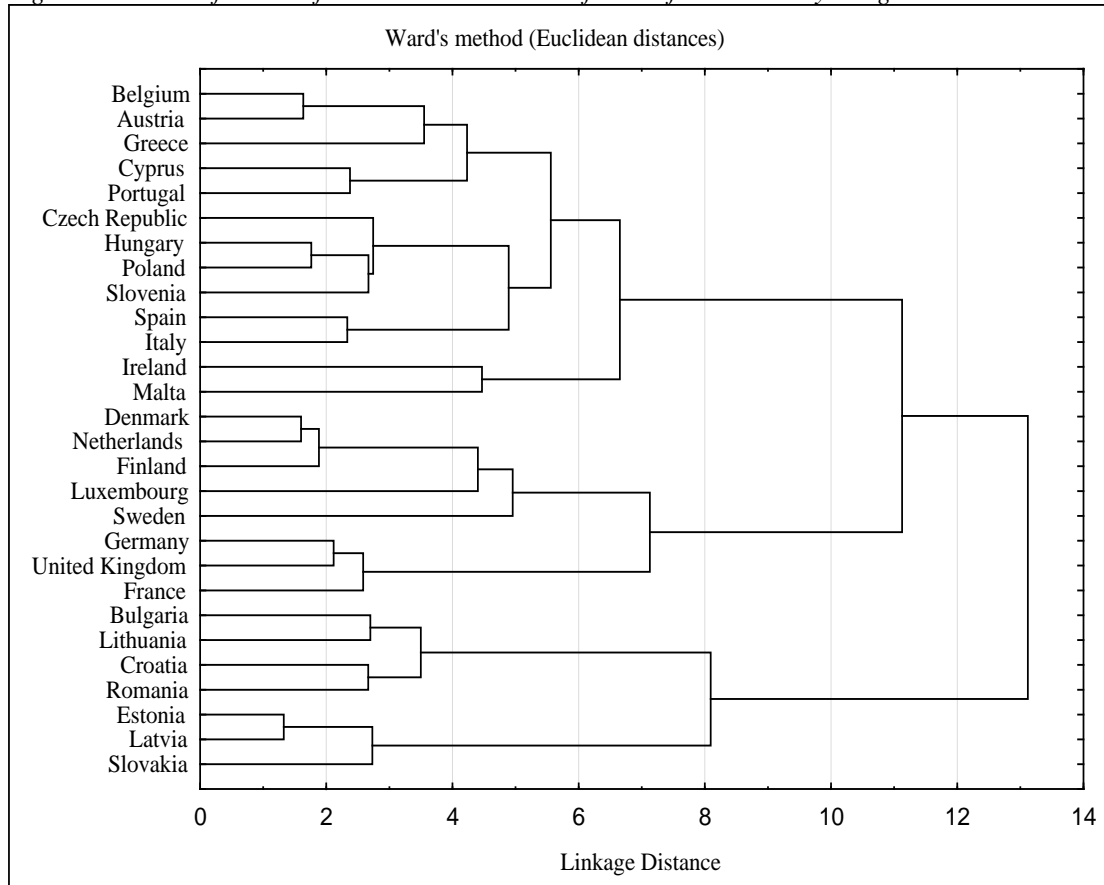
An important problem that arises after preparing dendrogram is the number of EU countries with a similar sustainability level.

In the literature on the subject, despite development of many indicators, the optimum rule for number of classes has not been established (see, for example, Filip, 2006; Halkidi, *et al*, 2001; Milligan, Cooper, 1985; Migdał-Najman, 2011; Stec, *et al*, 2014).

The commonly used criterion of objects division into groups is the analysis of agglomeration graph. Graph shows the distances between clusters when they were combined. The best cut off point is a clear flattening (longer vertical line), meaning distant focus (Stanisz, 2007).

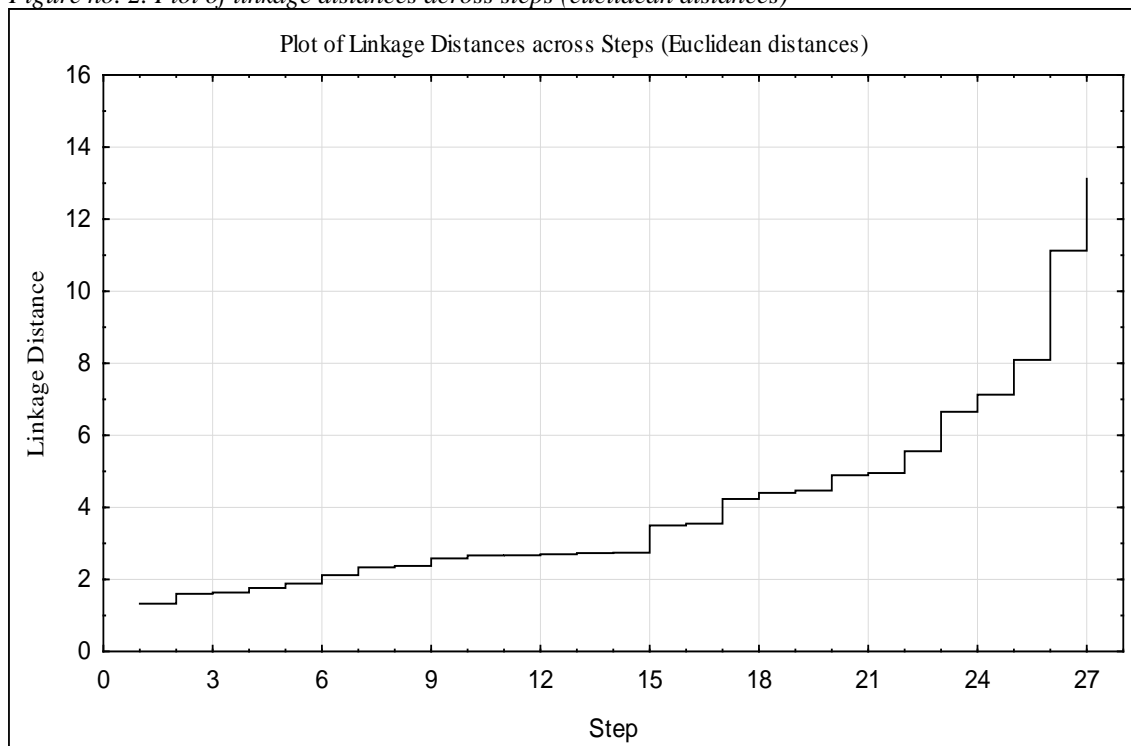
The course of agglomeration for 28 EU countries in terms of sustainable development level is presented in Figure 2.

Figure no.1. Classification of EU countries in terms of level of sustainability using the Ward's method



Source: Own calculations

Figure no. 2. Plot of linkage distances across steps (euclidean distances)



Source: Own elaboration

By analyzing the pattern of agglomeration shown in Figure no. 2, it can be observed that dividing EU countries into 6 groups of similar countries would be the most sensible (distance 6). The composition and characteristics of individual clusters are shown in Table 2 by the most favorable arithmetic means of the leading indices computed for the countries categorized in each cluster of countries.

*Table no. 2. Groups of EU countries with similar levels of sustainable development*

<b>Groups</b>	<b>Country</b>	<b>The most favorable values of leading indicators</b>
I	Belgium, Greece, Austria, Czech Republic, Cyprus, Portugal, Hungary, Poland, Slovenia, Spain, Italy	Lack of data
II	Ireland, Malta	X1, X2, X5, X7, X8
III	Denmark, Netherlands, Finland, Luxembourg, Sweden	X3, X4, X9
IV	Germany, United Kingdom, France	Lack of data
V	Bulgaria, Lithuania, Croatia, Romania	Lack of data
VI	Estonia, Latvia, Slovakia	X6

*Source: Own elaboration.*

Ireland and Malta as countries from Group II have the best situation in terms of sustainable development. Of all the studied countries groups, these countries have obtained the most favorable average values of five leading indicators: X1 - Percentage change on previous year, EUR per inhabitant, X2 - Resource productivity (2000=100), X5 - Healthy life years and life expectancy at birth, females, X7 - Primary energy consumption and X8 - Energy consumption of transport relative to GDP.

Countries in group number III (Denmark, Netherlands, Finland, Luxembourg, Sweden) also have a good situation in this subject area. Their characteristic is the favorable situation in terms of three leading indicators: X3 - People at-risk-of-poverty or social exclusion, X4 - Employment rate of older workers and X9 - Official development assistance as share of gross national income.

Favorable values of one of the leading indicators (X6 - Greenhouse gas emissions) have Estonia, Latvia, Slovakia, forming conglomeration VI.

In contrast, groups of countries numbered I, IV and V do not stand out among the other clusters in terms of the value of any leading level of sustainable development indicator.

#### **4. Conclusion**

The main findings of the paper can be summarized as follows:

1. Sustainable development is a priority of the European Union. In measuring the progress of EU countries in implementing this development concept, EU uses indicators of varying detail levels.

2. Lead indicators for sustainable development cover the most important areas of this development and can be an effective tool for a preliminary assessment of the progress of individual EU countries in implementing this development concept.

3. The empirical studies used the leading indicators for sustainable development for 28 EU countries in 2016. The Warda method was used to classify EU countries into groups with a similar level of sustainability.

4. Using the criterion of division of groups based on the agglomeration graph, 6 groups of countries were separated and their characteristics were determined. Good results in the implementation of the concept of sustainable development reached the countries included in Group II (Ireland, Malta) and III (Denmark, Netherlands, Finland, Luxembourg, Sweden). On the other hand, in terms of Greenhouse gas emissions - group VI stands out (Estonia, Latvia, Slovakia).

5. The importance of the sustainable development concept in EU countries indicates the need for further in-depth research.

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# The Role of Taxes in Financing of Public Expenditures and the Implications for Fiscal Policy in the Countries of the European Union

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## Abstract

*The analysis made in this paper, for the 1995-2016 period, in the EU confirms that the fiscal resources are the main public resource and pointing out the fact that they are sensitive to the economic conjuncture. By analyzing the structure of financial resources, we found that most of the Member States also used extraordinary resources in financing the public spending even if the economic situation allowed the balancing of resources with public expenditures, with negative consequences on the situation of public finances, but also on macroeconomic stability, while breaching and the existing Community regulations. A second direction of analysis was to identify the position of the Member States towards the rules of a sound fiscal policy in relation to the economic conjuncture. As a result of the analysis, we have concluded that most of the Member States have led a pro-cyclical fiscal and budgetary policy, more pronounced in 2001-2007 period.*

**Key words:** taxes, public expenditure, fiscal policy, economic growth

**J.E.L. classification:** E62, H60, H20

## 1. Introduction

In our approach, we aim to analyze the structure of the main forms of public financial resources in terms of their coverage of the total public expenditure at the EU level in the period 1995-2016, in order to identify the peculiarities of structure on one group of states (EU15 and the new member states respectively). Secondly, with the emphasis on the role played by the tax revenues from the taxes, we wish to dynamically analyze their evolution in terms of public spending coverage. Also, considering, on one hand, the overall economic conditions in the analyzed period and, on the other hand, the existing community norms, we intend to identify the implications of the evolution of the indicators analyzed with a reference to the type of fiscal policy -the budget adopted by the Member States.

## 2. Conceptual approach

Taxes have been the main form of public financial resources ever, since their emergence. The purpose of these levies was and it is financial, namely, the procurement of financial resources at the state's disposal to cover its expenses, even if others have been added as a result of the mutations in society.

On the background of the modern doctrine, the state involvement in society and economy was focused on the development of the state economic sector and the influence of the evolution of the private economic activities and, on the other hand, the redistribution of the financial resources among the members of the society, in the context of its manifestation as a state of welfare. On this background, alongside taxes and fees that were considered to be fiscal levies, others have also been stated, such as social contributions to various public financial funds, framed by some authors in the generic category of parafiscal levies, as a result of the development of the state functions in the society, amid state interventionism (Lowenthal, 1996, p.112). However, from an economic point of view, the taxes and the social contributions are considered to be similar to taxes. Also, due to the fact that the state itself is an economic agent, it participates in the processes of primary distribution

of the created product, the revenues obtained are a source of coverage of all the public expenditures, those of a non-fiscal nature.

The two major categories of public financial resources, namely those of fiscal and non-fiscal nature, give the current of ordinary public financial resources used to meet the public needs. To this, extraordinary financial resources are added, mainly purchased through public loans, whose involvement in the formation of the public financial resources has become more and more intense in the contemporary society, on the background of the state-interventionist doctrine and in comparison to the economic and social difficulties, the majority of the states accepting the financing of the budget deficits, in order to relaunch the economy, on their account.

### **3. Implications of the European integration process on the structure of public resources**

If the Maastricht Treaty laid the foundations for a fiscal-budgetary discipline, in 1997 the Stability and the Growth Pact (SCP) outlined the multilateral surveillance system of the Member States whereby the level of government deficit and government debt is monitored by the European Commission, in order to maintain the sustainability of the public finances. The implications of the CFP for how public expenditure is covered are the limits imposed on the maximum level of extraordinary financial resources, the value of which should not exceed 3% of GDP. If this maximum threshold is exceeded, it is considered that the Member State in cause has an excessive deficit, which violates the Article 104 of the EU Treaty, and it is therefore necessary to start the correction process. However, since its adoption, the CFP accepts a number of situations where the public deficit, although higher than the maximum threshold, is not considered excessive, such as natural disasters, wars or severe economic recessions.

In 2005, as a result of the amendment of the two European Council Regulations (Regulations 1466/1997 and 1467/1997), to the exceptional situations already existing, added the slowing down economic growth regulation. This change was seen as a *complete relaxation* of the tax rules by the Member States and the convergence criteria risked being viewed as a minimum and not as a maximum (Tanzi, 2005, p.12). In other words, even in the state of economic growth, Member States were allowed, accepted and financed with a budget deficit in order to stimulate economic growth to the level which was desired by the public authorities, which is to a larger extent contrary to another provision of the PCS, according to which, at the level of an economic cycle, the "budgetary position is close to the balance or in surplus", thus accepting public deficits only when economic conditions are unfavorable in order to promote a sound economic growth and create new jobs (European Council, 1997).

We note that the existence of "deep imbalances and market failures that affect both financial and real flows" justifies the promotion of a debt-financed budget deficit as a solution imposed first of all by the need to unlock and relaunch the economy in the periods of recession or stagnation, when it does not work normally and it does not fully self-regulate (Filip, 2002). In times of economic growth, however, the promotion of a budget deficit and its financing due to the extraordinary resources is not an indicative measure, making the realization of the budgetary surpluses to be rational.

In essence, the CFP requires a sound and prudent conduct by the Member States, where the public deficit is only acceptable under extraordinary circumstances and not as a pervasive reality, irrespective of the economic situation. The danger of non-compliance with these rules is to accentuate the economic cycle by undermining the effects of embedded stabilizers. In this respect, the conducted studies showed and warned that the fiscal policies were apparently pro-cyclical in the developing countries between 1960 and 2006, and in the industrialized countries they contained some pro-cyclical elements (Kaminsky et al, 2004, p. 18). Moreover, final public consumption, in developing countries, accentuates the economic cycle. However, at the level of the G7 states, fiscal-budgetary policies were either acyclical or anti-cyclical (Talvi et al, 2005, p.24).

As a result of the negative economic developments caused by the economic and financial crisis, on the one hand, but also by the worsening the state of the public finances in some of the Member States, on the other hand, in 2011, some provisions of the PCS were reconsidered; Firstly, the possibility of financing a deficit was eliminated when the growth rate is below the potential. In addition, the Directive 85/2012 reiterates the respect of the two fiscal anchors, the acceleration of

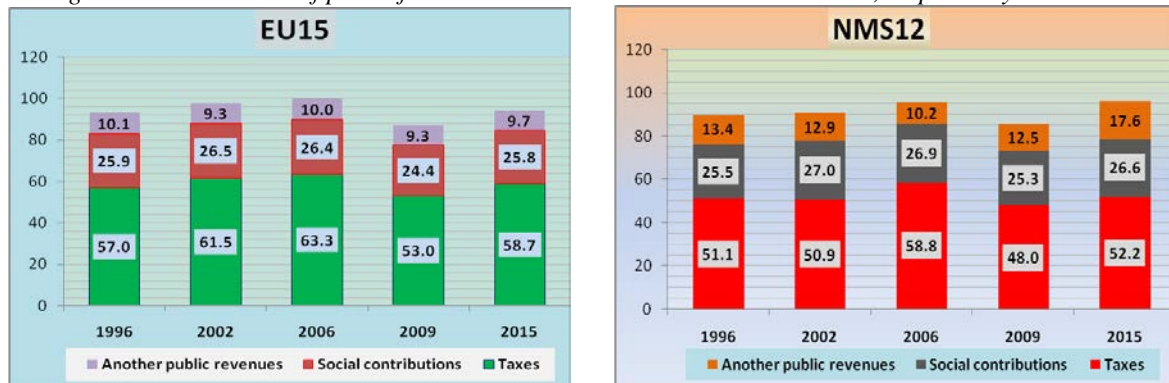


the fiscal consolidation process in favorable economic times (European Parliament, 2012). Moreover, the provisions of the CFP also refer to those Member States out of Eurozone: they are also a subject of the Commission's multilateral surveillance system, with the obligation to present convergence programs, in which the present and the foreseeable situation of the public finances (deficit and public debt) is monitored (European Council, 1997). We will continue to see whether these fiscal prescriptions have been respected both before and after the crisis.

#### 4. The importance of taxes in financing public expenditure – structural analysis

In the period under review, it is noted that between the EU15 and the new EU Member States (for reasons of systematization, we will refer to them as "NMS12"), there are differences in the structure of the financing of the public expenditure in general and the degree of the public expenditure coverage on the revenue of a fiscal nature.

Figure no. 1: Structure of public financial resources<sup>a</sup> in 1996-2015 in EU15, respectively in NMS12



Source: own calculation based on data provided by Eurostat. <sup>a</sup> – as a public expenditure financing degree

Overall, over the period 1996-2007, we observe that in the EU15 as well as in the NMS12, the level of the financing public expenditure has not exceeded the 100% threshold in any of the reference years, as required by the PCS. Correcting this result with the macroeconomic outcomes of the pre-crisis period (economic growth exceeded 3% between 1995-2001 and 5% NMS12 in the period 2002-2007), we can conclude that there were objective conditions for increasing public revenues (which follows mechanically the GDP trend), but the fiscal policies were some pro-cyclical, both in the reduction of taxation and in the increase of the public expenditures.

Looking individually, in 2002, compared to 1996, the coverage of the government expenditures from the ordinary resources remained constant in the new Member States, while in the EU15 Member States it improved significantly, with the exception of Greece. This improvement comes in the context of the fiscal consolidation process imposed by the Maastricht Treaty in 1993 with a view to adopting the single European currency in the EU15, in contrast to the NMS12, where, in order to increase the territorial attractiveness, the cutting tax on profit and income, with an impact on the budget revenues. In 2006, in the EU15, eight Member States had budget surpluses, and in the NMS12 only Bulgaria and Estonia financed their full public spending from ordinary resources. At the opposite end, there are countries like Greece, Portugal, the UK and Italy, where the level of funding was well below the group average.

In 2009, as a result of the economic and financial crisis, with GDP falling sharply in all Member States (Poland is the only exception), budget revenues have fallen dramatically, especially those stemming from taxes. At the same time, the situation of the public finances has worsened steeply, the level of public expenditure financing on the account of the budgetary revenues decreased to 86% in the EU15 Member States and to 85% in the NMS12. Far below the average are Greece, Ireland, Portugal and UK, namely Latvia, Lithuania and Romania; in these states, the total public expenditure was covered only by 80% of the ordinary budget revenues, the remainder being secured on the borrowed resources. Also, the average, financial resources from the social contributions and non-government public resources have not significantly altered their contribution to the total public spending, the tax revenue has fallen to around 18% in the EU27.

The collapse of the public finances had as its main causes, first of all, the economic crisis itself, the fiscal revenues being sensitive to the economic conjuncture. The programs proposed by the governments in most of the Member States, included either measures to increase the public spending or the tax cuts, to mitigate and combat the economic downturn, have also had a significant impact on the level of government spending.

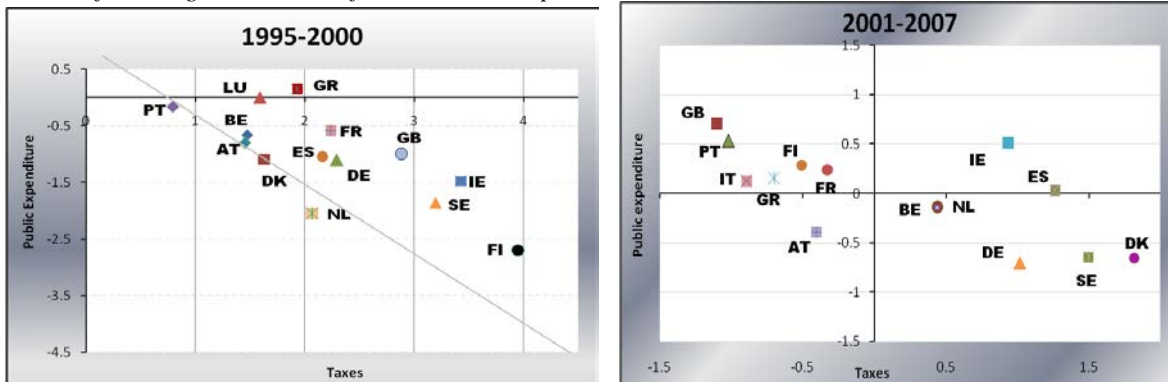
In 2015, the Member States recovered the situation of the main fiscal-budgetary indicators, with the usual resources financing over 94% of the public spending in the EU15, compared with only 96% in the NMS12. Negative situations are still recorded in Greece, Spain and UK, where ordinary resources covered less than 90% of all public spending. In comparison, in the NMS12, the fiscal anchor of the deficit is met, but no state has recorded a surplus, while in Germany, Luxembourg and Sweden the level of public expenditure financing exceeded 100%.

## 5. The role of taxes in financing public expenditure – approach in dynamics

From the above analysis, we can notice that fiscal resources from the taxes have been more fluctuating compared to other types of public financial resources. Public resources from social contributions and non-fiscal contributions, as a cover for the total of the budget expenditures, experienced small fluctuations, even insignificant, between 1995-2016.

Under these circumstances, for an analysis in dynamics, we will correlate the level of the financing of the public expenditure, on the basis of tax resources with the dynamics of the public spending, to see if the Member States acted in a pro-cyclical manner during the analyzed period, in three periods: 1995-2000, 2001-2007 and 2010-2015. The delimitation considered some peculiarities in the macroeconomic evolution: the adoption of the euro in the EU15, the manifestation of the NMS12 states as emerging economies starting with 2001, respectively the resumption of the economic growth in most of the EU7 countries from 2010.

Figure no. 2: Distribution of EU15 SM according to the trend<sup>a</sup> of public expenditure<sup>b</sup> and the degree<sup>c</sup> of their financing on the basis of tax revenues, in period 1995-2007



Source: own calculation based on data provides by Eurostat.

Note: <sup>a</sup> – the value of “a” from de linear equation of trendline  $Y = aX + b$ ; <sup>b</sup> as % in GDP; <sup>c</sup> as ratio between fiscal revenues (without parafiscal and non-fiscal revenues) and the level of public spendings

Starting from the assumption that in the periods of sustained economic growth there is an automatic adjustment of the budget balance, we will analyze whether this has happened, and if not, which were the causes and the implications.

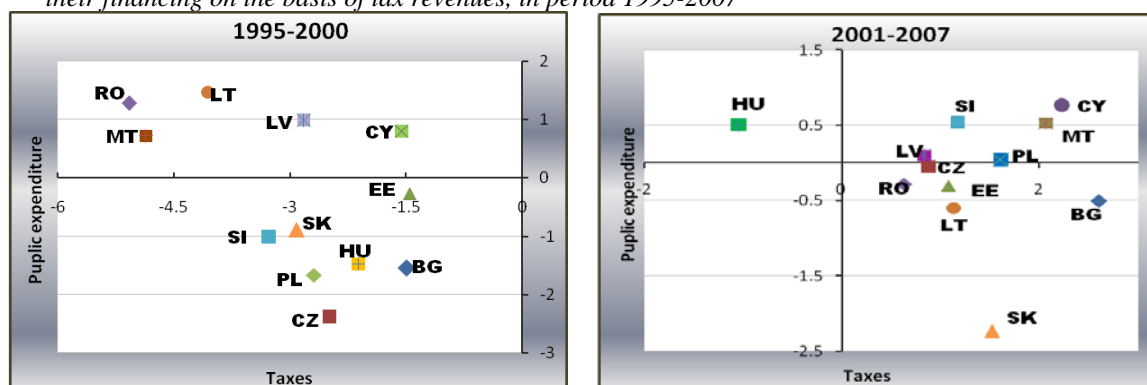
**In the first period**, it is consistent that in most of the EU15 countries, the public spending (as a share of the GDP) had a strong downward trend, with the exception of Greece (whee the trend was rising), Luxembourg and Portugal (downward trend). In the case of these three states, tax revenues has been rising in terms of the level of financing public spending. The second group (Belgium, Austria and Denmark) and the third group (Germany, Great Britain, France, Spain) are characterized by a moderate downward trend in public spending, although below the upward trend in their funding on the basis of the tax revenues, is lower for the first group, compared to the second one (here also confirming fiscal measures to increase the level of taxation). In the case of the fourth group (Finland, Ireland and Sweden), the fiscal consolidation process is most evident

(significant public spending cuts, discretionary tax increases) (Figure 2). Concluding, the trend in most of the EU15 Member States confirms the start of the fiscal consolidation process that has begun with the adoption of the EU Treaty.

In the **second period**, characterized by the sustained positive economic growth and very high values, the EU15 Member States are very dispersed, given the two indicators analyzed. From the perspective of a prudent fiscal and budgetary policy, the Member States should have been in the second corner of the chart on the right, a situation corresponding to a negative dynamics of public spending and a positive one in terms of their degree of funding on the revenue side taxes (this increases either as a result of the reduction of public expenditures, the revenues from this source remain constant, or as a result of the increase of the tax revenues, while the public expenditures remain constant). If this trend has not been confirmed, then the implications lead to two scenarios that are not mutually exclusive: in the first scenario the public spending has increased strongly, outpacing the rate of increase in tax revenues; the second, fiscal measures have been adopted and led to a decrease in the revenues from this source (either quota cuts or tax incentives).

Thus, looking at Figure 2, there is a *first group* of states in opposition to the scenario of a prudent fiscal-budgetary policy, namely the states in the fourth quadrant of the chart: UK, Portugal, Finland, France, Greece and Italy. Public spending coverage had a downward trend, more pronounced for Greece, Portugal and UK, indicating measures to reduce taxation. A *second group* is formed by the states in the second quadrant, of which Germany, Denmark and Sweden are individualized, where public spending has a steep downward trend and the tax revenues are a steady upward trend in line with Community rules. A *third group* is formed by Belgium, the Netherlands and Luxembourg, characterized by moderate fiscal consolidation measures. In the case of Ireland and Spain, significant increases in tax receipts were recorded, outpacing the growth rate of the public spending.

Figure no. 3: Distribution of NMS12 according to the trend<sup>a</sup> of public expenditures<sup>b</sup> and the degree<sup>c</sup> of their financing on the basis of tax revenues, in period 1995-2007



Source: own calculation based on data provides by Eurostat.

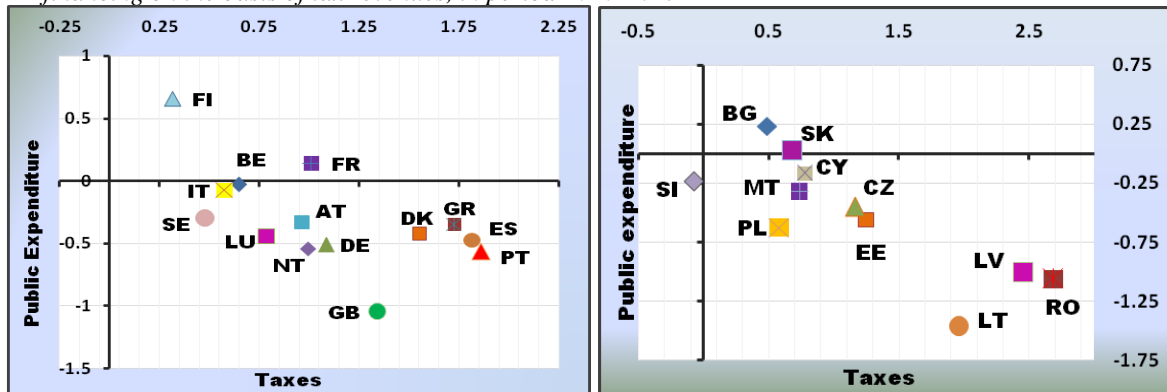
**In the case of the new Member States** between 1995 and 2000, the trend of the two indicators is largely explained by the profound changes in the economies of these states, which are in the process of transition to a functioning market economy. As can be seen from Figure 3, the level of the financing of the public spending had a downward trend in all 12 analyzed Member States, more pronounced in Romania and Malta, and moderate in Estonia, Cyprus and Bulgaria, the causes of extensive reforms including the tax plan, the fact that tax systems were still immature and the existence of fluctuating tax bases and considerable tax evasion.

The situation is a special one for the third-quarter states, which have seen a fall in the level of financing public spending from tax revenue, against a background of a downward trend in public spending, which signifies a strong reduction in tax revenues, indicating tax measures to reduce the level of taxation (quota cuts, tax incentives to attract foreign investors).

In the second analyzed period, most countries recorded an economic growth of over 5%, and in some cases even a two-digit one (Latvia, Estonia, Lithuania, Slovakia), which creates the conditions for the increased tax revenues, as as a result of the increase of the tax bases, provided that the quota cuts/tax allowances are not passed.

Furthermore, we can notice that, apart from Hungary, all the other Member States recorded increases in the tax receipts, more significant for those in Q1, where although public expenditure had an upward trend, it was outpaced by the rising pace of the tax revenue growth. In the case of the Member States in II, the increase in the level of financing the budget expenditures is partly explained by the downward trend of the public expenditures.

Figure no.4: Distribution of EU27 according to the trend<sup>a</sup> of public expenditures<sup>b</sup> and the degree<sup>c</sup> of their financing on the basis of tax revenues, in period 2010-2015



Source: own calculation based on data provides by Eurostat.

After the resumption of economic growth in the period 2010-2015, the EU27 countries returned to the "correct" fiscal-budgetary position, standing in the second quadrant or very close to it, as can be seen in the figure above. This indicates changes in the structure of tax bases, including the tax increases, even if the economic growth is modest compared to the previous period (0.97% in the EU15 and 2.32% respectively in the NMS12).

## 6. Conclusions

The analysis shows that a number of the Member States have made fiscal and budgetary policy decisions in contrast to the recommendations of the Community legislation, their actions endangering the sustainability of public finances and macroeconomic stability as a whole. The appeal of some Member States to extraordinary financial resources in times of economic growth, either as a result of an upward trend in the public spending or as a result of the tax reduction measures, has led to the undermining of the effects of the automatic stabilizers, with an impact on developments in the real GDP level, which, in the background of the economic and financial crisis, has seen a significant decline in all Member States (with the exception of Poland), and in some even severe, over 10% (Baltic States). Moreover, in countries such as Greece, Portugal, Spain, Italy, Cyprus, Estonia and Latvia, the economic contraction period was prolonged for several years, and the resumption of the economic growth was modest.

The reactions of the supranational bodies have led to the development of the Community norms to strengthen the Member States' oversight, both in the Eurozone and in the Non-Euro zone, with the aim of preventing or correcting the potential negative developments in the main indicators by monitoring the situation of the public finances. In addition, the new norms have the role to change the attitude of the Member States, by looking at the limits imposed by the convergence criteria, as a maximum and not as a minimum, as it did in the pre-crisis period.

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## Agrotourism in Romania - Sustainable Development Method for the Rural Environment

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### Abstract

*Agrotourism is more and more seen as one of the main ways for developing the rural area through different mechanisms. It provides the attraction to the economic and social circuit of different geographical areas that are not well equipped for industrial development, but that can offer many possibilities for people to get in touch with a specific pattern of life.*

*Agrotourism relate in fact the need and desire for leisure time with small business sector, both from tourism and agriculture. It sets up new coordinates that integrate people and nature for a mutual benefit, valuing the geographical characteristics of different areas.*

**Key words:** agrotourism, rural environment, organizational culture, leadership

**J.E.L. classification:** M10, M30, A12, O11

### 1. Introduction

This concept is located especially in the hill and mountain areas, but it has recently expanded to all types of relief, including plains, seaside zones a.s.o. The agrotourism allows the local community to take advantage of their natural resources as land, forest, landscape, rives, mountains a.s.o. and to assure a certain standard of living for the population.

The concern for preserving the cultural heritage in different parts of the world encourage the locals to maintain and even to develop some traditional activities that could have perish without any support and preoccupation.

Agrotourism support the cultural development of the local areas, representing an engine for educating both the locals, but also the tourists with regard to the history, traditions and different other element of the local folklore.

### 2. Developing a specific organizational culture within the agrotourism business

In order to get the expected performances the agrotourism business must be able to develop a specific organizational culture, that is going to integrate the characteristics of local community with the opening for large diversity of cultures that are brought by its stakeholders and, especially, by its market.

We refer particularly to the tourists who are more and more eager to explore this form of tourism and they want to deeply immerse in the local culture. At the same time, they bring their rich cultural luggage, contributing to the increasing of multicultural mix in a place that, till few years ago, was pretty much homogenous.

The organizational culture of the agrotourism business is determined by a series of endogenous and exogenous factors to the firm, which have a bearing on the organizational characteristics (Jarábková, 2010, pp. 532 -539).

The business management has the authority to make decisions that effectively affect any of the company's employees. This gives it the power to significantly influence managerial culture and organizational culture of the firm (Năstase, Gligor – Cimpoiu, 2013, pp. 191-201).

The impact is even greater if he is the owner or founder of the agrotourism business. Leadership and culture are strongly connected. Everybody needs the other. The creator of an agrotourism company develops alongside a series of work processes and products, a culture of work that reflects its image, its belief in what must happen in the firm to survive and enjoy its results.

Starting from the original idea, the founder of the agrotourism company brings in other people who share his vision. As time passes, the group grows, an organizational learning takes place and cultural elements based on the entrepreneur's vision appear and fix themselves. He is the creator and, at the same time, he is conditioned by the characteristics of the culture of the organization he has set up.

Leaders are true models for those in the firm and those who come in contact with it in one form or another. A special role for the founder and his descendants is the need to create an institutionalized goal (which is subsequently materialized in objectives) and to give a specific meaning to the agrotourism activities of those who lead them, with all the resources they have.

In this sense, it is advisable for leaders to have a great empathy with their supporters, to be able to understand and to understand them. The important source of the persuasion capacity of the leader, his power, is his own cultural base; the system of beliefs, values, attitudes and behaviors in which he believes strongly and decisively marks his actions (Nastase, Valimareanu, 2016, pp. 108 – 113).

Human nature is the one that determines people's desire to structure their lives, to have a familiar framework in which to move, so that they can successfully adapt their behavior to the requirements of the environment.

When they are familiar with a certain context, they enjoy greater intellectual and emotional stability, they do not have to be constantly tense, waiting for unpredictable, unknown elements to dictate a behavior other than the usual one.

That's why they feel comfortable in certain structures, with some people around them, whom I know and who are not likely to present unusual situations requiring them an extra consumption of resources.

For this reason, the entrepreneurs and the managers from agrotourism businesses should be able to invest formally and informally in training their workforce and besides the specific activities for running the company, the staff should be able to develop to a fast pace some intercultural competencies, highly required by their interaction with the tourists coming from different parts of the country or of the world, from country sides or from urban areas, with high or low income a.s.o.

Even if the environment has a number of unpleasant features, you know them, you know how to avoid them or have developed some specific defence mechanisms. Uncertainty, fear, arises when there may be unknown elements when you think you will have to change a series of things without knowing their magnitude and duration.

It is obvious that many people prefer stability and do not feel at ease when they come out of a certain routine. These patterns of behavior, developed over time and regarded as generally accepted norms by the constituents of a collectivity, are, in fact, the traditions the group has formed and perpetuates and represent in fact for local community a central point for attracting tourists in agribusiness field (Morag, 2004; pp. 3-16).

History and tradition are a powerful factor in shaping organizational culture. Group members recall and evoke a series of past events that deliver symbolic messages to both them and newcomers, by using ceremonies and rituals.

### **3. Leading the workforce for success**

From the very beginning, the hired employee in the agrotourism business gets acquainted with the company's demands through recruitment, selection and employment. They become even clearer during the integration period and as the new employee begins to work and interpret correctly a series of processes, phenomena from the firm and from its specific surroundings. The impetus to meet the company's expectations is a strong one that has its roots in childhood when the child is

told by the parents what they expect from him and what behavior he must adopt in order not to get in a conflict or to be rewarded.

Organizational culture is an important framework for agrotourism companies that conveys to the employee what is accepted and what is not in the organization. The behavior of bosses, colleagues, are substantial milestones against which a new employee reports both his own expectations and ideas, and the attitudes that he formally declared that should be followed.

If between formal and informal elements there are large differences, then the perception of the employee will be a conflict, which will most likely result in a predominant adaptation to the informal structure and the manifestation of a consequent behavior with negative results over the company (Ryglová, 2007, pp. 421-431).

The characteristics of the workforce are to differentiate the labor force in certain categories, depending on a number of criteria such as age, gender, race, physical capacities, etc. and can have a powerful impact on the interaction with the stakeholders, but especially with the customers.

The more and more free movement of the labor force will lead to an increasing interaction of different categories of people. People with different social situations, training, culture, language will bring to the organization a wide range of perceptions that reflect their characteristics. If they are properly managed, these differences can mean an important source of opportunities for the firm. But there is also the danger of tensions and even open conflicts; so the role of managers is to focus their energy on achieving the mission and objectives of the firm and to keep the conflict within certain limits that may prove beneficial to it (Drucker, 1993).

Employees with different needs, different expectations, will create a series of pressures in the organization, which must be correlated, harmonized and guided in constructive ways for the agrotourism organization. Of course that we refer especially to larger organizations, but such phenomena could occur even in the family businesses.

It is necessary in this context for managers to develop a series of skills in the management of a multicultural environment that will allow them to build an environment conducive to the manifestation of cultural diversity and the achievement of the synergy effect (Wilson, 2001).

Being able to lead in a multicultural environment requires you to recognize the ways in which this diversity enriches the content and nature of the relationships in the firm, its results. Building a strong organizational culture does not mean giving up individual cultural elements, but it asks for recognition of the core values of the firm, as shown by the company's vision and mission. Consequently, what is required is a harmonization of values, beliefs, individual symbols with those promoted by the leaders of agrotourism organization.

Managers who want and manage to maintain a diversity of cultural approaches also create the environment that offers the expected satisfaction of employees by offering the opportunity to manifest their cultural identity and succeed to integrate it and to value it in the multicultural environment offered by a high interaction with a wide range of stakeholders.

#### **4. Research methodology**

The research methodology used in this paper was focused on the statistical analysis of information on the evolution of certain indicators relevant for the analysis of entrepreneurship in all Romanian regions. These statistical indicators refer to tourist accommodation establishments with tourist accommodation functions, the types of structures being analysed and tourist villas (Table 1), tourist pensions (Table 2) and agro-touristic pensions (Table 3), for a representative period of 7 years, 2011-2017.



Table no. 1. Synoptic table of indicators in the regions analysed - Tourist villas

Type of accommodation structure	Development regions	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017
Tourist villas	NORTH-WEST region	57	61	49	47	52	48	42
	CENTRAL region	67	88	112	116	138	137	142
	NORTH-EST region	27	27	27	30	37	39	48
	SOUTH -EST region	257	298	296	297	270	264	246
	SOUTH-MUNTENIA region	49	51	56	59	61	58	76
	BUCHAREST - ILFOV region	4	5	6	5	9	11	13
	SOUTH-WEST OLTENIA region	50	52	38	36	35	34	42
	VEST region	37	39	37	34	41	44	50

Source: Processing of statistical information and publications of the National Institute of Statistics

Table no. 2. Synoptic table of indicators in the regions analysed - Tourist pensions

Type of accommodation structure	Development regions	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017
Tourist pensions	NORTH-WEST region	111	138	146	137	157	172	200
	CENTRAL region	351	429	476	484	613	597	620
	NORTH-EST region	157	187	195	193	218	215	222
	SOUTH -EST region	36	41	50	51	59	59	56
	SOUTH-MUNTENIA region	125	126	146	149	171	171	194
	BUCHAREST - ILFOV region	14	14	14	13	13	11	18
	SOUTH-WEST OLTENIA region	87	110	104	108	102	106	131
	VEST region	169	202	204	188	194	199	225

Source: Processing of statistical information and publications of the National Institute of Statistics

Table 3. Synoptic table of indicators in the regions analysed - Agro-touristic pensions

Type of accommodation structure	Development regions	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017
Agro-touristic pensions	NORTH-WEST region	206	252	231	226	246	284	443
	CENTRAL region	424	594	611	663	813	823	984
	NORTH-EST region	223	265	283	288	321	352	451
	SOUTH -EST region	71	89	86	88	81	88	95
	SOUTH-MUNTENIA region	125	147	166	174	203	210	246
	BUCHAREST - ILFOV region	2	2	3	2	1	1	1
	SOUTH-WEST OLTENIA region	74	108	103	108	105	120	150
	VEST region	85	112	115	116	148	150	186

Source: Processing of statistical information and publications of the National Institute of Statistics

## 5. Results and discussion

From these data we can see first of all that year-on-year, the number of tourist pensions and, in particular, of agro-tourist boarding houses, is growing. Also starting from the same analysis, we can identify the regions of the country, such as the North-East Region, the North-West Region and the Central Region, with the most developed potential, where there are the most favorable factors of economic and social development and the necessity maintaining tourism and agritourism among the strategic priorities of these regions.

It can be noticed that in all 6 regions of the country (North-East Region, North-West Region, Central Region, South Muntenia Region, South-West Region Oltenia and West Region) the number of agrotourist pensions doubled in 2017, compared to year 2011.

For all these regions that have been identified as most favorable to agrotourism development In Romania, strategic objectives have to be pursued such as:

- development of the technical infrastructure
- diversification of economic activities in rural areas
- granting financial incentives (loans, financial aids) to rural households that start their activity in agritourism
- developing human potential through vocational training adapted to agrotourism needs
- efficient use of natural resources and creation of conditions specific to rural tourism
- developing a rural economy to maintain traditional local products on the market
- preservation / preservation of heritage sites - monasteries, archaeological sites, fortified churches, etc.
- the promotion of the rural activities of the agro-tourist farms and of the rural lifestyle
- involvement and support of local authorities

## 6. Conclusions

All information points out that agrotourism has good potential for growth, but it needs specific programs and actions in order to have a sustainable development and to substantially contribute to the well-being of local communities, but also to act as a pillar for tourism, agriculture, transport and other important fields of national economy, providing a high added value.

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# The Contradiction Between the Environment Created by Man and the Natural Environment in the Context of Globalization

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## Abstract

*In the last decades, as a result of the use of results of the development factors of productions, the premises of a serious ecological imbalance have accumulated at an extremely rapid pace. Since the natural environment has been unable to absorb the shocks from human intervention, ecological crisis broke out.*

*The paper aims to surprise a symbiosis between man and nature, based on the aggravation of environmental problems and growth of global population. It is obvious that the satisfaction of unlimited human needs has been done through the accessing the planet's resources, whose regeneration rate is far inferior to the intensity with which needs multiply.*

*The basis of this paper is analyzing some of the factors involved in the degradation of the environment, in the context of globalization, mankind has to realize that the health of the planet is most important for the existence of current generations and the ones to come.*

**Key words:** environmental crisis, sustainable development, sustainability, ecological imbalance

**J.E.L. classification:** F64

## 1. Introduction

Over the years, globalization added new meanings, reaching, currently, to capture the whole economic life, influencing it from all points of view. With it new elements have arisen, but not without dangers and uncertainty, globalization leaving room for restlessness, getting harder to hide in connection with the collateral effects it could cause.

For some authors globalization is something that needs to be achieved in order for us to be happy; others say that the source of our unhappiness is globalization itself. Though, it is safe to say that for all of us globalization is a mandatory stage towards which mankind is heading very fast, an irreversible process that affects all of us equally and in the same way.

Globalization can be explained in different ways, but based on the aggravation of environmental problems, it represents a long-term system of approach to major contemporary problems, determined by the interaction of multiple political, economic, technical, ecological, social, cultural, religious processes and phenomena and the hope of solving them by the international community.

## 2. Environmental crisis

In the last decades, as the bonds between the world's states became stronger, globalization has determined an aggravation of global problems, including environmental crisis.

The ecological crisis is the expression of the contradiction between man made environment and his natural environment, between man and nature. Along history, man has considered that the planet's resources are an unlimited gift from nature, excessively exploiting them, without thinking of the disturbances that might occur in the ecosphere. Technical progress has had a major influence

over the amount of exploitation over natural environment. The way in which the technique was used had a contribution over environmental degradation.

Mankind has known other moments of ecological crisis. Although, the causes were of natural order: epidemics, natural cataclysms, etc. Over the last few years, economic, social and political causes have become primordial.

However, we cannot say for sure that mankind is on the verge of collapse, that the triggering factors of the ecological crisis would have escaped out of man's control. The danger is however real, making immediate action necessary, not only on a national scale, but international as well. People and local authorities, national and international have to collaborate in order to decrease, as much as possible, the negative ecological effects.

The ecological crisis from the past years has two major forms of manifestation: resource crisis and pollution.

Resource crisis has been generated by the irrational exploitation of resources. As the human society evolved, the needs of the population that were growing, have intensified and the planet's resources have decreased thoroughly. Even those that regenerate, have a much inferior regeneration rate to the intensification and diversification of human needs.

The planet is faced with the biggest population growth in the history of mankind. At the moment, the world's population has overcome 7,5 billion inhabitants.

It is estimated that the world's population will increase in the next decades up to 9 billion humans and will peak at 10 billion in 2050.

Over two billion people we will live on the planet over the next decades, they will need food, water and shelter, in the conditions of climate change that underline these fundamental human needs, these mean severe problems for the world's states. It is obvious that this rising population growth does not come with the same growth in resources as well.

Billions of people will be confronted with the lack of water, hunger, overpopulated urban areas in which living is nearly impossible, drought, food shortage, urban misery, migration and resources that are close to epuization, while the ability to meet needs tries to keep pace with the demand.

*Pollution*, in its diverse forms, is a result of uncontrolled economical development. It consists of affecting the natural ecological balance of an ecosystem, under the pressure of toxic substances made mostly by human activity. Overcoming a certain step, pollution damages the state of comfort of the human, his health, does damage to the economy, might become a calamity for whole regions.

It is estimated that the deterioration of the environment through pollution was caused by the way the industry has developed in the last hundred years, namely energy-intensive industries and a chaotic urbanization.

In the developed countries, the pollution phenomena has a rather small scale. Generally, in these countries poverty itself is a cause of pollution. It is safe to say, that over the last hundred years many of the developed countries have registered economical growth rates that can be compared to the advanced states, relying on attracting foreign investments, mainly industrialists from developed countries.

Other factors that are involved in the degradation of the environment are: some agrotechnical methods that are wrongly used, transports, urbanization, tourism, armaments race.

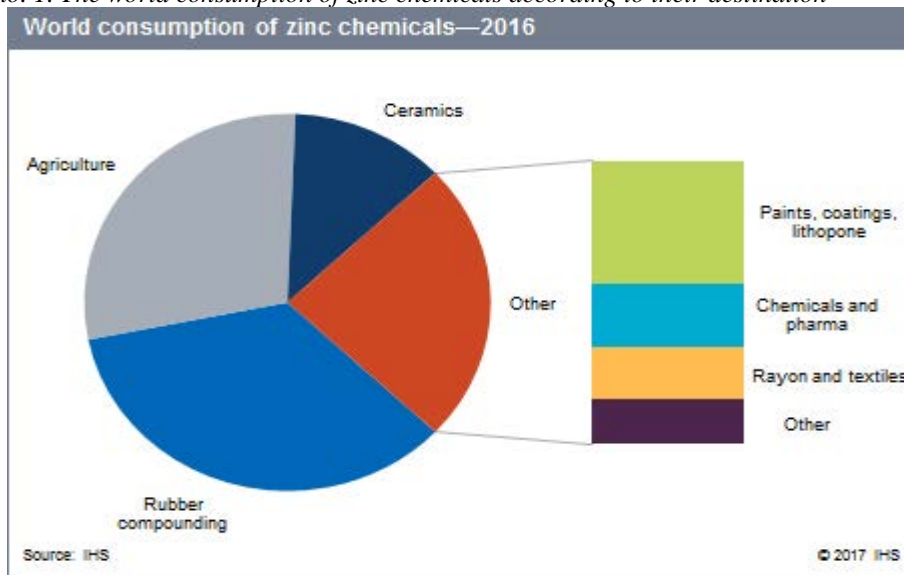
*Chemistry of agriculture* leads to high increase in production, but used scientifically, by omitting ecological aspects, might damage the soil, water, plants and man itself, from the food he eats.

For example, chemical products of zinc, respectively zinc oxide (62%), zinc sulphide (33%) and zinc chloride (5%) are increasingly more present in agriculture, rubber and ceramics industry.

Zinc chemicals continue to record growth in fertilizer industry, animal food and food consumption. Because above 50% of the world's soils are considered to be deficient in zinc, and the global population has doubled in the last decades, it's obvious that the arable land per person has decreased, but the crops need to grow to provide food for the growing population. In numerous studies, made including China, India, Brazil and Turkey, agricultural production has grown by adding zinc to the fertilizers and standard premixes.

The following graph shows the world consumption of zinc chemicals according to their destination:

Figure no. 1. The world consumption of zinc chemicals according to their destination



Source: <https://www.ihs.com/products/inorganic-zinc-chemical-economics-handbook.html>  
[Accessed 12 November 2017]

Some branches of the industry like petrochemistry, steel industry, cement production are becoming pollution factors when there are no measures taken to prevent it from happening.

Industrial consumption of fossil fuel for energy production, different gases and dust that are coming out from the chimneys of the factories have attracted the attention of ecologists a long while ago. The concentration of carbon dioxide in the atmosphere is rising, some say with 2% annually, rising the temperature in the lower layers of it, generating the greenhouse effect. The intensification of this process might modify the rainfall regime, climate, etc.

This is becoming a reality of the 21st century, if we keep in mind the evolution of economies from countries like China, India, Brazil, South-East Asia or East Europe and the fact that USA has not yet approved the Kyoto Protocol.

The human in industrial environment, is becoming increasingly exposed to metallic pollutants that are spreading in the air and water: copper, mercury, lead, chromium, cobalt, nickel.

The spills of some industries, especially chemical, in the waters attract great calamities. Also, it is worrisome the fact that more radioactive waste are spilled in the ocean.

Transports, in their various forms might become pollution sources: air pollution (through the exhaust gases), noise pollution (from the high noise of engines). Oil tanker accidents, accompanied by black tides, trigger real ecological catastrophes.

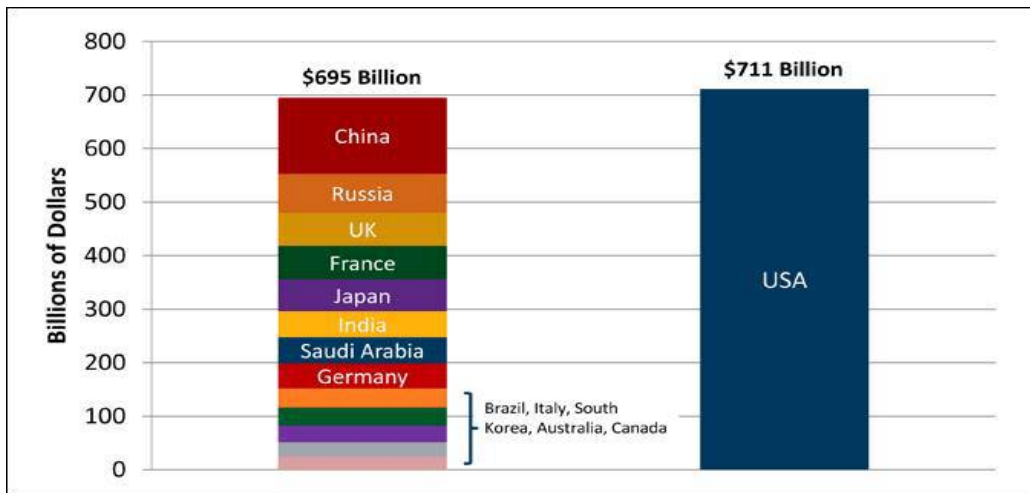
In the big cities, urban transport and industrial activity are at the root of smog, a phenomenon that, in some cases it's so intense that prevents sunlight from entering the atmosphere, attacks sight and breathing.

Gas emissions in the transport sector (14% of global gas emissions that have greenhouse effect), mainly involve fossil fuels fired for road, rail, air and maritime transport. Almost all (95%) of the world's transport energy comes from oil-based fuels, mostly gasoline and diesel.

The industry has been considered, for decades, as the main source of pollution of the planet. The accelerated development of transport, especially the growth in motor vehicle production, have made transport a major source of toxic substances and aggression towards the environment and human health.

A particular pollution factor is *the arms race*. In addition to it requiring enormous quantities of raw materials, accelerating their exhaustion process, military action itself, as well as experimenting with chemical and nuclear weapons that disturb the ecological balance of our planet.

Figure no. 2. World's states arming expenses



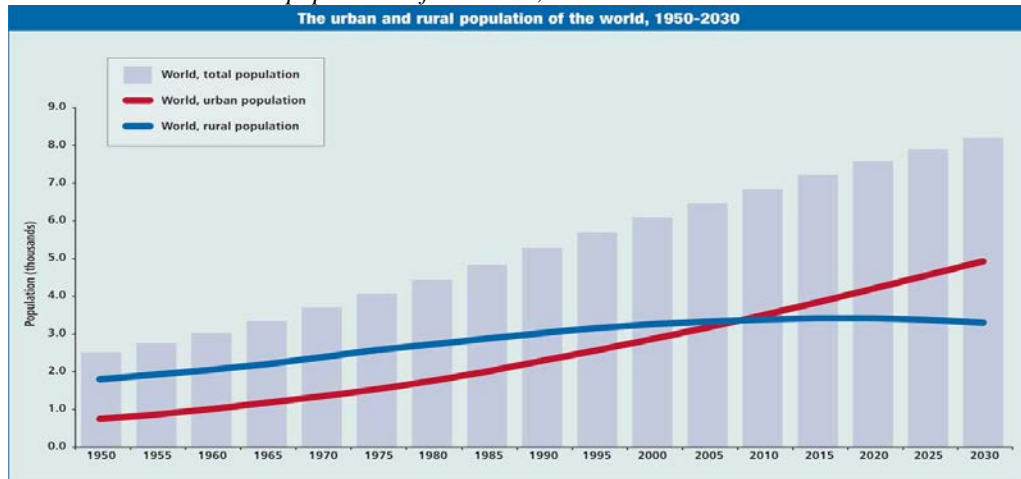
Source: <http://russia-insider.com/en/russia-and-china-will-win-new-arms-race/ri13258>  
 [Accessed 23 July 2017]

It is obvious that world states, mainly the economic powers of the present century are investing billions of dollars in arming themselves, to support their position in the economic field. Countries like the US, China, Russia, the UK and France are investing huge amounts in arming themselves, representing a true paradox, as they are permanent members of the UN Security Council.

*Urbanization*

In the twentieth century, as well as the beginning of the 21<sup>st</sup> century, there was a rapid urbanization of the world's population. The global proportion of urban population has grown from 13% in 1900 to 29% in 1950 and reached 49% in 2005.

Figure no. 3 The urban and rural population of the world, 1950-2030



Source: <http://www.un.org/esa/population/publications/WUP2005/2005wup.htm>  
 [Accessed 13 November 2017]

As the world is in a continuous urbanization process, it is expected that over 60% of the global population will live in cities by the end of 2030. Urban population increased from 220 million in 1900 to 732 million in 1950 and reached 3,2 billion in 2005. According to the United Nations forecast, in 2030, 4,9 billion will live in cities.

Already, according to the latest World Bank data, urban population represented in 2015, 54.2% of the world population.

### 3. Conclusions

The planet's balance problem is of general interest. Mankind is not in a situation without exit. The contradiction between human and nature, between demands of economic and social development and the imperative of environmental conservation can be resolved by current technical possibilities. Natural limits are not in the way of growth, the true limits are social and political.

According to the United Nations, despite the progress made in the last years by an increasing number of countries regarding the balance between growth and environment, we would require concrete approaches to contribute to true sustainable development.

UN Under-secretary general, Wu Hongbo stated in April 2017 that in order to achieve this vision, all stakeholders must actively seek equitable, balanced and sustainable ways to address the economic, social and environmental needs of present and future generations.

The wellbeing of each member of the human community depends on the planet's health as a whole.

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## **Section III**

### **Economic and Social Studies**



## **In Romania, the Buzzing Economy is Unable to Attenuate the Uproar Caused by Economic Backslides**

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### **Abstract**

*The aim of this article is to show that Romania has ended the second quarter of 2017 with a deficit of 4.1 percent, the highest in the European Union, according to seasonally corrected variations, which were published on Tuesday, October 24, 2017, by Eurostat. Even though Romania has experienced one of the greatest economic growths in the EU, there is an equally rapid growth in the structural deficit and these two trends are not compatible. Romania's economy could face problems in the near future, given the fact that the current development is largely due to consumption and the government is forced to massively cut off investment budgets, in order to sustain the announced wage increases. One should also note the high risk of pro-cyclicality in both fiscal and revenue policy, coupled with an unfavourable structure of budgetary expenditure, which are likely to boost primarily consumer demand and to increase both aggregate demand surplus and the current account deficit.*

**Key words:** budget implementation, current account, household consumption, economic growth, global competitiveness

**J.E.L. classification:** E03, E60, H30, H60, O11

### **1. Introduction and literature review**

In an established, well-balanced and economically healthy country, the laws that are the hardest to amend (and only after carefully conducted impact studies) are the Constitution and the Tax Code (fiscal legislation). In Romania, tax laws are the first ones to be modified by governments, whenever imbalances caused by superficial policy begin to take effect. This gives us a constant position of strange originality among other European states. As a consequence, panic in the business environment gets so strong sometimes, that the so-called consultations with partners in the economic and social environment, discussions and negotiations between the authorities and business environment have come to be done not on the basis of positive taxation strategies, but vice versa, in order to prevent malfunctions or chain effects, which the legislators had neither the patience to analyze nor the expertise to foresee. Thus, the real issue for the Romanian economy has shifted from the constructive details of tax regulations to the overall defense of the real economy, faced by the aggressive unpredictability of Romanian legislation.

Romania's government deficit climbed to 4.1 percent of the GDP in the second quarter of 2017, up from 3.6% of the GDP in the first quarter of this year. This represents the highest level of this indicator among the states of the European Union, according to the European Statistics (Eurostat) reports, published on Tuesday, October 24, 2017. The European Institute of Statistics has adjusted the figure upwards to -3.6% (for the first quarter of 2017) from the previous estimate of -3.2%. Thus, Romania experienced the highest deficit in the European Union, followed by the United Kingdom, which had a deficit of -3.4 percent during the second quarter of 2017. The Eurostat figures are based on the balance of ESA (European System of Accounts) 2010.

When it finds a budget deficit which exceeds the limit of 3% of the GDP in a member state, the European Union may start the excessive deficit procedure for the country in question. The target deficit set by the Romanian Government when planning the state budget for the year 2017 was 2.98% of the GDP (according to ESA methodology) or 2.96% of the GDP (according to cash

methodology).

However, according to the consolidated budget execution during the first nine months of the current year (2017), as recently published by the Ministry of Public Finance, the budget deficit has doubled, reaching 6.8 billion lei, which means 0.81% of the GDP - as compared to the deficit of 3.7 billion lei (or 0.49% of the GDP), which was recorded during the same period (January-September) of the previous year (2016).

The characteristics of the world economy show that the entire pattern of future GDP growths is influenced by changes in the financial conditions. The mix of macroeconomic and financial policies will have to be consolidated by decision makers at national and global level (IMF, 2017).

In Romania, the wrong mix of economic policies, which has stimulated consumption at the wrong time, underpinned economic difficulties and aggravated imbalances (Voinea, 2009).

The accumulation of financial excesses, which allow a prolonged increase in consumer spending, is due to the lack of effective macro-prudential supervision (Catte et al., 2011). The effectiveness of fiscal and budgetary measures in boosting GDP growth is diminished by the existence of a positive excess in demand (Caggiano et al., 2015 & Mittnik and Semmler, 2012; Auerbach and Gorodnitchenko, 2011; Baum et al., 2012).

The worldwide controversy regarding the effects of fiscal policy implementation has caused economic policies of states to vacillate between tax increases, accompanied by a reduction in government spending, on the one hand, and the adoption of Keynesian financial stimulation measures, on the other hand (Mencinger et al., 2017).

The fiscal position of a country has a direct impact on the level of deficit and government borrowing. When the fiscal position is weak, the fiscal policy effects have a lower rate of spreading, because decision makers adopt pro-cyclical fiscal measures at a time of expansion and vice versa (Spilimbergo et al., 2009; Nickel and Tudyka, 2014).

## **2. A few incongruities at the end of the first nine months of 2017**

In October 2017, Romania's National Institute of Statistics (NIS) announced that it adjusted upwards the estimates regarding the growth rate of Gross Domestic Product (GDP) for the second quarter of this year. Thus, the estimates published in August and September were increased, as a gross series, from 5.9% to 6.1%. This is the fastest growth rate among the states of the European Union (EU), but it is based on a consumption which was spurred mostly by the wage increases announced by the government - and only to a very limited extent, by investments.

Thus, investments in infrastructure have been drastically reduced, while wage increases, along with tax cuts, could lead to a significant increase in the public debt.

After the first eight months of 2017, the current account of the balance of payments underwent a shortage of 4.043 billion euros, 52.4% higher than the level recorded during the same period of 2016. This was mostly due to a disproportion in the balance of trade, according to the official data recently published by the National Bank of Romania.

Direct investments by non-residents in Romania amounted to 2.518 billion euros after the first eight months, down by 18.6 %, as compared to January-August 2016. At the same time, the country's public debt reached 33.898 billion euros in August 2017, 5% higher than it was on December 31<sup>st</sup> 2016.

At the end of the first nine months of the current year, the general consolidated budget suffered a deficit of about 6.8 billion lei, an amount equivalent to 0.81% of the GDP, which was estimated to 837.1 billion lei for the current year (following the first budget revision of 2017, in September). The recorded result is below the performance of the same period of last year, when, at the end of the third quarter, there was a lower deficit in nominal terms (-3.7 billion lei) and 0.49% of the 2016 GDP, respectively. This increase in the budget deficit is a cause for concern, given that, at the end of last year, we barely managed to keep our deficit below the maximum limit, which is 3% of GDP, according to the European calculation methodology (ESA). And over the first 9 months of 2017, our position has been even worse than last year, which we simply cannot afford.

This weaker result (as compared to the first three quarters of 2016) arose from a combination of factors: on the one hand, the surplus of 14.65 billion lei in revenues (+8.8% in nominal terms) and on the other, the increase of 17.77 billion lei in expenditure (+10.5%). This clearly shows that the

expenses exceeded the revenues generated by the economic growth, given the fact that the exceedance of the 3% deficit limit was only narrowly avoided in 2016.

It should be noted, however, that the pace at which money reached the State Treasury surpassed quite well the excellent advance of the GDP, but still couldn't keep up with new public spending, the most significant expenditure incurred during the third quarter of 2017 being the 9% rise in the pension point. This rise, effective from July 1<sup>st</sup>, only adds to the 5.25% indexation at the beginning of 2017, which would have fit much better in the budgeted economic growth.

From a strictly technical point of view, Romania should have used the benefits generated by economic growth for financial consolidation and reducing public debt. The latter, however, slightly resumed its growth (from 37.1% of the GDP in the first trimester, to 37.2% in the second trimester of 2017), despite the remarkable economic performance. This reflects a less than optimal management of the economic situation, as the state wasted this gain, instead of taking advantage of it to consolidate public finance.

*Table no. 1 Evolution of budget revenue and expenditure in the first nine months of 2017, as compared to the same period in 2016*

Category	Period		Period	
	9 months 2016 (bn lei)	% of GDP	9 months 2017* (bn lei)	% of GDP
Revenues	165.79	21.8	180.44	21.6
Expenditure	169.49	22.3	187.26	22.4
Surplus / Deficit	-3.70	-0.49	-6.82	-0.81

Source: Ministry of Public Finance data processing

\* GDP estimated in September following the first 2017 budget revision

It is a cause for concern that, while expenses have increased in a proportion significantly higher than revenues, they have not even been geared towards development and investments, but instead they went down the bottomless pit of consumption, according to questionable criteria (for example, the artificially inflated pension point, which rose in equal proportions for all pensioners, regardless of their pension level; starting from July 1<sup>st</sup> 2017, the pension point increased by 9% and reached 1,000 lei, according to the Government's Emergency Ordinance no. 2/2017).

It is important to remember that September 2017 was the maturity date for over 1 billion euros of the macroeconomic stabilization loan, borrowed from the European Union in 2009. This is an expenditure that Romania did not have in 2016, for reasons related to the scheduling of electoral expenses.

Basically, all the increased expenditure focused on personnel expenses, which rose by 0.5% of the GDP during the first nine months of 2017 (after an obviously exaggerated increase of +21.6% from one year to the next). It is worth remembering that, even by taxing such increased expenses (by moving money from one pocket to another), there was no GDP-related increase in revenues.

Essentially, within the budgetary execution in the first nine months of 2017, the wage increase was sustained through a significant reduction in the expenditure on goods and services (-0.2% of the GDP) and by cutting capital expenses (-0.4% of the GDP). The only area where things were a little better than last year was that of non-refundable financing projects (+0.1% of the GDP).

*Table no. 2 Evolution of budget expenditure during the first 9 months of 2017, compared to the same period in 2016*

Category	Period		Period		Variation % GDP 2017 / 2016
	9 months 2016 (bn lei)	% of GDP	9 months 2017* (bn lei)	% of GDP	
Total expenditure, of which:	169.49	22.3	187.26	22.4	+0.1
- Personnel expenditure	41.50	5.5	50.49	6.0	+0.5
- Goods and services	26.68	3.5	27.65	3.3	-0.2
- Interests	8.45	1.1	7.99	1.0	-0.1
- Subsidies	4.34	0.6	4.51	0.5	-0.1
- Non-refundable	7.10	1.0	9.08	1.1	+0.1

external financing projects					
- Social security	60.62	8.0	67.69	8.1	+0.1
- Capital expenditure	9.64	1.3	7.69	0.9	-0.4

Source: Ministry of Public Finance data processing

\* GDP estimated in September following the first 2017 budget revision

Social security expenditure increased over the first three quarters of 2017 by only 0.1% of the GDP, which is somewhat surprising, considering the social-democrat orientation of the government and the increase in pensions. This shows a tendency for the minimum resistance solution, namely giving some extra money directly and lacking a superior, European management of the social security services.

The allocation of budgetary funds and, in particular, the preparation of urgent infrastructure projects (compatible with European claims, very thorough about possible misuse of funds) would have allowed a higher absorption of European non-refundable loans, towards the limit set roughly at 4% of the GDP per annum, as this is the sole sufficiently large source to significantly balance the public budget.

According to the budget structure, the investments are based mostly on attracting European funds. But in this sector, Romania has delays, for bureaucratic reasons. The main issue is that, when we solve these issues and we are finally able to attract funds, the Government will have to co-finance the projects, by contributing 15% to the investments; but, with these 15% for investments, we risk exceeding the 3% deficit margin.

Household consumption of the population will probably remain the sole main determining factor of economic growth in the interval 2017-2018, while the contribution of gross fixed capital formation (GFCF) is expected to get even lower than previously foreseen.

### **3. Romania's competitiveness according to the research of the World Economic Forum 2017: the contribution of the businesses environment to our 6 position drop in their ranking chart**

The World Economic Forum has published a new Report of Global Competitiveness, in which Romania holds the 68<sup>th</sup> position among the 138 states targeted by the research.

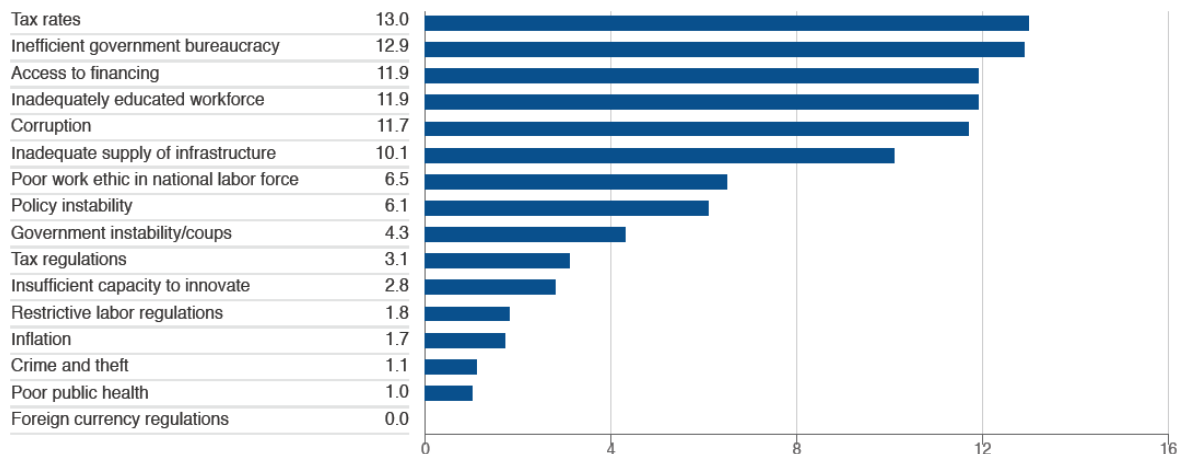
Since the last report, Romania has lost 6 positions in this Index of global competitiveness, while keeping, however, a score identical to the one recorded in 2016 (4.28 out of a maximum of 7). According to the research conducted by the World Economic Forum, Romania's score has been about the same since 2014, which means that the fluctuations recorded in the rankings over the last few years are directly linked to what and how much things change in other states and they have nothing to do with our national economic and administrative performance. In this ranking, Romania's "neighbors" are Georgia and the Islamic Republic of Iran.

Romania's greatest problems are the same, they are well known and largely attributable to the State: bureaucracy, poor infrastructure, difficult access to financing, incoherent taxation policies, etc.

At a careful reading, the indices included in Romania's economic profile show that even the business environment has important issues, as revealed by several relevant figures: the ability to keep talents – position 132 of 137; the ability to attract talents - 131/137; willingness to delegate authority - 129/137; staff's level of education - 123/137; the quality of local suppliers - 122/137; companies' spending on research and development - 110/137; companies' ability to innovate - 109/137; companies' work ethics - 100/137; companies' ability to assimilate new technologies - 95/137; the complexity of the manufacturing processes - 94/137.

According to the research of the World Economic Forum, the main factors that hinder the development of businesses in Romania are: tax rates, bureaucracy, access to financing, inadequately educated labor, corruption, the poor quality of infrastructure.

Figure no. 1. Most problematic factors for doing business



Source: World Economic Forum - The Global Competitiveness Report 2017–2018, available at: <https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018>

In short, about the „contribution” of the business environment to lowering Romania’s competitiveness, we can say that, in the current business circumstances, there are too many over-controlling entrepreneurs, who are unwilling to delegate responsibilities, do not really look at the future from a full perspective: workforce, technology, market trends.

It should be noted that a sustainable economic growth means keeping macroeconomic balance and developing those elements that contribute to a rise in the potential gross domestic product: capital, labor and productivity. Romania cannot sustain a long-term economic growth only by means of fiscal relaxation policies.

#### 4. Conclusions

We note that, in recent years, Romania has deviated from its medium-term budgetary objectives. In 2014-2015, the structural deficit was supposed to be 1% of the GDP, but over the past two years, Romania has substantially moved away from this target and is now the only member state of the European Union in a deviation procedure, according to the Stability and Growth Pact (SGP).

Therefore, the real problem is not a quarterly figure, which seems, at a simplistic level, far above the budgetary balance requirements. It's still possible to turn the investment tap off again (thus seriously affecting future development) or to perform a balancing act in the absence of monetary and financial policies and consistent revenue. The problem lies in the fact that we have reached the point where populist allocations will drive us out of this delusion straight into the land of financial reality.

An increasing number of economists have been expressing their concern about this pattern of growth, given its unfavourable implications on the potential GDP. An increase in investments is conditioned by the absorption of EU funds, public investment and the financial situation of companies, which is in turn affected by the costs of wages and raw materials; other important factors are the predictability of the legal framework, the quality of infrastructure and the availability of skilled workforce. The need for some deep structural reforms in these areas cannot be overemphasized.

The sad fact is that Romania is making the same mistakes as Greece and keeps augmenting its public debt at a time of economic boom. There is a danger of pro-cyclicality of fiscal and revenue policy, coupled with an unfavourable structure of budgetary expenses, which are likely to boost primarily consumer demand and to increase the surplus of aggregate demand, as well as the current account deficit.

An even higher increase in wage costs, as an effect of demonstrations and tensions on the labor market, in conjunction with the narrowing of profit margins for companies, may have similar implications, including by means of weakening competitiveness.

Unfortunately, immediate tactical interest and maximizing personal benefits have prevailed – which was somewhat to be expected, given the current electorate - over the country's medium and long term development strategies. Beware, however, that the limit of 3% of the GDP was set for recession times and not for periods of record economic growth.

The attempt to carbon-copy last year's budget implementation, by narrowly escaping the deficit limit imposed by European rules and regulations, is already a bit off track and certainly not the best idea at the time. It may prove quite dangerous, actually, by exposing Romania to possible external and (why not?) domestic turmoil, thus turning into a risky bet with national safety, with implications that go beyond the strictly economic area.

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# Consumption Management Informatics Solution for Increasing Consumers' Awareness towards Energy Efficiency

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## Abstract

*The paper presents an informatics solution for increase consumers' awareness towards energy efficiency considering three main aspects: consumption optimization, market segmentation and smart application for monitoring and scheduling electrical appliances and real time billing information.*

**Key words:** energy efficiency; prosumer; analytics; clustering; business intelligence

**J.E.L. classification:** C88, D47, L94, Q40

## 1. Introduction

Informatics solutions for demand side management are particularly important in the current context of the European and national regulations regarding large scale implementation of smart metering (SM) systems (European Parliament, 2009, p1), (NARE, 2016, p1), reduction of carbon footprint and improvement of energy efficiency (European Parliament, 2012, p1). In order to implement SM, the National Regulatory Authority for Energy (NRAE) approved national targets for grid distribution operators that should be reached until 2020 (up to about 80% of final consumers should have smart meters, based on cost benefit analysis). Comparing with previous period before SM implementation, the final consumers will play an active role, scheduling and controlling their appliances, charging storage equipment that can be unloaded back into the grid based on the electricity price, consuming or selling electricity produced by their own micro-generation units (photovoltaic panels installed on the roofs or buildings' facades, small wind turbines) also according to the electricity price. These consumers are known as prosumers. The volume of data provided from SM and intelligent appliances (IoT) is significant and currently it is not processed. Compared to conventional electricity meters that are manually read once a month, the SM measure aggregate/individual electricity consumption of IoT appliances at configurable time intervals (5, 10, 15, 30 min). In this area, at international level there are researches and studies for data management described in (Bughin et al, 2010, p1), (Rusitschka et al, 2010, p1), but at national area there are no tested or validated solution. Also, prosumers profiles are described in (Rathnayaka et al, 2012, p1), (Guo et al, 2012, p1), (Dedrick, 2012, p1), but due to national aspects (legislation, market requirements, consumer's necessities, demographic and infrastructure constraints), these solutions cannot be directly applied in Romania. As for the demand optimization models, there are several approaches at national level (Mujescu et al, 2012, p10) and international level (Zhi et al, 2012, p1), (Yang et al, 2008, p1), (Mohsenian-Rad et al, 2010, p1) and some electricity consumption forecasting models are described in (Mohamed et al, 2017, p1), (Moller, 1993, p1), (Huang et al, 2012, p1), (Quadrelli et al, 2012). However, these solutions require advanced customization and investments in order to be directly applied in Romania.



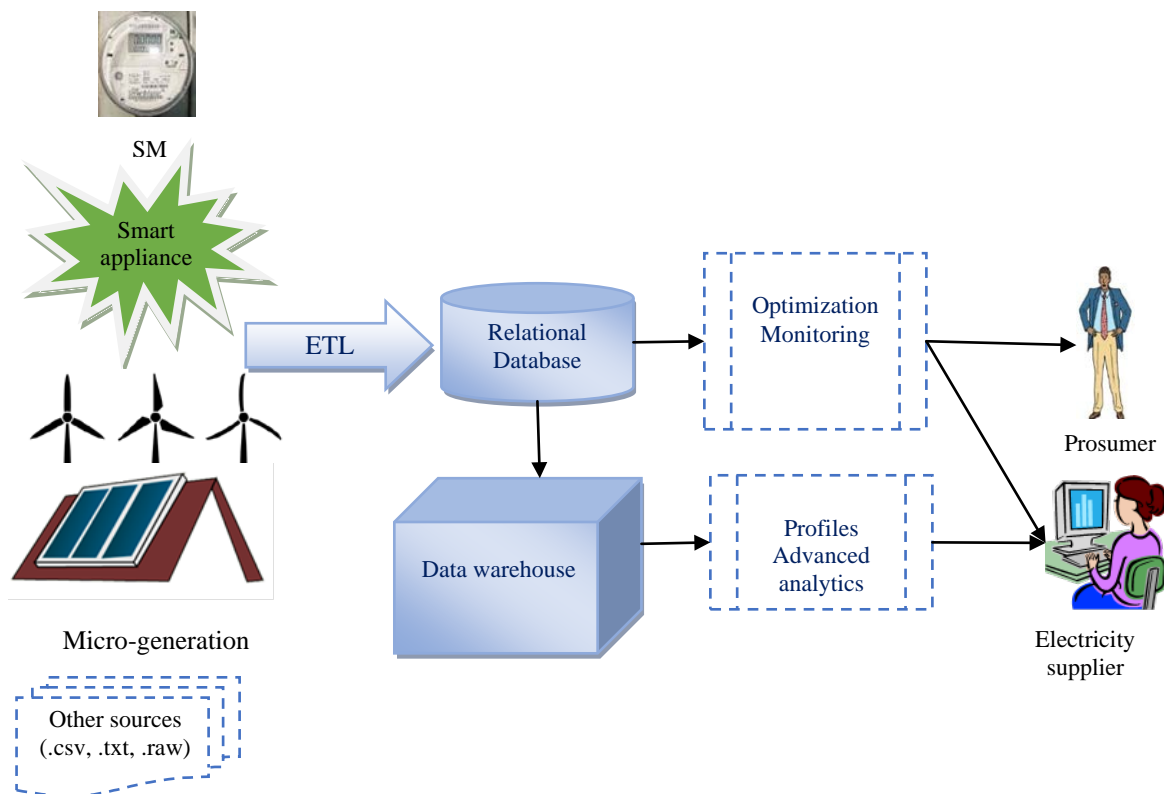
## 2. Consumption management informatics solutions

Smart grids and smart metering brings new challenges regarding demand side management. Regarding ICT solutions, the following requirements must be fulfilled:

- scheduling and optimizing consumer's electrical appliances;
- real time monitoring of consumptions and micro-generation;
- historical analysis of consumption and generation;
- information and simulations regarding tariff prices;

Our proposed informatics solution (prototype) is addressed mainly to household consumers, but it contains also a management consumption module for electricity supplier. The informatics prototype implements the following functionalities: data acquisition from smart metering and smart appliances, consumption profiles estimation for setting up the tariff prices, consumption optimization and smart bills (Figure 1).

Figure no. 1 Architecture of the consumption management informatics solution



From SM or sensors data is collected in .csv or .raw format and loaded into a central relational database. The following devices are considered as data sources: SM, micro-generation equipment (small photovoltaic panels, wind turbines, electrical vehicles), manual reading done by electricity supplier' employees or via web interfaces. An extract, transform and load (ETL) process is designed with patterns for different types of SM and also procedures for extracting data from heterogeneous appliances. After ETL process completes, data is loaded into a central relational database for operational management and then into a data warehouse for advanced analytics.

In order to fulfill the above requirements, the informatics prototype implements several models such as: load profiles, consumption optimization and advanced analytics.

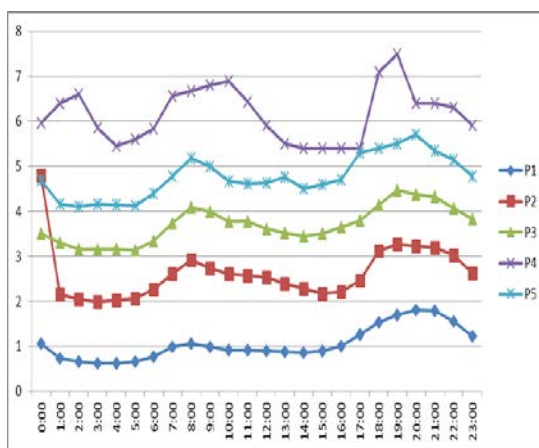


## 2.1. Load profiles

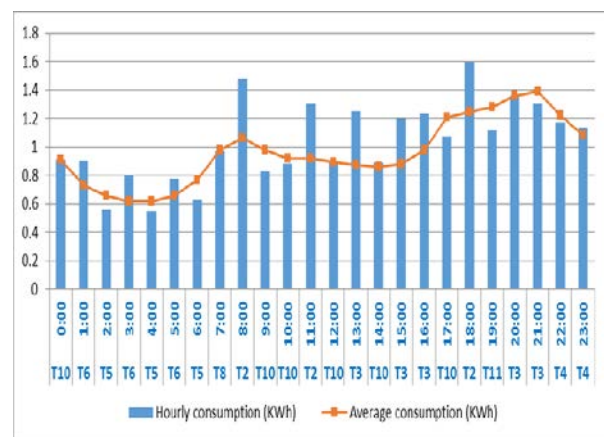
In (Oprea et al, 2016, p1) we analyzed several methods for profile calculation including fuzzy C-means clustering, auto-regression with exogenous variables and multi-linear regression. We also proposed a new method based on Self – Organizing Maps (SOM) that allows us to determine 6 profiles clearly delimited for consumers having the following types of consumption: heating, cooling, ventilation, interior lighting, exterior lighting, water heating, usual devices (washing machine, refrigerator) and other smaller devices (TV, audio, computer). These profiles were compared with other methods such as clustering and classification and the results shown that at some time intervals the profiles were not so much delimited in shape, but only in amplitude (consumption level). We performed clustering based on K-means method and for each cluster we again applied O-cluster (Orthogonal partitioning clustering) method. This method described in (Campos et al, 2002, p1) uses a recursive data grouping algorithm by orthogonal partitioning. We build 10 clusters that represent hourly consumption patterns.

In Figure 2 (a) we represented 5 profiles (P1, ..., P5) determined by K-means and in (b) it is shown profile P5 split into 10 patterns (T1, ..., T10) for a detailed perspective on electricity consumption. The patterns refine the clusters and gives a better understanding about consumption behavior regarding smaller groups of consumers and thus adjust the tariffs prices for these groups.

Figure no. 2 Profiles determination with K-means and O-cluster



a. Load profiles with K-means



b. Profile P5 patterns with O-cluster

## 2.2. Consumption optimization

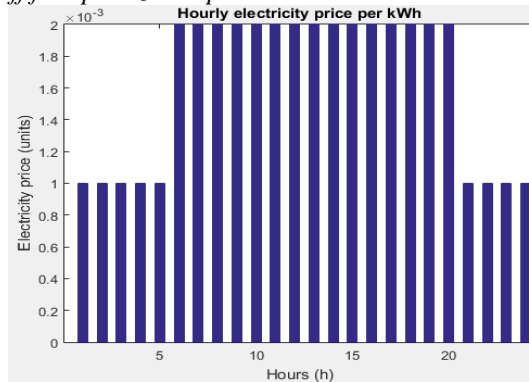
In the context of smart metering and controllable appliances, the electricity consumption becomes facile and rewarding for electricity consumers, grid operators and suppliers.

Different approaches are well known in terms of the electricity consumption optimization. On one hand, the grid operators and electricity suppliers would like to optimize consumption by minimizing the peak. This approach decrease the stress on the grid by shifting consumption to other time intervals when the total demand is lower. Otherwise only for short time intervals onerous investment in new grid capacity is needed. Also at peak consumption, the generators are stressed in order to produce more and the electricity is expensive therefore the suppliers have to buy it at higher prices.

On the other hand, the electricity consumer is stimulated to optimize the consumption in case the electricity payment is minimized. This incentive is usually strong enough to motivate consumers to change their behavior and become more active.

Therefore in order to increase the awareness of consumers, we propose the second approach in terms of objective function combined with storage devices and micro-generation sources such as wind turbines and solar or photovoltaic panels. This way all interested parties: consumers, grid operators and suppliers are satisfied since the storage device will shave the peak. In case storage devices are not used in the optimization process, then new consumption peaks might appear due to the fact that consumers would tend to follow the time-of-use (ToU) tariff scheme (Figure 3) that encourage consumption during the off-peak time intervals.

Figure no. 3 Time of use tariff for optimization process



Although, on long term the minimization of peak brings benefits also for consumers due to avoidance of investment in new grid capacities (such as overhead lines, cables, transformers), the second approach has more chance to improve awareness of consumers.

In this paper, considering the consumption of several appliances from a typical household, different simulations are performed in order to compare the impact of the objective function as shown in Figure 4 and 5. The constraints of the optimization problem are mainly related to the intrinsic characteristics, hourly and daily consumption of the appliances. Both types of appliances are taking into account into the optimization process due to the fact that they contribute to the peak consumption. For solving the optimization problem, the Matlab *intlinprog* function is applied.

Figure no. 4 Daily load curve with objective function: minimization of peak

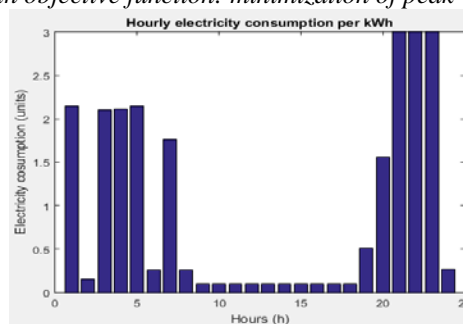
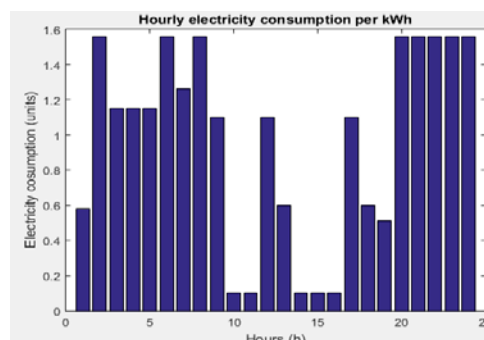


Figure no. 5 Daily load curve with objective function: minimization of payment



In case of payment minimization, the consumption is closing following the time of use tariff, therefore during the high tariff hours only the non-controllable appliances are in operation while the rest of them are off or at minimum. However, the peak consumption that stresses the grid and is recorded only 3 out of 24 hours is almost double comparing with the other objective function.

In terms of payment, when payment minimization is applied, the payment decreased by more than 20% compared with the reference case and when peak minimization is applied, it decreased only by almost 1%. Therefore, it is obvious that consumers' awareness would be increased when payment minimization is applied.

### 2.3. Advanced analytics

The informatics prototype is developed into a cloud computing platform and offers access for both consumers and electricity suppliers to friendly user interfaces to the following facilities:

- real-time monitoring consumption and micro-generation;
- optimizing and scheduling home appliances based on ToU;
- real-time information about prices and electricity bills;
- analyzing consumers' profiles and aggregate consumption;

The informatics prototype is developed in Java with Application Development Framework (ADF) and Oracle Database 12c for cloud access and data management. Offering cloud-based web-services, the electricity suppliers may benefit from this prototype without investing in costly infrastructure.

### 3. Conclusion

In this paper we presented an informatics prototype for increasing the prosumers awareness towards energy efficiency through ICT solutions. For prosumers it is important to schedule and optimize their electric appliances in order to reduce electricity costs and for electricity suppliers an important issue is peak shaving through the optimization model and also consumers' segmentation through load profiles. The proposed optimization method provide cost minimization for prosumers and also peak shaving for electricity supplier. The optimization uses ToU for electricity prices and we also proposed a solution for consumers segmentation in order to set up a more adjustable ToU. The profiling method uses K-means for clustering the consumers into 5 profiles and O-cluster for splitting clusters into more detailed consumption patterns. The informatics solutions are integrated through web-services developed in a cloud computing platform.

### 4. Acknowledgment

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## ESP Teaching for Tourism. An Experimental Study

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### Abstract

*This paper is focused on those teaching and learning methods and techniques which can improve the practical use of English for work-related purposes, this giving the students the opportunity to develop their language skills by means of attractive, motivating and useful learning activities. The paper aims at providing an in-depth knowledge about ways of studying and applying English for Specific Purposes in the Tourism field, as well as types of activities to be used in the classroom in order to assist learners overcome language difficulties. It is of great importance to emphasize the specific tasks and strategies used while teaching ESP for Tourism classes, strategies that differ from the ones used in a traditional English language classroom. The main purpose of all these ESP methods and approaches is to prepare students for their future jobs so that they can perform effectively in their area of work.*

**Key words:** ESP, tourism, Needs Analysis, teaching methods, experiment

**J.E.L. classification:** K00

### 1. Introduction

A great deal of articles discuss how ESP (English for Specific Purposes) can be defined, its historical background, its main characteristics, and the general distinction between General English and ESP (see Munby, 1978; Hutchinson and Waters, 1987; Brindley, 1989; Robinson, 1991; Dudley-Evans and St. John, 1998; Finney, 2002). For the sake of our paper, we are going to refer to ESP as the process of teaching and learning English with emphasis on a discipline or professional area (in our case, English for Tourism).

### 2. ESP – definitions and main approaches

In their book, "Developments in ESP: A multi-disciplinary approach" (1998: 6-7), Dudley-Evans and St. John classify ESP into English for Academic Purposes (English for Science and Technology), English for Medical Purposes, English for Legal Purposes, English for Management, Finance and Economics) and English for Occupational Purposes (English for Professional Purposes and English for Vocational Purposes). "Within English for Vocational Purposes (EVP) there are two sub-sections: *Vocational English*, which is concerned with the language of training for specific trades or occupations, and *Pre-Vocational English*, which is concerned with finding a job and interview skills". On the other hand, Carter (1983) suggests three types of ESP, which are, English as a Restricted Language, English for Academic and Occupational Purposes (EAOP), and English with Specific Topics (EST).

"ESP ... involves developing new kinds of literacy, equipping students with the communicative skills to participate in particular academic and professional cultural contexts. Establishing exactly what are the specific language, skills, and genres of particular groups on which we need to base learning priorities may well be expensive, time consuming and skill-intensive. But it is this research which both makes our teaching effective and our practices professional, and we should not give these up easily" (Ken, 2002: 385-395).

According to Basturkmen (2006: 18), "in ESP, language is learnt not for its own sake or for the sake of gaining a general education but to smooth the path to entry or greater linguistic efficiency in these environments. As the syllabus is based on needs, it is likely to be motivating for learners, who see the obvious relevance of what they are studying".

In order to design English curricula that meet the needs of students, we also have to consider the needs of both educational institutions and work places that may hire them. Therefore, the needs are those of learners, employers and even teachers and our teaching methods should rely on our student's needs, their future qualifications and their employers' expectations.

For the development of their language skills, students must be engaged in as much active practice as possible. The purpose of ESP deals mostly with "language in context" without focusing on grammar rules or ways of structuring the language. The skills taught and developed within the classroom are the ones the learners need for the exact purpose they came to class. In our case, teaching for Tourism classes, the emphasis is mainly placed on communication skills, i.e. the continuous process of improving the students' speaking skills as they have to become competent in using English in their work environment where the English language is required.

The efficiency of the ESP approach throughout the English classes is obvious due to its following positive aspects: it provides an increased exposure to language, authentic resources and involves an adequate learning environment; it reveals learners' needs and necessities which will be helpful in designing the new approach, selecting the materials and evaluation; it helps students develop their skills to communicate effectively in the Tourism field; it is useful in developing the four skills by means of different activities; it improves students' English language proficiency by developing students' oral proficiency with a focus on accuracy of grammar and pronunciation; it exposes students to the real language through the use of authentic materials (Basturkmen, 2010); it increases students' ability of further personal development in language teaching; it increases intercultural difference awareness through discussions about authentic materials that introduce students to cultural values and concepts from different parts of the world (especially when it comes to ESP idioms; in this regard, see Leonte and Istratie-Macarov, 2016: 226); it collects information about learners' language problems; it helps students into a better integration in the field of work according to the job requirements.

### **3. Study design, research methodology and results**

As mentioned above, the paper aims at designing an ESP approach throughout the English classroom activities for the Tourism field of study. It mainly focuses on increasing the English language instruction in the previously mentioned domain by teaching what students need to learn rather than what the teachers want to teach. Research indicates that a learner-centered approach with a more communicative and interactive teaching style and with respect to the active participation of the learner in his/her learning will be beneficial to the students in the tourism field.

The main hypothesis of our study was as follows: the students' ESP skills will improve visibly if they are involved in various (communicative) activities based on needs analysis. The research methods underlying this study are the experiment, the survey and the observation.

For the purpose of our study, we divided the students majoring in Tourism into two groups, i.e. a control group and an experimental one. The control group consisted of 22 students (4 males and 18 females) and the experimental one had 27 students (5 males and 22 females), aged between 19 and 23.

The experiment (which lasted one month) began by giving a pre-test to determine the students' level in the English language acquisition. The initial test applied to both groups revealed that the students' intellectual potential varied. Thus, we had to design a set of differentiated (and sometimes individualized) activities in order to adapt them to each intellectual level.

Although the teacher explained that the assessment was a stress-free test and that students should not feel nervous about it because the aim of the assessment was to determine their level of English language acquisition, they still had to be very serious about it and pay a lot of attention to the exercises. Then, we handed in the papers which contained three items. The first item was meant to test reading skills that is, reading comprehension and reading for specific information. The second item contained a multiple choice exercise which aimed at testing students' level of grammar

acquisition, while the third item contained a writing task. The requirements were clearly explained to the students. The results of this initial test are given in the table below:

*Table no. 1 Initial test results – the experimental group*

<b>Grade</b>	0-4,99	5-5,99	6-6,99	7-7,00	8-8,99	9-10
<b>No. of students</b>	2	3	5	8	5	4
<b>Group average</b>	7,20					

*Source:* authors' own processing

*Table no. 2 Initial test results – the control group*

<b>Grade</b>	0-4,99	5-5,99	6-6,99	7-7,00	8-8,99	9-10
<b>No. of students</b>	1	3	3	7	6	2
<b>Group average</b>	7,00					

*Source:* authors' own processing

Some observations and recommendations were made in connection to the initial test:

*Table no. 3 Initial test: observations and recommendations.*

<b>Item</b>	<b>Observations</b>	<b>Recommendations</b>
1.	The exercise was rather easy, so the students did not find any difficulties in reading the text in order to identify the correct information. Some students had some problems in matching some words/expressions to their meanings.	-more exposure to authentic reading texts.
2.	The exercise implied general knowledge of English grammar, so more than half of the students had some problems in choosing the correct answer appropriate to the context.	-more grammar exercises (syntax and morphology). -general revision of English grammar
3.	Big problems regarding personal written production (difficulties in expressing both short and more complex sentences)	-more writing exercises -more grammar exercises (morphology and syntax) -vocabulary and spelling exercises

*Source:* authors' own processing

Thus, the initial test revealed that the groups were almost similar, and that there was a slight difference between the two groups before the experiment, in terms of the students' level of English language acquisition.

The second step consisted in applying a Needs Analysis questionnaire to the students in the experimental group in order to check their degree of interest towards their needs when studying ESP. This questionnaire revealed that the students from the experimental group were interested in more real-life activities and strategies, in using authentic materials, focused on developing their speaking, listening and reading ESP skills (in the field of Tourism). Thus, they expressed their desire to develop their language skills, especially their communicative ones, in order to better integrate into the labor market.

In the third stage, the control group students were taught ESP by means of traditional methods while the experimental group students were subject to the research, being taught ESP in connection to Needs Analysis. In order to teach ESP to the experimental group according to the needs analysis approach, a learning unit was developed based on the framework of this approach. Therefore, we designed various activities giving them the occasion to improve their ESP skills and find out what they lack, want and need when studying English for their future professional careers. The taught topics (for both groups) were distributed as follows: week 1 - The second Conditional sentences and language in context (communication); week 2 - Listening strategies, Pronunciation and

Vocabulary; week 3 -Reading strategies (booking a hotel room) and Communication practice; week 4 - Writing / creating a hotel advertisement. Furthermore, we designed a series of activities based on needs analysis, in order to develop the students' ESP skills; such activities included reading comprehension, multiple choice listening, discussions, debates, role play, problem-solving, job interviews and letter writing.

Although the two groups had the same teacher and syllabus throughout the experiment, the difference implied a certain focus on the experimental group's needs. The students acquired a certain degree of English knowledge by means of a range of complex exercises which were useful in avoiding boredom and maintaining students' interest alive: discussions and debates on various topics, mind mapping, role-plays (developing skills such as self-awareness, creativity, acting skills, critical thinking and learning to shift roles as a result of seeing the realities of life), skimming for the gist, prediction in group or pair-work activities, self-assessment, peer-assessment and different writing tasks.

One of the most important goals concerning the modern educational approaches consisted in the interaction of the students throughout the English classroom activities. Thus, students had the chance to work in pairs or in small groups or individually. In addition, pair work activities gave weaker students the occasion to work better with their colleagues, which helped them become more confident. As far as individual work was concerned, it enhanced students' reflection on the newly acquired information, self-confidence and independence.

The achievement test represented the fourth step of our experiment, its main goal being to check the difference in the level of the students' English language acquisition (i.e. the experimental group compared to the control group). The test was the same for both groups, but the students representing the experimental group expressed their preferences for using more authentic materials, namely tourism-related vocabulary (touristic brochures, hotel advertisements) in the needs analysis questionnaire.

Teachers are always responsible for the assessment tasks, but we tried to offer this opportunity to the students to get involved in the process of testing (Douglas, 2000), thus taking into account their needs expressed in the questionnaire. We had to decide which areas are more appropriate for student involvement as well as to monitor and design activities in which students take responsibility for certain aspects of the assessment process. Taking into account that students expressed their preference to read more authentic texts related to their future professions, such as texts from tourism web pages, magazines, newspapers or tourism brochures, we chose an article containing vocabulary and information related to their field of study. Students had to read the article carefully and to match certain words/expressions from the text to their meanings/explanations. The second item checked the students' ability to recognize second conditional sentences and it consisted of rephrasing them. For the third item of the post-test, the students were asked to write a web page for their city including some historical information, some of the most important touristic objectives and also activities that can be performed here.

The achievement test revealed that the class average of the experimental group increased visibly, i.e. 8.50 (compared with the results from the initial test). Thus, the results are distributed as follows:

*Table no. 4 Achievement test results – the experimental group*

<b>Grade</b>	0-4,99	5-5,99	6-6,99	7-7,00	8-8,99	9-10
<b>No. of students</b>	0	1	9	6	5	6
<b>Group average</b>	8,50					

*Source:* authors' own processing

*Table no. 5 Achievement test results – the control group*

<b>Grade</b>	0-4,99	5-5,99	6-6,99	7-7,00	8-8,99	9-10
<b>No. of students</b>	0	1	4	11	4	2
<b>Group average</b>	7,70					

*Source:* authors' own processing



The results of the achievement test triggered the following observations and recommendations:

Table no. 6 Achievement test: observations and recommendations

Item	Observations	Recommendations
1.	A significant percentage – students from both groups registered a high performance regarding the reading comprehension of the text.	Students should continue practising reading for comprehension and reading especially authentic texts to improve their vocabulary.
2.	Most students improved their writing skills but there are still some problems with the second conditionals.	More (communicative) activities involving grammar exercises
3.	A remarkable improvement in using related vocabulary when describing their hometown, but there are still some problems for some students when writing complex sentences in a composition.	More writing tasks concerning their job-related vocabulary.

Source: authors' own processing

The results of the achievement test show a difference of 0.7 points between the experimental group and the control group regarding the acquisition of English language. A comparison of the two groups shows that the experimental group registered a significant improvement in each item of the achievement test. Although it is not a remarkable improvement, it shows progress. Therefore, teaching English from a needs analysis perspective proves to be more efficient than the traditional approach and thus this will help them into acquiring a certain job-related vocabulary in their future career. Thus, the overall progress is obvious. That is why we consider that the objectives have been attained and thus the hypothesis has been confirmed.

#### 4. Conclusions

Our experiment has proved the benefits of modern activities during the ESP classes. The purpose of ESP is to deal mostly with "language in context" without focusing on grammar rules or ways of structuring the language. The skills taught and developed within the classroom are the ones the learners need for the exact purpose they came to class. In our case, teaching for Tourism classes, the emphasis was mainly placed on communication skills, i.e. improvement of the students' speaking skills as they have to become competent in using English in their work environment. That is why we designed „an ESP approach”, more exactly a needs' analysis perspective for a learning unit during the English language course.

The efficiency of the ESP approach throughout the English classes became obvious due to the following positive aspects: it provided an increased exposure to language through authentic resources; it revealed learners' needs, wants and necessities; it helped students develop their skills to communicate effectively in the the Tourism field; it was useful in developing the four skills by means of different activities; it improved students' English language proficiency by developing their oral proficiency with a focus on accuracy of grammar (*in disguise*) and pronunciation; it increased intercultural difference awareness through discussions about authentic materials that introduced students to various cultural values; it collected information about learners' problems; it helped students to better understand their field of work and their job requirements.

Our research indicates that a learner-centered approach with a more communicative and interactive teaching style and with respect to the active participation of the learner is beneficial to the students in tourism field. Both the questionnaire and observation used as needs analysis instruments for this paper reported that accurate listening and speaking skills are the primary skills needed by an English language learner aspiring to work in the tourism field.

As shown throughout this paper, the role of the teacher shifts from what he/she is traditionally known to be, the knowledge provider, to being a facilitator. For better results, both the teacher and the learner worked collaboratively to contribute to beneficial learning and they had equal responsibilities for the techniques employed in teaching and learning. The teacher collected some interesting material and adjusted it to the needs of the particular course, but also to the needs and learning styles of her students.

Being concerned about their responsibilities as ESP learners, the students got interested in the lessons as they were related to their future work. Activities such as "Dubbing" or "Debate" when students had to create a hotel advertisement were designed to resemble real-life situations as much as possible and they were student-centered as they helped learners gain self-confidence in speaking in a specific situation. Moreover, they focus on the students' creative skills by creating a screenplay for a travel agency advertisement and a message that would express the spirit of the company and attract people's attention. The activity was perceived as motivating, since the students played the roles of travel agency owners and could use their creativity and imagination to design advertisements. Learning also took place through technology integration that simulated real life tasks for professionals. Moreover, we were able to observe students' involvement in classroom activities and the progress made throughout the process of English language learning.

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## Economic Concentrations vs State of Competitive Space

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### Abstract

*Achieving market performance is the main objective of companies in business transactions. Developing competitiveness and gaining a large market share is conditional on achieving the proposed objectives. A way to increase the market power is to do mergers or takeovers. They can be vertical or horizontal, depending on the type of activity realized by the parties. Effects resulting from the economic mergers made under certain conditions, can distort the competitive environment on the market, with a serious damage. This leads to the need to analyze them in the compatibility with the competitive environment. Permission to achieve a merger occurs after a comprehensive study of cases considering the peculiarities on each of them. The avoidance of obtaining the competition authorities permission to make the economic concentration before its implementation, is sanctioned.*

*The paper presents an analysis of the impact of the effects of economic concentrations on the facilitation or worsening of sanctions provided by the legislative framework.*

**Key words:** merger, abuse of dominant position, merger notification, remedies

**J.E.L. classification:** K21, K49

### 1. Introduction

The development of the market economy requires a constant change for the market players. They have to survive in a fierce competition. The ways of developing and touching performance indicators are varied, and the merger of two or more forces facilitates this process for market players. A concentration of two or more companies can create the opportunity to develop their business line by using a higher percentage of resources for innovation and new product creation. On the other hand, it may reflect an anticompetitive action if the effects of the concentration distort the competitive environment on the market. Increased market power as a result of the concentration may create or strengthen a dominant position. The dominant power can condition the market on which it operates, which affects both market players and the consumer. Establishing a dominant position reduces competitors' market power, contributes to creating barriers to entry, and may condition the final consumer's decision. This determines the need for a complex analysis of economic concentration cases in order to determine the possible effects of this operation.

The analysis of the economic concentration operations takes place on the basis of the notifications, which are mandatory in case of fulfillment of certain conditions stipulated by the competition law. Failure to comply with this obligation leads to tough sanctions. The amount of these sanctions, however, is determined by the complex analysis of each case in particular, where an important factor is the impact of the effects of the economic concentration on the competitive environment and on the final consumer. The beneficial effects on the economic environment resulting from a merger can serve as a mitigating factor in setting sanctions. Accordingly, the concentration that damages competitive environment, affecting the final consumer, is considered as an aggravating factor in setting sanctions.

## 2. Legal Frame

As described in the Competition Law (Article 20 (2)), an economic concentration takes place where the lasting change in control results from the merger of two or more previously independent undertakings or several parts of undertakings previously independent. Or the taking over by one or more persons, already controlling at least one company or one or more companies of direct or indirect control, over one or more companies or parts thereof, including the creation of a company in jointly fulfilling all the functions of an autonomous economic entity.

Notification of mergers, under competition law, must be made before the transaction is implemented. In order to carry out the transaction, the economic concentration must be declared compatible with the competitive environment. This provision in the law helps to manage the avoidance of market distortions[1].

A notification of the merger must inform the competition authorities of the particularities of the transaction by fully describing it as well as of the parties involved in the transaction and their positioning on the market.

The main condition for identifying the need for notification of the economic concentration operation is when the total cumulative turnover of the enterprises involved, registered in the year prior to the operation, exceeds 25,000,000 lei and there are at least two enterprises involved in the operation which have been carried out on the territory of the Republic Moldova, each with a total turnover exceeding 10 million lei in the year prior to the operation [2].

In particular, the criteria for assessing the effects of the transaction are:

- The ability of significant retain of the activity on the same market, on a upstream or downstream market or on a neighboring market closely related to the market;
- The possibility of eliminating competition for a significant part of the products analyzed.

Economic concentrations that may significantly impede effective competition in the market or in a significant part of it, in particular as a result of the creation or strengthening of a dominant position, will be declared incompatible with the competitive environment and unauthorized. In the case of mergers which do not impede effective competition on the market, they are declared compatible with the competitive environment and authorized. At the same time, in some cases, economic concentrations liable to raise significant barriers to competition may be authorized if the parties involved in the economic concentration demonstrate the cumulative fulfillment of the following conditions:

- The merger operation should contribute to increasing economic efficiency, improving the quality of production and distribution, technical progress or increasing export competitiveness;
- The favorable effects of the merger offset the adverse effects of competition restraint;
- Consumers benefit to a reasonable extent from the resulting advantages [2].

Criteria for establishing the compatibility of the merger with the competitive environment, described in the Competition Law, are:

- The need to maintain and develop competition on the relevant market, taking into account the structure of all the markets concerned by the concentration and the existing or potential competition from undertakings located in or outside the Republic of Moldova;
- The market position of the involved companies, their economic and financial strength;
- The alternatives available to suppliers and users, their access to markets and supply sources, as well as any legal or other barriers to entry;
- Demand and supply tendency for relevant products;
- The interests of intermediate and final consumers;
- The evolution of technical and economic progress.

Non-notification of the economic concentration, or its late application, provides for harsh sanctions in the form of fines or, in particularly serious cases, the termination of the transaction and the restoration of the competitive environment prior to its implementation.

The prescription period of law appliance is 5 years, and all the infringement cases, identified during this period, fall under the scope of competition law and are subject to analysis, with the sanctions set out in the legislation.

### **3. Infringement of the provisions of art. 22 of Competition Law, on the Republic of Moldova market**

The market of the Republic of Moldova is very common in non-notified or late notification cases, often unintentionally. This is due to factors such as:

- The relatively new application of the Competition Law, having a period of only 10 years;
- Promoting competitive culture at an early stage;
- • Poor documentation of company specialists about the provisions of the competition law.

Non-notification or late notification of economic concentration operations is sanctioned by law. However, when issuing the decision fixing the amount of the fine, account is also taken of the factors and conditions in which the infringement was committed, as well as the cooperation of the companies sanctioned in order to remedy the breach [3].

#### **3.1. Case studies**

Below are described real cases of several companies that have achieved the economic concentration without submitting the notification to the Competition Authorities, in order to obtain the permission to complete the transaction.

##### **Case I**

A travel company X, operating as a tour operator, which forms and sells tourist packages, took over another company Y, which achieve the same type of activity. Company Y was taken over with the customer base and contracts.

Prior to the merger, Company X had a 42% market share and Company Y – 18%. Thus, as a result of the economic concentration, the companies of the newly created group of companies have gained a dominant position on the market for the development of tourist packages bound for A. This raises significant obstacles to effective competition in that market. Given the dominant position on the market, these companies have created barriers to market entry for other operators due to difficulties in providing air travel to form tourist packages destined for A. At the same time, the consumers suffered due to the considerable price increase for travel to that direction.

This operation is a horizontal merger incompatible with the competitive environment. For the serious violation of the economic concentration incompatible with the competitive environment, and without notification, the Competition Council's Decision was to impose a fine of about 21 million lei (turnover based amount), and require the undertakings involved to dissolve the concentration so as to restore the situation existing prior to the implementation of the concentration.

The effect of concentrating on the competitive environment in the relevant market of the described case, reflects two very important criteria for distorting normal competition. This concentration has strengthened X's dominant market power, resulting in the creation of market entry barriers and influencing the final consumer's decision [4].

##### **Case II**

Another case of strengthening the dominant position is the case of a company that sells French cosmetics and perfumery. This company, O, took over M, the only competitor on this market. The takeover operation was not notified to analyze its compatibility with the competitive market environment. Subsequently, company M was liquidated, thus O company created a monopoly on the wholesale market of French perfumery products on the territory of the Republic of Moldova.

This case presents a serious infringement which distorts the competitive environment on the market, and thus affecting the final consumer [4].

### **Case III**

A light clothing manufacturing company for women and children H has taken over another outerwear manufacturing company for women and children T. Both companies have been operating under the LOHN manufacturing process. Company T was in a state of insolvency, having many payroll and maintenance duties. Company H paid the company's internal and external debts, keeping employees at work, and keeping it active on the market. The non-notification of this transaction for the compatibility analysis with the normal competitive environment constituted a breach of the competition law provisions regarding the conditions for notification of takeover transactions. However, in the course of the investigation, when the Competition Authority notified the infringement, Company H has shown receptivity and openness to co-operation by presenting the late notification. The situation created in this case demonstrates that in this case, the company unknowingly violated the law. This does not exempt the company from imposing the fine for the infringement. However, the peculiarities of this transaction demonstrate the benefit of the final consumer as a result of the economic concentration. This allows the Competition Authorities to deviate from the provisions of the legislation, and not to charge a fine [4].

### **Case IV**

A Company that has a trademark for unique coffee production I took control of a coffee shop F. Particular for this case, is a collaboration agreement, a franchise contract between these two companies, agreed one year before the takeover transaction. In fact, these companies already had a business relationship before taking over, and did not alter the market situation after the takeover. The non-notification of this operation led the Competition Authorities to initiate an investigation. Company I, following the notification by the Competition Authorities, submitted a late-notification of the takeover operation, being open to collaboration and providing further information on the case. In this case, as in the previous one, the infringement occurred unknowingly. Furthermore, F's activity did not change as a result of the transaction because it already operates under the trade name of Company I under the franchise agreement. So this operation did not create negative effects for the competitive environment [4].

## **3.2. Aspects of worsening and facilitating sanctions**

Based on cases presented in p. 3.1., it can be made a classification of determinants, aggravating and facilitating the enforcement of sanctions based on violation of art. 22 of Competition Law.

### ***Aggravating points:***

- Refusal to cooperate with competition authorities due to obtain information on the investigated case;
- Creating adverse effects on the competitive environment by eliminating competition on the market;
- Creating adverse effects on the competitive environment by creating an opportunity for unjustified price increase;

### ***Attenuating points:***

- Collaborating with competition authorities to obtain information on the case under investigation;
- Tracking the benefit of the economic environment as a result of transactions;
- Tracking the benefit of the final consumer as a result of transactions;

## **4. Conclusions**

Promoting competitive culture in the economic environment is essential to preventing violations. Due to lack of information, often they are made violations resulting in sanctions. Late notification or non-notification of an economic concentration may be exempted from sanctions in

certain circumstances. This factor can be mitigated in the case of open cooperation with competition authorities and depending on the effects of the merger. The rewarding of the final consumer's benefits as a result of an economic concentration may lead to a decision to derogate from the sanction.

However, economic concentration, which significantly distorts the competitive environment, with the aggravating factors such as eliminating competitors in the market or strengthening the dominant position, with the power to restrict competition, is strictly sanctioned and restoration of the pre-concentration competitive environment is required.

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# The Social Economy Enterprises in Romania

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## Abstract

*The social economy plays an important role at every country and globally. It provides an economic development alternative based on ethical principles - solidarity, democracy, professional and personal development, functioning according to the market economy and independent of the state. The European Parliament attaches great importance to the social economy; through the adoption of a resolution on the social economy, the parliamentarians had in mind both the recognition of organizations in this sector and the promotion of a new economic model centered on social needs. In the context of the social economy, social enterprises are considered to promote innovative behavior in creating new forms of organization and new services, relying on a diverse mix of resources. Social enterprises receive income mainly from commercial activities and less as a result of public funding.*

**Key words:** social economy, social economy enterprises, non-profit sector

**J.E.L. classification:** A12, A13, A19

## 1. Introduction

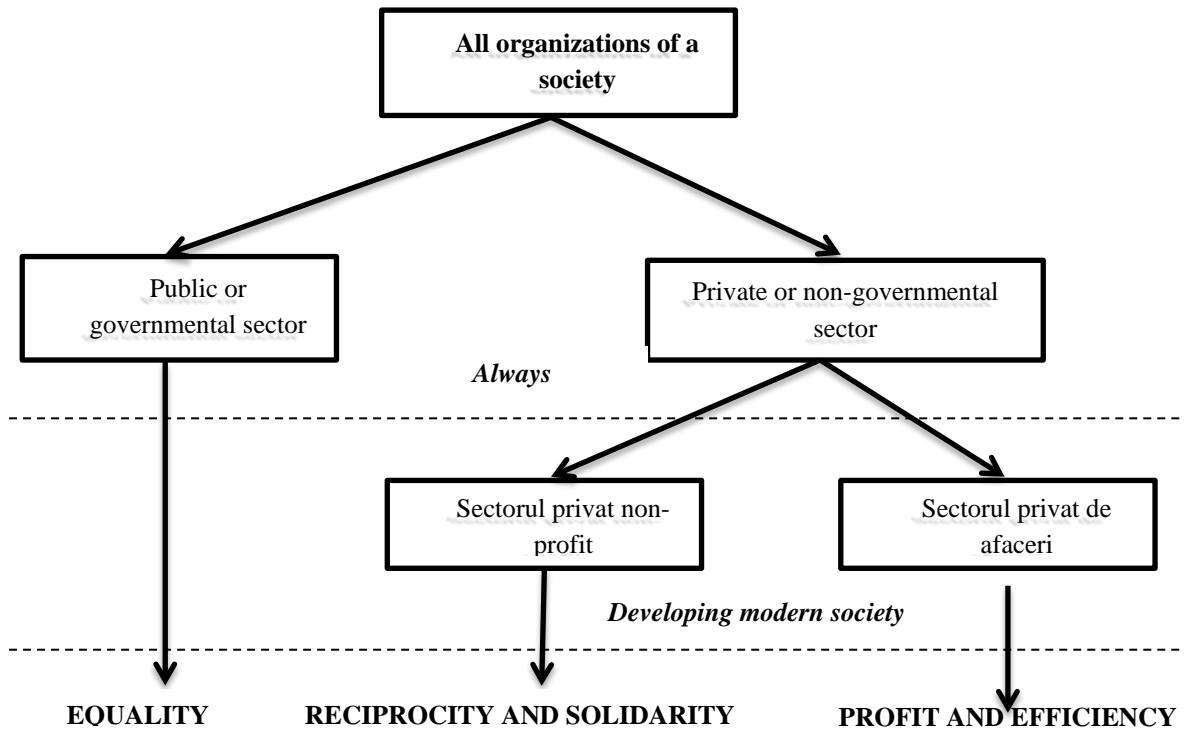
It is known that over time the society has been divided into two sectors, namely the private sector represented by all the companies and organizations carrying out an activity for the purpose of obtaining a benefit, and the public sector represented by the state bodies, which are organized and operating for the benefit of citizens, through the provision of public services. With the passage of time and with the development of modern society, the private sector began a reform of division of activity, thus creating two different private sectors: the first represented by the private business sector operating for profit, second, the non-profit private sector with the aim of obtaining resources then distributed to the members of the society.

It can be seen from the figure below that "a fundamental criterion for differentiating the organizations is the public-private axis" (Vlăsceanu, 2002, p. 56). The public or governmental sector, owned and / or managed by the state, local, county or regional, national or European / international public authorities, seeks to ensure equality among the citizens of a society. We see that the public sector belongs to the people, it is administered by the state and refers to "public goods" offered to the population in order to serve the "public interest." However, the private or non-governmental sector has the mission to carry out activities that will add value to organizations which fall within it. It forms within the general framework of the market by creating with the own efforts of a good or service that will later generate, through the sale-purchase process, profit-making. It is clear that the results obtained, and here we refer to the favourable ones, will be used distinctly by the two sectors of the private sector. The private business sector is represented by commercial companies (SMEs, multinationals, large companies) owned by one or more shareholders and targeting efficiency and profit (used at the discretion of employers) while the non-profit private sector is represented cooperatives, mutual aid houses, associations and foundations, which are based on the pursuit of activities on the basis of reciprocity and solidarity among the members of society.



Even if it appears as a separate sector within the national economy system, the non-profit sector lends features both from the public and private sectors. Non-profit organizations are based on private actions undertaken for the public good compared to the public sector that initiates public actions for the public good or with the private sector based on private equity to secure private gains (Heyman, 2011, p. 33).

Figure no. 1: The National Economy System in the Modern Economy



Source: own construction

Organizations belonging to the private non-profit sector are subject to the principle of "non-profit distribution", which means that the favourable results obtained from the activities are invested in efficient and qualitative activities of covering the "public good" (Vlăsceanu, 2002, p. 56). Therefore, the intersection between the public sector and the private sector leads to the emergence of non-profit organizations, as they are private (in the case of property and profit) but public through the purposes they produce (here is the provision of collective goods at company level). It can be noticed that non-profit organizations are at the intersection of the public and private sectors.

It is true that the private non-profit sector has different names according to the characteristics and the aspects that each author who deals with the subject (Salamon and Anheier, 1992; Vlăsceanu, 2010) wants to highlight. The authors Salamon and Anheier (1992, p. 4) capture in their work seven concepts relating to the third sector: the charitable sector, the independent sector, the voluntary sector, tax exempt sector, non-governmental organizations, the social economy and the non-profit sector but asserts that the list can continue. At the same time, the authors warn that all of these identified concepts are "partially misleading" because they ignore or undermine other relevant aspects of the sector. At present, the term social economy is the most used and is beginning to be adopted and well-regulated both in Romania and in Europe.

The social economy includes various organizational and / or legal forms such as: cooperatives, mutual societies, associations, foundations, etc. Although there are differences from country to country, there are comparable entities throughout the European Union that share the same characteristics, even though they are not described as being part of the "social economy" and are not legally regulated in all Member States.

## 2. Social economy and social economy enterprises

**The social economy**, called informally and the third sector, is defined as the set of activities organized independently of the public sector, whose purpose is to serve the general interest, the interests of a community and / or personal non-patrimonial interests by:

- increasing the employment of the vulnerable group;
- production and supply of goods;
- provision of services;
- execution of works.

In Romania, the legal framework of the social economy is represented by Law no. 219/2015 on the social economy, the provisions of which are applied according to the Methodological Norms (Decision No. 585/2016).

The social economy is based on private, voluntary and solidarity initiative, with a high degree of autonomy and responsibility, as well as limited distribution of profits to associates.

**The main purpose** of the social economy compared to the purpose of market economy is not profit-making but consists in improving living conditions and providing new opportunities for disadvantaged or vulnerable people.

The social economy is based on the following **principles** ('Legea nr. 219/2015 privind economia socială'):

- priority given to the individual and to the social objectives in relation to the increase of the profit;
- solidarity and collective responsibility;
- convergence between the interests of associate members and the general interest and / or interests of a community;
- democratic control of the members, exercised over the activities carried out;
- voluntary and free association in organizational forms specific to the social economy;
- distinct legal personality, autonomy of management and independence from public authorities;
- the allocation of the largest part of the financial profit / surplus to achieve the objectives of general interest, of a collectivist or non-patrimonial personal interest of the members.

The social economy gives **priority** to a model of enterprise (social economy enterprise) that cannot be characterized by the dimensions or the sectors in which it operates, but by respecting some common values, including:

- the supremacy of the participation of social actors, the person and social objectives on capital;
- defending and applying the principle of solidarity and responsibility;
- sharing the interests of user members and the general interest;
- the democratic control exercised by members of the organization / enterprise;
- voluntary and open adhesion;
- autonomy of management and independence from public authorities;
- allocating the largest proportion of the surplus to achieving the objectives of sustainable development and providing service to members in accordance with the general interest.

At the same time, social economy enterprises play an important role in supporting the objectives set by government policies, as follows:

- helping to increase productivity and competitiveness;
- contributing to the development of an inclusive and participatory society;
- encouraging and empowering community members to participate in solving local problems;
- offering a new way of delivering public services.

The term Social Enterprise (IS) designates nonprofit organizations that have replaced traditional forms of income with approaches closer to the business to obtain financial resources. Social enterprises appeared in Europe around World War II, focusing on the systematic collection of clothes and furniture. In the 1970s and 1980s, active environmental organizations contributed to IS efforts, particularly small scale, in local communities. Their activities focused on waste sorting, repair / resale and material recovery. In the 1990s, in addition to resale activities, repair and

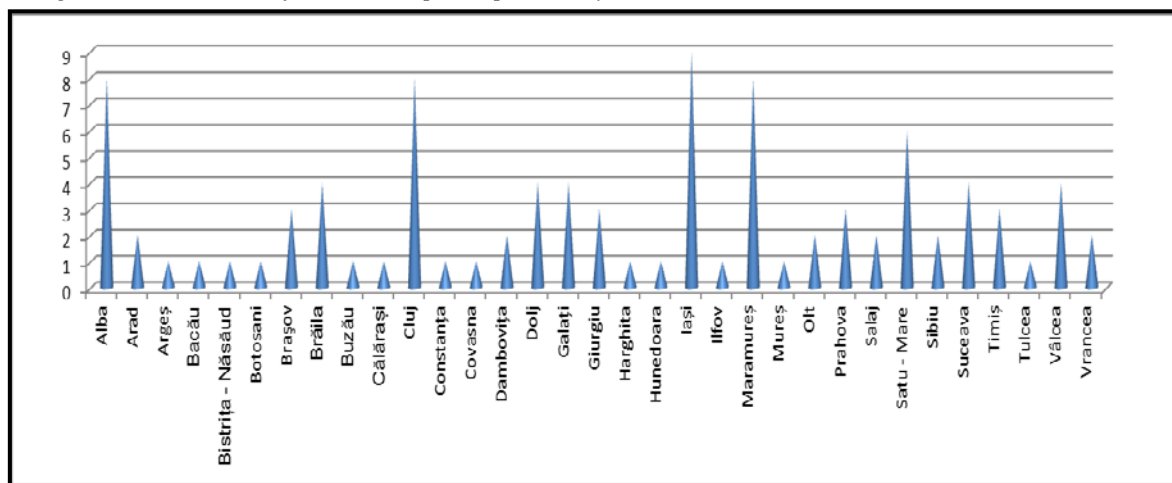
recycling activities also took place. As a result of the worsening of the problems caused by local and regional waste management, the economic crisis and the recognition of the social economy sector as a stand-alone sector, some social enterprises have begun to reorganize to capitalize on market opportunities.

According to Law no. 219/2015 on the social economy, the social enterprise is the private legal entity that carries out social economy activities, which has a certificate of social enterprise and respects the principles of the social economy.

### 3. Analysis of social economy enterprises in Romania

At the level of Romania, in November 2017 there were 96 social enterprises according to the information published by ANOFM (National Agency for Employment). The figure below shows the current situation of the number of social enterprises per county.

Figure no. 2: Number of social enterprises per county



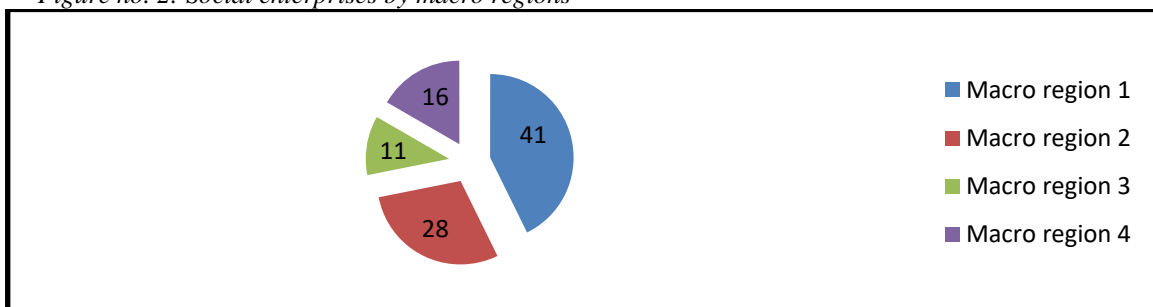
Source: own construction

From the above figure it is noticed that only in 33 counties of Romania were recorded and declared social enterprises. According to the data published by ANOFM, the counties of Bihor, Caras Severin, Gorj, Ialomita, Mehedinti, Neamt, Teleorman and Vaslui are not evidenced even with a declared social enterprise to carry out activity.

Most social enterprises are declared at the level of Iasi County (9 enterprises) and at the opposite side, with only one registration being the counties of Arges, Bacau, Bistrita-Nasaud, Botosani, Buzau, Calarasi, Constanta, Covasna, Harghita, Hunedoara, Ilfov, Mures and Tulcea.

From the analysis we can see that most social enterprises are in Macro region 1 with 41 records (42.71% of the total), followed by Macro region 2 with 28 records (29.17% of the total), then Macro region 4 with 16 records (16.67% of the total) and the last being Macro region 3 with 11 records (11.46% of the total).

Figure no. 2: Social enterprises by macro regions



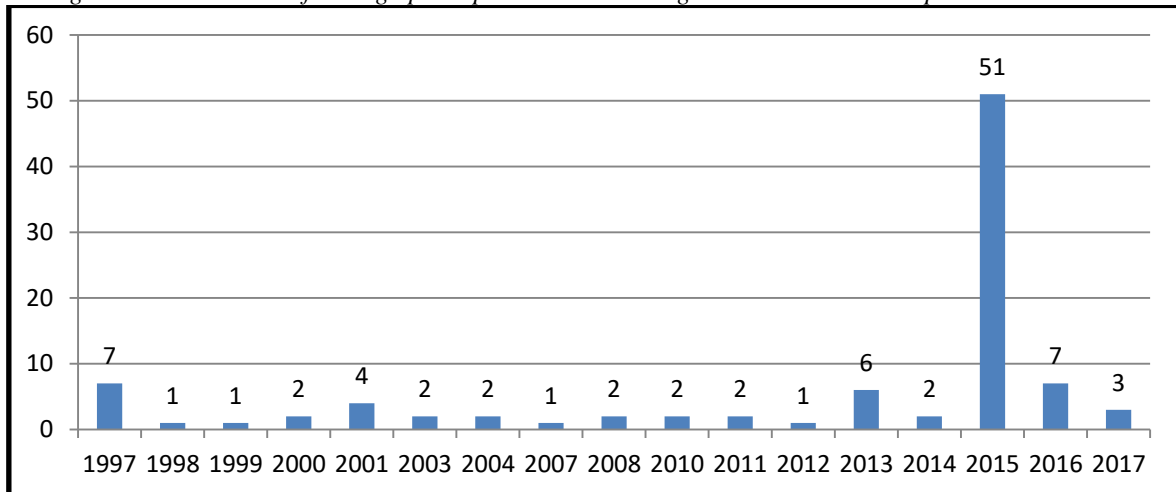
Source: own construction

This ranking is due to the counties of Arad, Cluj and Maramures located in Macro region 1 of Romania, which register every 8 social enterprises, i.e. 24 in total, respectively 25% of the total of 96 existing in the country. It should be mentioned that Bucharest is also part of Macro region 3, for which ANOFM has not published any records regarding the existence and functioning of social enterprises.

It is necessary to make a presentation of the organizational forms that are registered as social enterprises in Romania because it is a new concept that is being consolidated starting with the year 2015 when the law of the social economy was regulated.

Thus, from the figure below, it can be seen that legal entities registered as social enterprises in Romania are established between 1997 and 2017 inclusive, with a boom in 2015 when the social economy law entered into force in Romania, i.e. a registration of 51 of social enterprises out of a total of 96 existing in the country. It is possible that this major occurrence is the result of advantageous tax policies regarding the organization and functioning of social enterprises or, in a more optimistic manner, the increase of corporate social responsibility at the level of the Romanian companies. It cannot be disputed, however, that some of these social enterprises have not developed over time actions that are both for their own benefit and for the benefit of society.

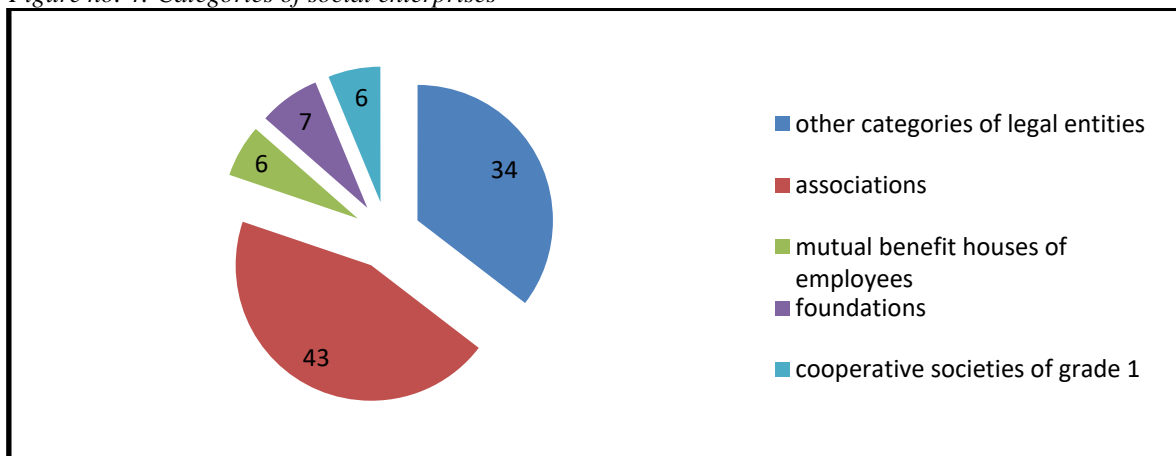
Figure no. 3: The rate of setting up companies that have registered as social enterprises



Source: own construction

Regarding the type of company that has registered as a social enterprise in Romania, ANOFM presents five main categories: other categories of legal entities, associations, foundations, mutual benefit houses of employees and cooperative societies of grade 1. It is worth mentioning as with other categories of legal entities there are 34 companies with limited liability.

Figure no. 4: Categories of social enterprises



Source: own construction

From the above figure it can be seen that the highest share is held by the associations with a number of 43 registrations (i.e. 44.79%) followed by other categories of legal entities with 34 registrations (i.e. 35.42%), foundations - 7 records (i.e. 7.29%) and the same number, respectively 6 records (i.e. 6.25%), the mutual benefit houses of employees and the cooperative societies of grade 1.

#### 4. Conclusions

Upon joining the European Union, Romania has experienced a special effervescence in terms of the concept of social enterprise, with numerous public debates on this issue as well as numerous initiatives to develop such structures. This trend is supported by European funds through Priority Axis 6 "Promoting Social Inclusion" aimed at attracting and reintegrating people facing the risk of marginalization and social exclusion into the labor market, such as: persons with disabilities, Roma population, young people over 18 who leave the system child protection, women, families with more than two children, including single parents, convicted persons, drug addicts, victims of domestic violence, homeless people, etc.

The social economy is acknowledged in the European Employment Strategy, despite the different perceptions of social enterprises in different countries. These businesses are present on the market, but their competitiveness is influenced by additional social objectives. They often encourage the reintegration of risk groups into the labor market through training and employment. Social businesses facilitate access for low-income households to goods or services with guaranteed quality at lower costs. From an economic point of view, they offer jobs in the proximity of people for whom moving or moving to another locality is not a desirable solution.

Even though there are only 96 social enterprises in Romania, the number of organizations that promote the public good is much higher. If we relate to the number of non-profit organizations registered in Romania, we can conclude that civic spirit and social responsibility are being developed and expanding.

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## Regional Cooperation on the Energy Markets – A Study of Romania's Day-Ahead Market

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### Abstract

*In the context of the EU's new energy targets, interregional cooperation is vital. The Romanian Day-Ahead energy market is one of the basic tools in promoting and realizing the internal energy market in the EU, as part of a coupling mechanism at regional level and as such its activities are of particular interest. This paper aims to study the main characteristics and activities carried out on this market, in the context of developing an informatics prototype for forecasting, analysis and decision models for energy providers, to estimate energy demand and generation in a suitable way for an efficient trading on the wholesale energy market.*

**Key words:** energy markets, day ahead market

**J.E.L. classification:** C88, D47, L94, Q40

### 1. Introduction

This paper presents a part of the researches on the electricity market in Romania carried out within the "Intelligent system for trading on the wholesale electricity market" (SMARTRADE) project, funded by the National Authority for Scientific Research and Innovation through European Regional Development Fund (ERDF), namely a study of the characteristics, participants and activities of the Day-Ahead energy market.

The Day-Ahead market (DAM) is a component of the wholesale electricity market on which firm hourly electricity transactions are realized, with electricity delivery the day after the trading day (Florea et al., 2017, p.13).

The Day-Ahead market is a vital component of the wholesale energy market, especially due to the transnational activities taking place on it. Starting with November 19th, 2014, the Day-Ahead Market in Romania operates in a coupled regime with markets in the Czech Republic, Slovakia and Hungary through the price coupling mechanism known as 4M MC (OPCOM, 2017a, p1).

The DAM rules establish a centralized market framework for the sale and purchase of electricity by participants in the wholesale electricity market, needed for:

- Facilitating the formation of a wholesale electricity market at national and regional level under conditions of competition, transparency and non-discrimination;
- Establishing reference prices for other transactions on the wholesale market;
- Optimizing the use of interconnection capabilities with neighboring countries by applying their default allocation mechanism.

One of the elements that has garnered a lot of interest lately in the context of the European Union's long term energy strategy is the Regional Energy Policy Cooperation as a way of advancing the EU's energy objectives As it is mentioned in (Dimitrova et al, 2016, p. 1) cooperation and coordination is meant to facilitate the convergence of markets and policies, so while the creation of one EU Internal Energy Market remains the goal, regional cooperation is the

tool with which to achieve that goal. Cooperation could become the stepping-stone towards the completion of the Internal Energy Market within the European 2030 climate and energy framework and beyond.

In (Sandulescu, 2017, p. 1) some of the effects of an integrated market are mentioned such as price convergence, the trading of energy in a single location (on the exchange), the maximization of the overall profit, market volatility, a more consistent reference price, the reduction of market abuse, the elimination of existing risks in the case of separate trading, in the short term, of the interconnection capabilities, as well as the creation of new opportunities for cross-border trading.

The topic of our research project is especially relevant in the conditions in which regional market development through TSO cooperation is essential to the timely realization of the benefits that the Internal Energy Market (IEM) will bring to Europe (ENTSO-e, 2017, p1).

## **2. Main characteristics of the Day-Ahead Market**

Electricity surplus or shortage can be balanced by selling or buying it on the Day-Ahead Market.

Participation on this market is voluntary and permitted to all license holders and economic operators, foreign legal entities that have been granted by the National Energy Regulatory Authority (NERA) the decision to carry on in Romania the supply or trader activity and have concluded with the Electricity and Gas Market Operator in Romania (EGMO) the participation Convention on the Day-Ahead Market. License holders who may become participants in the DAM are electricity producers, suppliers and network operators, the latter only for the purpose of performing the functions mentioned explicitly in the Commercial Code and not for the purpose of obtaining profit.

On the DAM in each trading day, firm electricity transactions are concluded for each hourly trading interval of the next delivery day, based on the bids submitted by the DAM participants. Offers may only be placed in the trading system in accordance with the trading hours set in CET hours and only if the RON price scale is available and the exchange rate for the respective trading day has been published by the Romanian National Bank (RNB). The exchange rate is established on every bank business day. If the day before the trading day is a non-working day respectively Saturday, Sunday, a legal holiday or a day when the RNB does not set the exchange rate, the exchange rate applicable for the trading day is the one set on the last banking day before the trading day. The exchange rate is entered into the trading system by the Energy Market Operator on the day it is established, for all trading days for which it is applicable.

Deals traded on DAM have several distinctive features. Electricity sales / purchase offers are aggregated on the portfolio of each DAM participant. The offer is defined by at least one quantity-price pair. The quantity is expressed in MWh with one decimal, and the price is expressed in lei with two decimal places. Bids are made at CET time, the first trading interval being between 0:00 and 1:00 CET. Offers shall be made for the national supply area, taking into account its operation in a coupled mode or, as the case may be, in a decoupled condition in the last resort. Offers may be of the following categories: deals per one trading session, identified as hourly bids; offers corresponding to several consecutive interdependent trading intervals identified as block bids.

The IT system validates / invalidates the bids submitted by participants in accordance with the criteria set out in the "Operational procedure for setting the format, content, mode of transmission and validation of bids on the Day-Ahead Market".

In the normal situation of coupled operation, DAM transactions are carried out by correlating bid and purchase bids through the auction mechanism established according to the Price Coupling of Regions (PCR) mechanism, following the bidding, validation and aggregation of bids, running of the coupling mechanism, allocation of the coupling results on the participants' portfolios.

## **3. Activity flows and functionalities**

The process of conducting trading on the DAM is described in detail in (OPCOM, 2017a, p1) and (OPCOM, 2017b, p1) and involves going through several successive stages in which both participants and the market operator are involved.

The first stage is the registration of the economic agent as a participant in the DAM. The economic agent must obtain from the National Energy Regulatory Authority the license for: generation of electricity (for producers) or supply of electricity (for suppliers). For this he must do the following:

- Registering as a Balancing Responsible Party (BRP) with the balancing market operator or delegating balancing responsibility to a different BRP.
- Submitting a letter of intent to the Electricity and Gas Market Operator "OPCOM SA".
- Preparing the dossier with the documentation specified in the procedure for registering the participants on the Day-Ahead Market and filing it at OPCOM.
- Signing the participation on the DAM convention.
- Submitting to the Electricity and Gas Market Operator "OPCOM SA" the declaration under its own responsibility in accordance with the provisions of art. IV pt.1.e) of the Romanian Government Ordinance no. 28 / 27.08.2013 regarding the regulation of fiscal-budgetary measures, and the receipt of OPCOM's declaration on its own responsibility.
- Withdrawal, suspension and revocation of the participation license, where applicable.

The second stage involves the operator of the DAM, which prepares and updates a trading registry. Each DAM participant has the right to consult the information in the trading book that concerns him and to request correction of any inaccuracy.

In the third step, the market operator records the offers during the trading hours until the DAM closing time on each trading day. Bids are transmitted (up to 25 pairs of price-quantity) for purchase and / or sale of electricity on the DAM by the participants. Subsequently, validation of bids entered into the trading system takes place. If necessary, after the validation of the offers, these may be modified or canceled by the DAM participant who sent them, before the DAM closing time. Changes are temporally marked and recorded in the trading system. Bids will be revalidated.

The market operator calculates the MCP (Market Closing Price) and the quantities of electricity traded, for the delivery day (s) and establishes the acceptance or non-acceptance of the quantities of the bids for trading. If MCP is defined, the market operator will accept for all purchase offers all price / quantity pairs, whose price is greater than or equal to MCP, and for all sale bids, all price-quantity pairs, whose price less than or equal to MCP. If MCP is undefined, the market operator will execute the second round of bidding on the DAM for the delivery day in which the closure of the DAM led to an undefined MCP over several trading intervals corresponding to the same delivery day

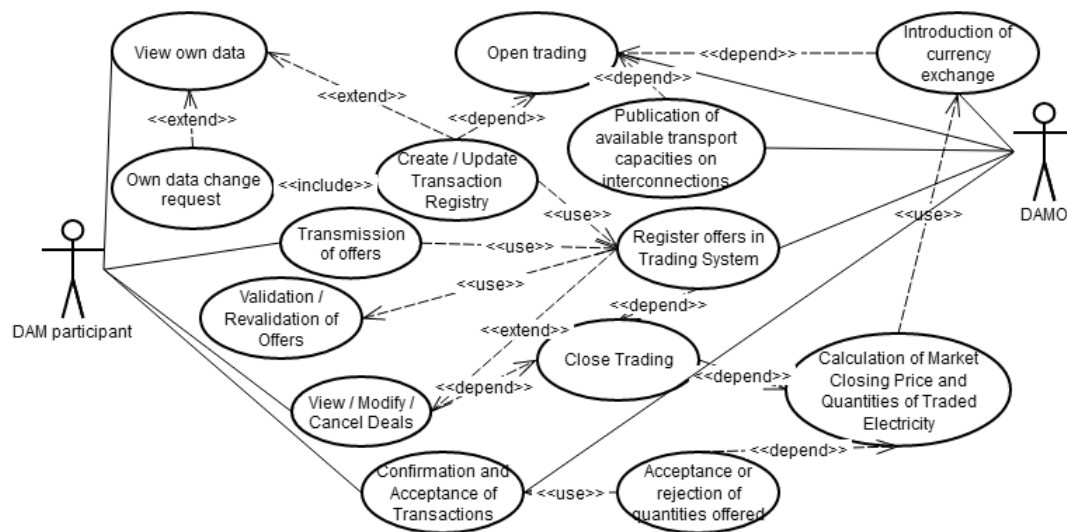
Confirmation and acceptance of DAM transactions involves:

- The market operator informing each participant in the DAM on the concluded transactions
- Receiving appeals from the DAM participants
- Verifying appeals and submitting results
- The market operator establishing physical notices to be forwarded for verification to each BRP to which the DAM participants belong

Offers are transmitted electronically by the participants to DAM through an electronic interface to the trading system for correlation and execution. In Figure 1 we represented the main activities identified above, represented in the form of trading system functionalities, respectively the use cases of the Use Case Diagram.



Figure no. 1 General Use Case Diagram for DAM



Each of the main activities identified and punctuated in the diagram presented above can be further explained to provide all the details necessary for a thorough understanding of the market mechanism. In the table below (Table 1), we have made a detailed textual description of the process of creating or updating the Trading Registry.

Table no 1.

Use case element	Description
Code	UC11
Name	Create / Update Trading Registry
Status	Sketching
Scope	Making Trading Registry
Main actor	Day-Ahead Market Operator (DAMO)
Description	DAMO prepares and updates a trading registry
Precondition	<ul style="list-style-type: none"> <li>• Open trading period</li> <li>• Economic agent registered as DAM participant:                             <ul style="list-style-type: none"> <li>- Obtaining from the national energy regulator the license for: electricity generation (for producers) or supply of electricity (for suppliers);</li> <li>- Recording as a party responsible for balancing (BRP) to the balancing market operator or delegating responsibility for balancing to another BRP;</li> <li>- Submission of a letter of intent to the operator of the electricity and natural gas market "OPCOM" S.A.;</li> <li>- Preparation of the dossier with the documentation specified in the procedure for registering the participants for the next day's market and filing it at OPCOM;</li> <li>- Signing the next-day market participation convention.</li> <li>- Submission to operator of the electricity and natural gas market of the declaration on own responsibility</li> </ul> </li> </ul>
Postcondition	Each participant to the DAM has the right to consult his own information in the trading registry (View own data) and to request correction of any inaccuracies (Own data change request)
Trigger	Desire of the DAM Participant to participate in DAM trading on a given date
Base flow	Creates a trading registry recording the DAM participants. The trading registry must contain for each DAM participant at least the following: name, registered office and contact details; The date and number of the DAM Participation Agreement; Identification code on DAM; The names and contact details of persons delegated to act on behalf of the licensee; The name, contact details, and identification code of the PRE that has assumed the responsibility for balancing for that DAM participant.

Alternative flows	<ul style="list-style-type: none"> <li>• DAM participants view their own data, and if there are inaccuracies, they make a request for data modification, on the basis of which the change is made in the trading registry</li> <li>• If a DAM participant waives its participation in the DAM, or if the registration of a DAM participant is suspended or revoked by it is deleted from the trading registry.</li> </ul>
Relations	The trading system
Frequency of use	Daily
Business rules	<ul style="list-style-type: none"> <li>• A DAM participant will be revoked or suspended in the following cases:             <ol style="list-style-type: none"> <li>a) If the DAM participant, no longer fulfills one of the conditions required for registration as a DAM participant;</li> <li>b) If the DAM participant, no longer meets the requirements for the required guarantee or does not make the payments in accordance with the provisions in question;</li> <li>c) DAM Participants that do not comply with the DAM Participation Contract and DAM operation and rules;                 <ol style="list-style-type: none"> <li>a. If the DAM participant is repeatedly found guilty of non-compliance with the applicable DAM rules or settlement rules.</li> </ol> </li> </ol> </li> <li>• If a DAM participant waives its participation on DAM or if the registration of a DAM participant is suspended or revoked by DAMO:</li> <li>• The DAM participant is no longer entitled to submit new offers to DAM and all validated bids are deemed to be canceled;</li> <li>• The DAM participant must make all payments due in accordance with the provisions of the law;</li> <li>• After all payments due by the DAM participant, the DAMO cancels its registration in the Trading Registry, informing the participant to the DAM, TO, BRP-that has assumed the balancing responsibility for the respective license holder and all other DAM participants in connection with this cancellation.</li> <li>• To become a DAM participant, a licensee or a small manufacturer must be registered by the EGMO</li> <li>• Network operators may become participants in DAM and may participate in DAM only for the purpose of performing their functions specified in the law. No network operator has the right to trade on DAM only for the purpose of obtaining a profit</li> <li>• A licensee wishing to become a DAM participant has the obligation to pay the applicable rates</li> <li>• The DAM participant who intends to submit positive purchase offers or offers with negative prices must submit a financial guarantee to the EGMO.</li> <li>• Registration for DAM is made after the registration of the license holder as BRP or on the basis of the evidence of inclusion in a BRP</li> </ul>

#### 4. Analytical indices and indicators used on the market

##### *DAM Indices*

The Energy and Gas Market Operator has reached an agreement with the Eurex Group - European Energy Exchange (EEX) and Power Exchange Central Europe (PXE) and has obtained the right to use the ROPEX\_DAM spot electricity indices. These indices are useful for recording transactions in derivative contracts as well as for trading products in order to mitigate the volatility risk of the Day-Ahead Market price. These indices are:

- *Hourly prices* [lei/MWh] (*ROPEX\_DAM\_H*) - presents the sequence of the 24-hourly values of the closing price of DAM;
- *Basic price* [lei/MWh] (*ROPEX\_DAM\_BASE*) - the daily arithmetic mean of closing prices for the Day-Ahead Market;
- *Base volume* [MWh] - Sum of hourly volumes traded on the DAM;
- *Rates for peak hours* [lei MWh] (*ROPEX\_DAM\_PEAK*) - arithmetic mean of closing prices for DAM corresponding to peak load hours;
- *Volume for peak hours* [MWh] - sum of hourly volumes traded on DAM corresponding to peak load hours;

- *Price for empty hours* [lei/MWh] (*ROPEX\_DAM\_OF-PEAK*) - the arithmetic average of closing prices for the DAM corresponding to the unladen hours of load;
- *Volume for Loadout Hours* [MWh] - sum of hourly volumes traded on the DAM corresponding to the load-out hours.

#### *DAM analysis indicators*

One of the main analysis indicators for the Day-ahead Market is the one that reflects Price Evolution and Spot Transaction volumes (DAM). Data is tracked on: Number of active participants per day; Number of active participants per month; Volume traded hourly; Volume traded daily; Volume traded monthly; Average volume traded daily; Average volume traded monthly; Monthly Market Share; Value of daily transactions; Monthly transaction value.

In addition, the Sales Market Quotations, Purchase Market Quotas, Volume and Dam quotas (% of Romanian consumption) are also analyzed.

## 5. Conclusions

The Day-Ahead Market provides the participants with a functional tool to achieve the schedule for the day of delivery, a balance between the portfolio of bilateral contracts, a consumer forecast and technical availability of production facilities. In this paper we have presented the main characteristics of the market, the main indices and indicators and we have detailed the main functionalities of the IT system currently used for participating on the market.

## 6. Acknowledgment

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## Business Intelligence Integrated Solutions

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### Abstract

*This paper shows how businesses make decisions better and faster in terms of customers, partners and operations by turning data into valuable business information. The paper describes how to bring together people's and business intelligence information to achieve successful business strategies. There is the possibility of developing business intelligence projects in large and medium-sized organizations only with the Microsoft product described in the paper, and possible alternatives can be discussed according to the required features.*

**Key words:** Business Intelligence, Data minning, Report Services, Analysis Services

**J.E.L. classification:** O31, O32.

### 1. Introduction

Data Mining, also known as data or knowledge discovery, is "the process of analyzing data from different perspectives and synthesizing them into useful information that is used to increase revenue or reduce costs" (Frاند, 2016, p.3) . From a technical point of view, Data Mining allows the discovery of connections or patterns among dozens of fields in large relational databases. Data Mining is currently used primarily by companies that place a strong user focus, such as retail, financial services, communications and marketing organizations. This technique enables them to establish the links between internal factors such as price, product or staff positioning, and external factors such as economic indicators, competition, turnover effects, customer satisfaction and business profits (Kurz, 2011 , p. 11).

### 2. Reporting Services

SQL Server Reporting Services (SSRS) is a reporting software and can be used to prepare and deliver a multitude of interactive and dedicated reports (Azevedo et al, 2006, p.36). It is managed through a Web interface and provides a Web Services interface for developing customer-specific reporting applications. SSRS competes with Crystal Reports and other business intelligence tools. Reports are defined in Report Definition Language (RDL), an XML-Markup language. Reports can be used with the newer versions of Microsoft Visual Studio, which are installed with the provided business intelligence plug-in, or with the provided Report Builder tool. Reports defined with RDL can be done in a variety of formats, including Excel, PDF, CSV, XML, TIFF, and HTML-Web. SSRS can also run reports in Microsoft Word (DOC) format.

#### 2.1. Report Server

In this section we will first explain the use of Reporting Services, report server, and see how to build a chart report in SQL Server Reporting Services. For this demonstration we will use the AdventureWorks example database from Microsoft. To configure this report, we open Visual Studio Business Intelligence Studio and create a new Report Server project. As soon as the project

is ready, we set up a data source that allows data to be retrieved from the AdventureWorks Database.

For the data selection we write the following query:

```
SELECT YEAR(SOH.OrderDate) OrderYear, PC.NAME AS CategoryName, PSC.NAME as
SubCategoryName, SUM(UnitPrice) TotalPrice, SUM(OrderQty) TotalOrders
FROM Production.ProductCategory PC INNER JOIN Production.ProductSubcategory
PSC ON PC.ProductCategoryID=PSC.ProductCategoryID
INNER JOIN Production.Product P ON
PSC.ProductSubcategoryID=P.ProductSubcategoryID INNER JOIN
Sales.SalesOrderDetail SOD ON P.ProductID=SOD.ProductID
INNER JOIN Sales.SalesOrderHeader SOH ON SOH.SalesOrderID=SOD.SalesOrderID
GROUP BY YEAR(SOH.OrderDate), PC.Name, PSC.Name
ORDER BY OrderYear, CategoryName, SubCategoryName
```

If we run this query, we should get the following result, as shown below.

Figure no. 1 Report Manager subreport

	OrderYear	CategoryName	SubCategoryName	TotalPrice	TotalOrders
1	2001	Accessories	Helmets	6983.8561	1003
2	2001	Bikes	Mountain Bikes	1995907.6076	2415
3	2001	Bikes	Road Bikes	3944233.0833	4724
4	2001	Clothing	Caps	761.8968	520
5	2001	Clothing	Jerseys	9945.6118	983
6	2001	Clothing	Socks	690.08	629
7	2001	Components	Mountain Frames	204504.5924	495
8	2001	Components	Road Frames	129765.374	1079
9	2002	Accessories	Helmets	17531.3036	3830
10	2002	Accessories	Locks	2217.00	676

## 2.2. Report model projects

SQL Reporting Services uses report models by which administrators include items in the database in their reports. For the user, the report is simpler because, due to the report model offered, it can only choose certain perspectives and notions. For model-based reports, at least one report model needs to be available. It is necessary to draw up certain reports quickly.

These report formats are required to quickly access a particular business situation. For this reason, there is a very important feature in SSRS, called Report Builder. With the Report Builder, ad-hoc reports can be produced. A report model contains metadata of the data source and the links between them. These metadata are in SMDL (Semantic Model Definition Language). This is a form of presentation of the model concepts based on XML (Azevedo et al, 2006, p.39). Models can be developed with a report manager or Microsoft Office SharePoint Server, but BIDS offers maximum flexibility. The model can be developed, if necessary, based on cubes analysis services. If the cube is modified later, the model must also be regenerated. Report models based in Analysis Services-Cubes can not be drawn with the Designer. The reference models consist of the following components:

- entities: similar to the objects in the tables (entities have features and roles);
- features: similar to the columns in the tables;
- roles: indicates relationships between entities;
- Folder: used for organization of entities and perspectives in order to summarize certain models of notions;
- Perspectives: Partial quantity of the model, it is useful when there are very large models and perspectives included in entities, roles, folders, etc.

In order to be able to prepare ad-hoc reports, a new draft report model must first be written in Business Intelligence Studio in Visual Studio. In this, it is necessary, as in the report server project, to establish a data source and build a picture of the data source. Here, the necessary tables are added to the model to be used for ad-hoc reporting, and aggregations such as sums, average values, or the minimum of selected attributes are created in advance. After preparing the model, it can be accessed through the Report Manager ([http://\[localhost\]/Reports](http://[localhost]/Reports)).

Figure no. 2 Microsoft SQL Server Report Builder

		Accessories		Bikes		Clothing		Total		
Year	Quarter	Month	Quantity	Unit Price	Quantity	Unit Price	Quantity	Unit Price	Quantity	
CY 2001		Total			12736	\$41833198			12736	\$41833198
CY 2002		Total			32247	\$76650563			32247	\$76650563
CY 2003		Total	216552	\$4204560	77641	\$127221147	54606	\$2038636	348799	\$1334643
CY 2004		Total	252644	\$4905320	58662	\$92903557	63707	\$2378408	375013	\$1001872
<b>Total</b>			<b>469196</b>	<b>\$9109879</b>	<b>181286</b>	<b>\$338608465</b>	<b>118313</b>	<b>\$4417044</b>	<b>768795</b>	<b>\$3521355</b>

It is also possible to create graphs directly in the Visual Studio designer. The report image, created like this, also appears in a web browser or report manager. Functionally there is no difference to the reports that were created as a report server project.

### 3. Subscriptions

A subscription is "a requirement to transmit a report in a previously used data format at a given time or as a reaction to an event" (Sallam et al, 2011, p.137). Subscriptions become an alternative to executing a report when needed. Every time, when a report is needed, the report must be selected manually. For such situations, subscriptions can be used to plan and automate the execution of a report. Subscriptions are processed and distributed on the delivery extensions of the Report Server provided by SQL Server. Standard subscriptions can be made to send reports to an approved folder or an email address. If a report is configured for SharePoint integrated mode, it can also be sent to a SharePoint library. When creating a subscription, you must find stored access identifiers within the report, but you also need to have the right to display the report and make the subscription. In addition, scheduled activities and report preparation within the reporting server must be enabled.

Figure no.3 Report Manager Subscription

Reporting Services supports two types of subscriptions: standard subscriptions and data-generated subscriptions. Standard subscriptions are designed and managed by individual users. A standard subscription contains statistical values that can not be different during the subscription processing. For each standard subscription, a variety of presentation possibilities, delivery possibilities, and report parameters are available.

Data-generated subscriptions access subscription information by consulting an external data source that provides values for a receiver, report parameters, or an application format. Data subscriptions can be used if a very large recipient list is available or if different reports are to be

issued for different target groups. Data-driven subscriptions require knowledge from the consultation and use of the parameters. Normally, these subscriptions are set up and administered by report server administrators.

Subscriptions use delivery extensions to determine how and in what format the report should be issued. If a report is to be written, the user may choose one of the available delivery extensions to determine the mode of transmission. Developers can build additional extensions to forward reports to other destinations or other targets. Reporting Services includes the following delivery extensions:

Table no.1 Delivery extensions for subscriptions

Extensie de transmisie	Descriere
Windows-file sharing	Sends a report as a static application directory to an approved folder that is accessible through the network.
E-Mail	Forward an info or report as an email or URL link.
SharePoint library	Sends a report as a static application folder to a SharePoint library that is accessible through a SharePoint website. The website must be integrated into a report server that is executed in integrated SharePoint mode.
Zero	The ZERO transmission bidder is a highly specialized extension that is used to preload a cache with parameterized reports ready for display. This procedure is not available to users in the case of individual subscriptions. ZERO transmission is used by administrators subscriptions generated data to improve server performance report prior to uploading the data cache.

Source (Sallam et al, 2011, p.152)

#### 4. Alternative to KPI's from Analysis Services

This section explains how key performance indicators are displayed in various conditions in SQL Server Reports. For this demonstration we chose the Northwind database. Integration of key performance indicators into a report is a common requirement formulated by CFO, CEO and stakeholders in a firm in each department. SQL Server offers various possibilities to integrate indicators into a report (Schultz et al, 2008, p.11). In the following demonstration, one of them uses a report to configure. The next KPI is built using a part of SQL Servers -Visual Studio. The following is a query that is used for the draft report..

```
USE Northwind
GO

SELECT E.City 'Employee City', YEAR(O.RequiredDate)
OrderYear, COUNT(O.OrderID) 'Total Orders',
SUM(OD.UnitPrice * OD.Quantity) 'Total Sales'
FROM Orders O INNER JOIN [Order Details] OD
ON O.OrderID = OD.OrderID
INNER JOIN Products P
ON OD.ProductID = P.ProductID
INNER JOIN Employees E
ON O.EmployeeID=E.EmployeeID
where E.City='LONDON'
GROUP BY E.City, P.ProductName, YEAR(O.RequiredDate)
```

The query above selects the city of the employee, the desired term, the total of an employee's orders and the total turnover, grouped by city, product name and date. This query selects data only for "London". The result is shown in the following figure.

Figure no.4 Report Manager – raport

	Employee	City	OrderYear	Total Orders	Total Sales
1		London	1996	1	249.60
2		London	1996	1	240.00
3		London	1996	1	588.00
4		London	1996	1	2176.00
5		London	1996	2	504.00
6		London	1996	4	1550.40
7		London	1996	1	864.00
8		London	1996	1	316.80

At this point indicators can be entered in the report. Indicators may be colors or images. There is also the possibility to use gadget images to display indicators.

## 5. Conclusions

A business intelligence solution helps the user to pursue the following critical goals within an organization: reaching or exceeding profit figures; maximizing profitability by identifying the most profitable programs, finding cost-cutting opportunities across the organization, avoiding over-reliance on IT resources, making business teams more confident in their own efforts, faster and more efficient IT customer engagement, and developing a 360 degree customer-oriented summary.

A business intelligence solution enables business teams to understand data interrelations across the organization and synthesize results, trends and forecasts in comprehensive analysis to understand the implications of this approach in-depth on the organization's goals. Business intelligence users understand what happened, what is happening and what steps to take in the future.

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## The Socio-Cultural Consequences of the Migrations Phenomenon on the Romanian Emigrants

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### Abstract

*In this study, we conducted a research based on an open interview- focus group type, direct and online, on the Romanian emigrants from the main destination countries – Italy and Spain.*

*The conducted research shows us that, most of the times, the migration is seen as a final option for the ones involved, being seen less and less as a decision of the emigrant's individual investment. At a world level, the main determinants for the migrations' phenomena are: the economic and social climate associated with the emigrant's country of origin population increase, associated in some cases to the armed conflicts, religious persecution and xenophobic attacks.*

**Key words:** interculturality, host country, ethical behavior, globalization.

**J.E.L. classification:** F22; J61; J62; J68.

### 1. Introduction

The causes that determined the interviewed people from the focus group research, were determinants of economic nature, these being conditioned, on their turn, by social, political and cultural factors. The social factors are the produce or result of the long term decisions taken by the interviewed Romanian emigrants. The long term decisions taken by the Romanian emigrants that are working abroad are reflected and have powerful reverberations on the left at home families.

A focus group scope is to listen and gather as many conclusive information as possible.

Qualitative research is a modality of better understanding of how they feel or what people's opinion on a certain analyzed problem is. The focus group in question must be small enough in order for everybody to share their own migration experience, but, at the same time big enough to offer a chance for expressing their own ideas, points of view regarding their experiences and feelings. (Budacia, A, E., 2009),

The scope of this research focused on the use of the open interview is represented by the identification of the economic and social causes of the Romanian migrations phenomenon.

### 2. Qualitative research of the Romanian migration focused on the focus group.

The qualitative research of focus group type represent a support for identifying and better knowing the Romanian emigrant's behavior. At the same time, we aimed to identify the perceptions regarding a series of economic, cultural social and religious aspects that characterize the immigrations actions, as well as a series of decisions taken by the emigrants in the host country. The size of the chosen group in the qualitative research is of 22 people, those being divided in smaller groups function of the chosen country (Italy and Spain) and in function of the town of origin or the town from the host country. (Cristian, E, R; Baragan, L, G, 2015)

The selected participants for the qualitative research have a series of common characteristics: they are Romanian emigrants established in Italy and Spain, they have a job considered as relatively stable on the labor market from the destination country, and they have qualifications and a few years of migration experience. It has been tried, for the interviews period of time, that no value judgements were issued nor the chosen group's answers to be influenced. All along the period of the interview, the Romanian emigrants had the possibility to share their own experience. The focus group in the interview was divided function of the chosen country of destination, but there was also focused on a small part of the members, relatives and their families (Romanian migrants gone to work to Italy and Spain, as well as the relatives and families of the migrants gone to work abroad). (Cristian, E, R; Baragan, L, G, 2015)

In order to have a clearer image of the investigated phenomena, interviews were conducted in mini-groups from the urban and rural environment from different zones and regions of Romania. In the research conducted the region of Moldova has been analyzed, due to the fact that the official statistics show that a lot of Romanian emigrants located in Italy and Spain are from this region, especially from the counties of: Iasi, Suceava, Botoşani, Bacau, Neamţ, Galati, Vaslui and Vrancea.

In total, 22 interviews were performed, the research being conducted within the period of June 2017 – August 2017; the interviewed people were split in two groups in function of the country of destination chosen: Italy and Spain. The first group comprised a number of 14 persons aged between 25 – 51 years old, from the urban and rural environment that chose Italy as country of destination and the last group formed of 8 persons from the urban environment, aged between 25 – 51 years old, established in Spain.

The interviews were focused on the scopes and motives of the decision to emigrate and work abroad, the way and integration degree of the emigrants, their relationship with the communities and the Romanian Diaspora, their intention to return to the country of origin, their perception on the different economic, political and social phenomena that take place in the country.

## **2.1 The Push & Pull factors that determined the interviewed person's migration**

In order to form an overview image on the socio-cultural effects that strongly influence the life of Romanian emigrants from Italy and Spain; in the conducted research the starting point was from analyzing the Push&Pull type factors.

The Push&Pull type factors have a strong influence on the human behavior, determining and modifying the involved in the migrations process subject's behavior.

To all these determinants, we may add the psychological factors: mentality and culture that complete the full image of the foreign emigrant. Before deciding to emigrate, the immigrant must cross many borders: for some of these individuals, these are, most of the time real or imaginary; all these materializing into a palpable journey to another land, region and continent.

The Push&Pull factors are the ones that constraint a person, from various reasons to leave their domicile from a region and to move on to another country. The Pull factors are the ones considered attraction ones for the foreign emigrants that arrive to different countries, determining them to leave the country of birth for a period of time. (Gursharan,S, K.,2009)

The Push factors are considered stronger and more important for the emigrants in order for them to take a decision, unlike the Pull factors.

From the Push & Pull factors with socio-cultural impact on the Romanians migration were

### *Push Factors:*

- Discrimination based on ethnical, sex or religion reasons
- Human rights infringement

### *Pull Factors:*

- Family reuniting
- Forming of an emigrant's Diaspora
- Respect for individual liberty

### **3. The interculturality effect upon Romanian emigrants**

Following the conducted interviews, we could observe that, generally speaking, part of the Romanians working abroad in Italy and Spain try to distance themselves from "the image of the Romanian abroad", who, many times, in the emigrants vision is "selfish, secretive, envious and thief in certain situations".

The opportunity to emigrate is given in first place by the life strategy options of the subjects, by the directions of the emigrant's that already live or intent to live and experiment in positive terms. Gradually the opportunity to emigrate is intercrossing with other biographic transitions that meet in a climax point that reinforces this decision: divorce, separation from the partner, layoffs, unemployment, facilitation of the migration experience by the close ones. Our co-nationals make efforts in order to better integrate themselves into the host country, integrating themselves into a collectivity, learning the language, tradition, costumes and culture. (Cristian, E, R; Pădurețu, E; Sorlescu, M., 2010),

The foreign immigrant in Antonio Perotti's opinion may be defined by his past, present and future. In the author's opinion, the immigrant may find itself and identify as it follows: (Perotti, A., 1996)

- By its past, the immigrant feels like being "unrooted", arriving in a new country, meeting a new culture. In this phase, he feels like a stranger in a new world, with a past of his own, and a stranger for the adoption country; in this situation the main reasons and causes (economic, political and social) that determined him to emigrate play a secondary role;
- By its present, "because he is a replanted one", resident for a certain time in a new country. In this phase, his interests come first and compete with the ones of the host population; having common interests and even similar to the local community ones from which he takes part and even shares the same interests with other foreign immigrants located in the same country as him;
- By its future, his "transient" situation will gradually change and in time; in an end coming to be completely integrated in the new collectivity, following to socializing and cultural and linguistic integration. In this phase his personality changes in a radical way, reaching an end whereas he adopts fully and completely customs and tradition from the host country; for some foreign immigrants this stage is synonymous with the situation in which his own and his parents origin condition is ignored.

The qualitative research conducted, based on the interviews, highlighted that migration's main cause is the poverty from many Romanian areas, the lack of jobs, of a salary (fix income), of an existing numerous family with many underage kids in care.

#### **2.1. The socio – cultural integration of the Romanian emigrants in the host country**

The answers to the interviews demonstrated that the main economic decisive factor in choosing the destination country is represented by the personal income increase and professional opportunities. At the same time, in the received answers some important discrepancies between Italy, Spain and Romania, for many of the emigrants the return to the country of origin being determined by:

- Life conditions from the country of origin;
- The drear reality from the country;
- The opportunities from finding a job well enough remunerated in order to give a financial situation;
- A decent way of living and a stable, sure income;
- The politicians attitude towards society;
- The socio-political changes surveyed in the country;

The qualitative research offered the opportunity to understand the amplitude of the migrations phenomenon by means of a direct contact with the Romanian emigrant and its family but also by means of the personal problems he is being confronted with.

The regions from where the Romanian emigrants come from do not know of an economic and social development on short and long term and the labor productivity from these areas being relatively small. For this areas and regions case, from where the Romanian emigrants come from the infrastructure improvement, local and regional development and investments to conduct to the number of jobs, are necessary, the increase of the personal consume (Cp) within families, by increasing of the salary incomes.

The conclusions that came following the interview answers demonstrated that the emigration was focused mainly on the acquaintances network system.

The research results led to the conclusion that the respondents are temporary migrants these returning in the country of origin only during the Easter and Christmas holidays and vacations. Also, the respondents admitted that they are confronted, from a psychological point of view, with states of mind marked by nostalgia and sometimes depression, generated by the situation of the ones left at home. As for the emigration advantages or its strong points, the respondents declared that their left at home family member's situation increased considerably since the time they left for working abroad.

The qualitative research has identified, in the case of the Romanians working abroad, in Italy and Spain, a mobility for the construction, agriculture, housekeeping services or medical care sectors.

Following the conducted interview, it has been ascertained that the actual economic-political context had repercussions over the Romanians from Italy and Spain, these reporting the worsening of their own situation form the "host" country: job loss, incomes considerably reducing, job insecurity.

Most of the nowadays "Western host societies" demand that the immigrants that enter in a new country, with a new culture, learn and adopt the new language and traditions. Since decades ago, due to the increase in the migrations phenomenon at a global level, researchers have investigated the efficient intercultural communication that is produced at the foreign immigrants-local community level. Their research focused on the personality and behavior traits, or on the social skills that influence the successful adapting to a new culture, traditions and idiom. (Selma. L., H; Jan Pieter van Oudenhoven; Marieke, T. 2008)

Between the migrants, the term *acculturation* is used more and more frequently, by this meaning a group of migrants from different countries, from different cultures that enter into a primary form of contact with the local population. As a result of this social contact, both cultures entwine and lend each other different basic elements: colloquial expressions, gestures, preferences, a taste for different types of service, products, bringing visible alterations in each and every participant's to this process behavior. It is frequently observed, among the migrants that after a long period of time they borrow or adopt in a natural way a new culture, a new language; making it impossible to appreciate how much it is borrowed from the country of adoption or how much the native culture of the emigrant represents. The preferred integration form by young people from Europe, especially by teenagers and adults aged until 35 years old, is the cultural one. (Bocancea, C., 2011)

From these personality and behavior traits that determine a better integration of the foreign immigrants into another country, we may mention:

- Empathy;
- Respect;
- Interest for the local culture;
- Migrants flexibility to assimilate quicker a large new information volume;
- Religious and ethnical tolerance,
- Technical skills,
- Openness to new professional and social visions,
- Being social,
- Positive self-image.

All these enumerated elements from above are also contributing to the creation and "polishing" of the newcomers into the host country personality.

For all those who arrived to a new "Promised land", the first feeling the emigrants had was probably of social marginalization, feeling or state that they are not yet fully accepted and that cannot assimilate the new environment, culture, language, prejudices that they were confronted with. For the emigrants, social integration into a new country is preceded by a cultural integration. The two processes, social and cultural integration are realized in a sort of long period of time. (Hein de Haas, 2008)

The ones who are specialized in a certain domain (construction, agriculture, housekeeping and child and elderly care services) easily find a job, unlike the abroad newcomers, unexperienced in a new. The interviewed subjects declared that they had relatives, acquaintances, friends that helped and influenced them regarding the arrival to a new foreign country and finding of a job; and them, at their turn, attracted or helped other acquaintances or relatives to go abroad, on the beaten path principle. (Cristian, E, R; Baragan, L, G., 2015)

The most common and handy transportation network for the potential Romanian emigrant remains, in the end, the family, close relatives and friendships developed in the country.

The interviewed Romanians have contradictory feelings regarding the host country inhabitants; some of the manifest a mild reticence for the locals and an extremely jovial attitude (of admiration, sustained by integration efforts among them for the case in which they do not intent to return to Romania in a near future), projecting their future in the new adoption country.

Beyond the small dissatisfactions present in the Romanian emigrant soul, the feeling for the host country, the attitude towards the locals but also the perception towards the society they live and work in are perceived.

Beyond regionalizing, the main tendency specific to the Romanian migrants regardless of the "foreign country corner" they might find themselves in:(Precupețu,I.,2001),:

- Romanian migrants get less involved in the internal origin community form the host country problems; migration uses especially social networks from the level of the belonging community;
- The Romanian relationships abroad are altered due to the human interaction frequency by breaking off the old relationships and new ones apparition;
- A certain reticence to the fellow nationals is being observed inside the community; even conflictual relations arise that most of the time generate physical and verbal violence among family members;
- The Romanian, once returning to his country is mostly preoccupied in showing off to the ones who remained at home;
- The Romanians working abroad are preoccupied in developing new friendship relations with different nationalities, employers or the national population from the host country.

From the conducted interviews, it has been observed the permanent tendency that the Romanian emigrant has to make permanent comparisons with Romania, stressing the strong contrast between the two countries. A certain reticence could be ascertained regarding a possible definitive return to the country. At the same time the subjects manifested a continuous in adaptation when they returned to Romania, in August, for the summer vacation.

On the opposite is situated the Romanian emigrant who does not unconsidered the destination country, the possibility to have a decent salary and employment opportunities, to live and work in a civilized country, with real possibilities. The Romanian is used to the hard way but also with the good one, a common lesson that he has learned a long time ago in his own country. Romanian emigrants become aware how difficult it is on foreign land and far away from home, but the financial advantages obtained into another country are much consistent for the time being, most of them having no other present option. The emigrants leave to work abroad "for money and safe earnings" and they come back in order to be close to their family and / or because they saved enough money to reach the objectives from their country. (Stănculescu, M; Stanciu,V; Alexe, I; Moțoc, L.,2012),

The emigrant's reasons for not returning home are diverse and are not only of financial considerate, some of them come back for visiting their relatives, sick elders, underage children remaining at home or in order to invest carefully the money they worked for and saved in the destination country.

But there are Romanian emigrants that did not achieve their objectives and that dream to definitively return home remains very far to reach for them; you listen to them and to their story and it ends, every time, with a "not yet". It is very important, especially for a foreign citizen that lives far from its country to overcome its own mentality and prejudices existent at an individual level; before choosing to distance themselves from the house, the family, the children, the community and social life in order to move to another land, country or continent for a better life.

### 3. Conclusions

The conducted research scope is focused on understanding the phenomena and the perception degree regarding the migration. An interesting identified aspect refers to the fact that the interviewed people were delighted to express openly and as objectively as possible their opinion. The research was exclusively conducted on the Romanian emigrant's residents of the Moldova region.

Sometime, somewhere, in another Romanian region you may find another Romanian emigrant who left to work abroad, with another story (or even a similar one). An emigrant who, at its turn, must finalize a life project (a house, an underage child, a numerous family, sick parents and grandparents without a considerable income that remained at home). The Romanian emigrants live in a foreign country with the hope for a better future for themselves and for the left at home family.

In this situation are the Romanians that do not intent to comeback home in the next 3-5 years; being willing to accept any job (either permanent or temporary), only to have enough income in order to send to the left at home ones. The mentality regarding migration is tightly connected to the valid information quantity and of which it has at disposal in connection with the chosen country and mainly, on the emigrant's education achieved in the country of origin. Many times, migration may create conflictual situations in the country of destination, this happens due to the lack of education, integration or an aggressive behavior of the emigrant.

It is difficult enough to produce a complete evaluation of all cultural elements borrowed by the emigrants, these depend on and are in a full accordance with the emigrant's age, gender, religious orientation, geographic area, social class or the profession that the individual has.

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## The Use of Superlatives in the Written Tourist Discourse

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### Abstract

*In the specialized texts, adjectives represent a non-negligible part of the vocabulary used. As part of speech subordinated to the noun, the adjective has the role of highlighting inherent features of the promoted product with impact on the reader-traveler. The touristic discourse is characterized by a wide use of adjectives and, above all, of the evaluative type of meliorative type, as they are adjectives that transmit a positive image of the promoted product.*

*As far as it concerns tourism discourse, language is the most powerful force to promote tourism, its purpose is to persuade, attract, seduce millions of people to turn potential customers into real customers. Thanks to this force of persuasion, the tourist language can transform an unknown place into a tempting tourist destination that arouses the desire to be visited and where a simple garden is transformed into a "paradise oasis".*

**Key words:** adjectives, tourism, discourse, guides, language

**J.E.L. classification:** Z13

### 1. Introduction

In the tourist guides are frequently encountered adjectives describing: the beauty of a destination (*a refined and intimate place, a superb view of the sea, a paradisiacque moment, des grottes étonnantes.*), the richness and variety of places (*the luxurious villas in the surroundings, une variété impressionnante de restaurants, etc.*) that evoke the history of a people (*cosmopolite, bullying, painful*), adjectives with suggestive and evocative power (*crystalline waters, miraculous destinations, unique beaches ...*); used in culinary art to suggest variety of dishes (*eccentric menu, French cuisine, Romanian, international, Saxon specialties, exquisite food, exquisite dishes, cuisine savoureuse, original et créative, raffinée, élégante et goûteuse, etc.*)

As Dann (Dann, 1966, p.95) states, magic and euphoria can be considered as two fundamental elements in accomplishing the two functions of the tourism discourse that help create a positive and attractive image of the destination to meet a need, namely to travel. Moreover, Calvi and Bonhomme (2008: 189) argue that the tourism discourse is dominated by optimism and positive values that have been put to good use by adjectives.

Calvi (Calvi, 2005, p.33) defines the language of tourism as a "*linguaggio dalla fisionomia sfuggente*", which does not have a well-defined content and clear functional limits because it is influenced by a wide range of disciplines and includes various communication functions such as persuasive, argumentative and vocative function. Normally, the two main functions we find in promotional texts are persuasive and informative ones. Because every text in tourism has the role of informing and convincing, it must attract attention, influence and must remain in the memory of the reader.



## 2. Degrees of intensity in tourism discourse

The use of the superlative by the locutor is in accordance with the particularities of the tourism discourse, characterized by a bombastic style that tends to emphasize to the extreme the qualities of the promoted destination, which awakens specific expectations and stimulates the desire of the tourists to experience them for real. (Dann 1966, p.123). Thus, the colorful, fascinating presentations and descriptions have the role of impressing, attracting potential tourists to make them visit the presented destinations.

Passing a word or phrase from the current use into intensive use will occur under special declarative conditions. In a communication situation in which the locutor's intentions are directed towards the receiver/addressee, there must be taken into account the effects that the former intends to produce on his interlocutor.

Finding different means of expressing the intensity and recognizing the forms associated with it, examining them to show what this operation is and identifying the main issues is another objective of this research. Exploring expressive language and observing it in the most current manifestations will bring a new light on this phenomenon that is often met in tourist guides. In this part of our research, we have stopped over the comparative and superlative structures as means of expressing the intensity in the tourism discourse. The expression of intensity and degrees inherent in this linguistic phenomenon is achieved through various intensive means or processes. Of these, the means associated with the expression of high intensity are found in a large number. In order to highlight the high degree, the locutor actually has a wider range of means that prove to be as effective as the others. Because in tourist guides, these are more numerous and more diverse, we have chosen to restrict our analysis to intensive processes related to the expression of high intensity.

In Romanian, the system of comparison and intensity has a much richer configuration than in French, with a remarkable expressive potential. This category specific to the adjective and the adverb is taken up by some subclasses of the adverb that we have analyzed in this paper.

As a characteristic of adjectives and adverbs, intensity is defined and presented in various grammars or specialized studies devoted to both Romanian and French linguistics. Traditionally, the phenomenon of intensity is studied in the Comparative Degrees or Degrees of Intensity section of Grammarians such as M. Avram (1986), I. Coteanu (1987), or D. Irimia (1999), GARL I 2008, J-C. Chevalier and his collaborators (C. Blanche-Benveniste, M. Arrivé and J. Peytard) 1994, M. Riegel et al. (J-Ch. Pellat and R. Rioul) 2005, M. Grevisse (1994) Cristea. (1978), and others.

Degrees of comparison express the intensity of manifestation of the quality of the product or the gradual way of carrying out the action, which, in general, has a subjective character (Șișcanu-Boz 2010, p.167). In our corpus, the appreciation of quality and action by the locutor stems from the degrees of comparison of the adjectives and adverbs of manner.

The degrees of intensity are expressed by a variety of means both in Romanian and in French, so the intensity of an attribute can be expressed using adverbial modifiers with the role of approximation or equality reduction: almost, slightly,... enough, and so on. (GARL I,2008,p. 156)

" *Luna Park, cu diverse jocuri și carusele **cam** demodate*"( Luna Park, with various games and some **pretty** outdated carousels.)(GTRo,p.413); (Cluj) "*A păstrat însă un aer **ușor** subversiv și sfidător, și reputația de oponent al regimului*" (But it kept a **slightly** subversive and defiant air, and the reputation of the regime's opponent.)(GTRo, p.224) "*(Hotel nou de trei stele, **destul de** agreabil și amenajat cu gust*" (New three-star hotel, **quite** agreeable and tastefully decorated.)(GTRo, p.392).

According to Irimia (1999, p. 91), the relative intensity is built with the structures quoted above.

" *Pe lângă o colecție **destul de** frumoasă, dar **cam** săracă în explicații[-] muzeul include și o reconstituire la scară reală a Curții Domnești*"( In addition to a **fairly** beautiful collection, but rather poor in explanations [-] the museum also includes a real-scale reconstruction of the Royal Court) (GTRo, p.308).

In French, the average intensity is marked by a few adverbs such as: *assez, moyennement: "a beau cadre, organisé en terrasse, assez bien ombragé* (GRC, p. 91), *quasi (plus quasiment)* (GRP, p. 601) and its familiar substitutes of *assez*, such as *plutôt* and *pas mal* (Riegel, 2005, p.362).

"*Pas mal de groupes mais pas seulement*" (GRP,p.296).

The quality designated by an adjective or an adverb can be compared to one or more other elements. In this case, we can talk about *comparative*; and when compared to a limited number of other elements, it is *superlative relative* (Chevalier, 1994, p. 199).

### 3. Levels of comparison and the specificity of tourist texts

In grammar, three levels of comparison are known: the positive, the comparative (equality, inferiority and superiority), and the superlative (relative and absolute), in which degrees of intensity are expressed by different means.

The comparative degree includes an explicit comparison with other things, beings, and other situations, and can mark equality, superiority or inferiority. The comparative of equality is expressed with the help of: adverbial phrases, *as... as /aussi* which conveys an autonomous morphological expression.

"*La fel de vestite sunt și cergile, covoarele și cojoacele lucrate în zonă*" (There are also the cages, carpets and cobbles worked in the area) (GTBN, p. 32); "*Ajutată de un bătrân arhitect de încredere, tot la fel de însuflețit ca și mine*" (Helped by an elderly trusted architect, as animated as I am) (GTCRB, p. 20); "*Les villages sont aussi sympathiques, nichant leurs maisons --*" (GRC, p.49);

As far as the adverb is concerned, the comparative of equality in French is expressed by the adverb *aussi* accompanied by an adverb, and by *autant* together with a verb. (Grevisse, 1994, p. 1396)

"*On peut tout aussi bien goûter quelques vins rares*" (GVMA, p.140); "*les chambres combleront autant les bohèmes au budget serré mais sensibles aux jolies décors que les amoureux--*" (GRP, p.297)

The adverb *davantage* appears alongside the verb (often after the verb) and is more expressive in comparison with the adverb *plus* (Grevisse, 1995, p.1395).

The comparative of superiority is built with the adverb *mai* (*plus* in French) and accompanies the positive form of adjective or adverb.

"*Nu există loc mai bun în Sibiu pentru a vă bucura de mâncare simplă*" (GTRo, p.216) (There is no better place in Sibiu to enjoy simple food) (GTRo, p.216)

"*On conseille vraiment celles avec balcon et vue sur mer ---nettement plus agréables, celles sur rue étant bruyantes dans la journées.*" (GRC, p.182); "*Une façon de voir la Corse sous un angle plus spirituel que d'ordinaire*" (GRC, p.39); "*---etajul unde se află locuința începând a fi decorat mai bogat, în diverse stiluri--*" (GTRo, p.25)

In modern French, the comparative of **superiority**, besides the analytical forms built with an adverb, preserves three comparative synthetic adjectives from Latin : "meilleur" for the adjective "bon"; "pire" for the adjective "mauvais" and "moindre" for "petit". However, in the spoken language, the analytical comparatives formed with the adverb *plus* (*plus bon, plus mauvais* and *plus petit*) compete with the three Latin forms.

Like adjectives, adverbs can take the form of comparative of superiority (further, just as well). Especially, one can compare adverbs of manner identical in form with adjectives. There are also some adverbs of place or time that express relative characteristics and bear the comparison (closer, very late /*mai aproape, foarte târziu*).

"*Un fel de Mic Berlin, zic unii, cu o viață de noapte atât de zbuciumată , că mai nou a căpătat și reputația de destinație europeană de clubbing*" (A kind of a Little Berlin, some say, with such a tumultuous nightlife, that it has also gained a reputation as a European clubbing destination.) (GTRo, p. 20); "*Ei reprezentau mai mult decât o colonie, [---] devenind o populație de sine stătătoare*" (They represented more than a colony, [---] becoming a self-contained population) (GTTim, p. 24); "*Un fel de "Pour rester plus longtemps, la demande se fait au Canada auprès d'un consulat de France.*" (GRC, p.314)

In French also there are types of adverbs that can be part of other comparative structures than of ordinary ones. To mark the degrees of comparison, a limited number of adverbs (4 in number) have synthetic forms. Thus, the adverbs *beaucoup, peu, bien* and *mal* have synthetic forms in the comparative of superiority: *plus, moins, mieux* and *pis*.

"*Domage pour les uns---tant mieux pour les autres*" (GRC, p.68)

"*Et, tant pis pour le cliché, direction Le Sacré-Coeur*" (GRC, p. 198)

The majority of adverbs with degrees of comparison followed by the preposition *de* (*trop de*, *beaucoup de*,) and by the article *des* (*bien des*), accompany the nouns expressing quantity.

*"Beaucoup d'habitues et de touristes : mieux vaut arriver tôt le soir."* (GRP, p.41)

*"En fin de saison, et même avant, bien des magasins n'ont plus de véritable charcuterie corse."* (GRC, p.382)

In our corpus, the adverbs remain an element of the ad text, the most representative being, undoubtedly, the adverbs of intensity. All types of adverbs (manner, time, place) contribute not only to the formal organization of the text but also to the semantic sequence of the facts.

The abundance of qualifying adjectives, which come to complement the information provided by the nouns, could accentuate the positive and enthusiastic emotion, rendered by adjectives in the superlative degree. The superlative is the degree to which the maximal potentiation of quality comes. To highlight the hyperbolic character of the tourist text, the guide-scriptor uses numerous and varied procedures, some of them being of a stylistic nature, others forming a complex morphological system. (Chevalier et al, 1994,p. 197).

The relative superlative is formed with the help of the article the / the + adverb *most* + an appreciative / affective adjective or the existence of superlative lexical-semantic marks such as: in the dream world, in the world. This form is used to praise the product's qualities, being one of the features commonly found in tourism advertising.

In French it has the same form as the comparative of superiority or inferiority that is distinguished by the presence of the determined article.

*"The best hotels on the most beautiful beaches ..."* (GTRo, p. 34)

*"C'est la meilleure, la plus fertile, la plus douce, la plus charmante contrée qui est au monde"* (GRC, p.10)

*"Entourée par la Méditerranée, vous y découvrirez des paysages splendides et uniques au monde"*( GRC,p.31); *"C'est l'un des parcours les plus durs d'Europe"* (GRC, p.26); *"C'est évidemment l'hébergement le moins coûteux"* (GRC, p.39);*"--La Sorbonne ferme désormais à la moindre manifestation--"* (GRP, p.183);*"Iar schimbarea se vede cel mai bine în Centrul Vechi, înainte pustiu și dezolant."* (GTRo, p.20);*"În lumea muzicii, eu sunt cinci într-unul : compozitor, dirijor, violonist, pianist, și profesor. Cel mai mult prețuiesc darul de a compune și nici un muritor nu poate poseda o fericire mai mare, a mărturisit George Enescu despre sine."* (GTVP, p.47)

*"Le mieux est de suivre la numérotation."* (GRP:56)

The high intensity, from a morphological point of view, can be rendered by using adverbs. Being the correspondent of the traditional absolute superlative, the intensity is expressed by the adverbs: "very" and "très, tout, fort, bien" for the French language. To these, Riegel (2005, p. 362) annexes the adverbial "tout à fait"

*"The Church of the Holy Voivodes, [-] preserves a very expressive painting"* (GTTN, p.34);

*"biserica Sfinții Voievozi, [-] conservă o foarte expresivă pictură"* (GTTN, p.34);

*"l'accueil très bonhomme"* (GRC,p. 245); *"un bien beau musée"* (GRC,p.321); *"à prix fort modérés"* (GRC,p.427); *"belle randonnée trop difficile"* (GRC,p.327); *"-- donne alors une qualité de raisin tout à fait exceptionnelle"* (GVMA,p.53);*"Certains jours, le vent souffle très fort."* (GRC,p.37)

*"Dans un immeuble de famille, un hotel d'une vingtaine de chambres, fort bien tenu."*( GRC, p.76)

The **absolute** superlative, the exaggeration, the hyperbole, has a variety of means to achieve. Thus, constructions with the adjective in the positive degree compared to a typical object for the respective characteristic are the equivalents of the absolute superlative. (GALR I, 2010, p.155)

*"On our way to Câmpina, we pass through the village of Cornu, famous for its luxurious villas that have come out on its territory, like the mushrooms after the rain."* (GTVP, p.63)

A large number of adverbs of manner with the termination *-ment* (*grandement, divinement, joliment, carrément, diablement, vachement*, etc.) expresses high intensity. (Chevalier et al 1994, p.198)

*"Parfois, le toponyme utilisé couramment provient carrément d'une erreur."* (GRC, p.41)

*"Petite église de Saint Sebastien, datant de 1450, joliment restaurée par un particulier"*(GRP, p.376);*"Succulent et divinement original quant aux parfums proposés."* (GRC, p.187)

The main variants of the maximum intensity are the suffix *-isim* and the adverbs: *very ...*, *extremely* and the degree of **maximum intensity exceeded** is marked by prefixes (*ultra-*, *extra-*, *arhi-*), or by adverbs: (*excesiv (de)*, *exagerat (de)*, *peste măsură (de)*(excessively,exaggerated, over..) (Irimia 1999, p 91)

"*peisaje extrem de pitorești*" (GTRo,p.28); "un restaurant **excesiv de** zgomotos" (GTRo,p.171).

"*castel supraestimat*" (GTRo,p.192); "*localitate hiperturistică*", "**extrasezon**" (GTRo,p.156).

"*un loc ultracentral*"(GTRo,p.226); "**Extremely** picturesque landscapes" (GTRo,p.28); "An **Extremely** Noisy Restaurant" (GTRo,p.171); "**Overestimated** castle" (GTRo,p.192); "**extraseason**" (GTRo,p.156); "An **ultracentral** place" (GTRo,p.226); "*Après le célébrissime Baiser de Brancusi*" (GRP,p.432); "*une kitchissime boutique*" (GRP,p.413); "*super petit déj.*" (GRC,p.251); "*des pizzas hyper copieuses et goûteuses*"( GRC,p.264); "*de belles chambres ultra-confortables et bien insonorisées.*" (GRP,p.447)

What we can notice, both in Romanian and French, is that some of the elements of composition have acquired, in familiar language, autonomy, becoming invariable adjectives.

"*birou retro*" (retro office) ( GTRo,p.349), "*hartă velo interactivă*"(interactive **velo** map) ( GTRo,p.171)/ "*plusieurs producteurs bio, salons de coiffures afros*" (GVMP,p.364); "*ambiance gastro et cuisine inventive*" (GVMP, p.229); "*service pro*"(GVMP,p.242); "*accueil vraiment sympa*"(GRC,p.318); "*Piscine super sur une vaste terrasse.*"( GRC,p.79); "*Tester la scène électro à Vienne*" ( GRC,p.71); "*un endroit extra*" (GRC,p.291).

Apart from these grammatical processes, *the idea of superlative* is also achieved by other means. Chevalier et al. (1994,p.198) asserts that the high intensity has the greatest number of means of stylistic expression. These include phonetic procedures: dividing into syllables and the repetition of adjectives without a pause (in the familiar language), and the use of the following adverbial phrases: *plus que*, *on ne peut plus*, *tout ce qu' il y a de (plus)*, *des plus*.

"*Orsay est l'un des plus beaux musées du monde*"( GRP, p.21); "*Bref, du beau, du bon, du bon--heur*"( GRP,p.466)

The language of advertising is recognized for its lexical innovations. Adjectives with diminutive suffixes can express the superlative:

"*o cafenea micuță*(= foarte mică) *și primitoare*"(A small (= very small) and welcoming café) (GTRo, p. 167)

According to GALRI (2005,p.207), morphosyntactically, the quality of the object can also be replicated by repeating the adjective in a diminutive form. For example, we propose the following example:

"*blocuri cu apartamente nou-nouțe construite pentru cei strămutați din sate.*" ("New apartment blocks built for the displaced ones from the villages.") (GTRo,p.85)

By analyzing the proposed corpus, we have noticed that, unlike adjectives that occur frequently in comparative (superiority) and superlative (relative and absolute) degrees, the number of adverbs in both forms is rather narrow.

For Agorni (2012, p. 6), exaggerations and hyperboles made with the adjectives are one of the distinguishing features of the touristic discourse. Moreover, in order to influence the attitude of the future traveler, the deliberately oriented language of tourism exploits communication resources such as: superlatives, the complex adjective system and valuable terms, creating the impression of a reality consisting of moments of relaxation.

As stated by Angela Faccin (2015, p. 21), the tourist guide and the language used by tourism specialists have the mission to inform the reader, persuade and attract him, playing the role of a mediator between the destination and the reader, who will turn from the passive reader into a potential tourist, and why not into a real tourist.

#### 4.Conclusions

In the tourist guides, the purpose of the language is to motivate the tourist to travel and, thanks to the intervention of a familiarity note towards the reader, specialists in this field introduce destination as a novelty and as an exchange in relation to everyday life. It turns out that the specialists, through the language they use, aim at informing, persuading and attracting the reader,

playing the role of a mediator between the destination and the reader who, suppose, will become a potential tourist. And, in order to sell its tourist product, the language tends to reorganize and re-produce both the information and also the language of the common language. So the function of language is to present the destination in a most attractive way to give the tourist the idea of entertainment and exclusivity.

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## Regional Unemployment Disparities in Romania

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### Abstract

*The unemployment phenomenon and the factors that contribute to its evolution have always been in the attention of the analysts having the main purpose to study the size, the structure and the dynamic of the unemployment.*

*The aim of this study is to make a segmentation of the Romanian regions by taking into account the unemployment rate, the number of emigrants, the number of immigrants and the population for 42 regions for 2016 year. We decided to include the unemployment rate and the migration rate because these second index has strong implications on the first index.*

**Key words:** unemployment, migration, clustering

**J.E.L. classification:** J16, J21, J61, J62, J64

### 1. Introduction

According to OECD, the unemployment rate is defined as being the ratio of the number of people without work divided by the total number of working people (<https://stats.oecd.org/glossary/detail.asp?ID=3094>).

From a historical point of view, in a family, men have been the ones who have power in terms of income. Compared to men, women had less or no opportunity to work. Over time, this strong gap begun to reduce gradually, moving from male breadwinner model to the dual breadwinner model (Gush *et al*, 2015, p. 705). Therefore, the role of the man in the household has not changed much in comparison with the women's role, it has become more complex, women have to combine household chores with the employee status.

Young men are more likely to enter the labor market when the unemployment rate is high. This can be seen as favoring the "added worker" effect. At the opposite end, middle-aged and elderly men, high levels of unemployment are associated with low participation, which implies that the "discouraged worker" effect predominates (Kakinka *et al*, 2011, p. 7). Even though, the data from this study suggest that in Romania, the unemployment rate is higher for men.

### 2. Data and methods

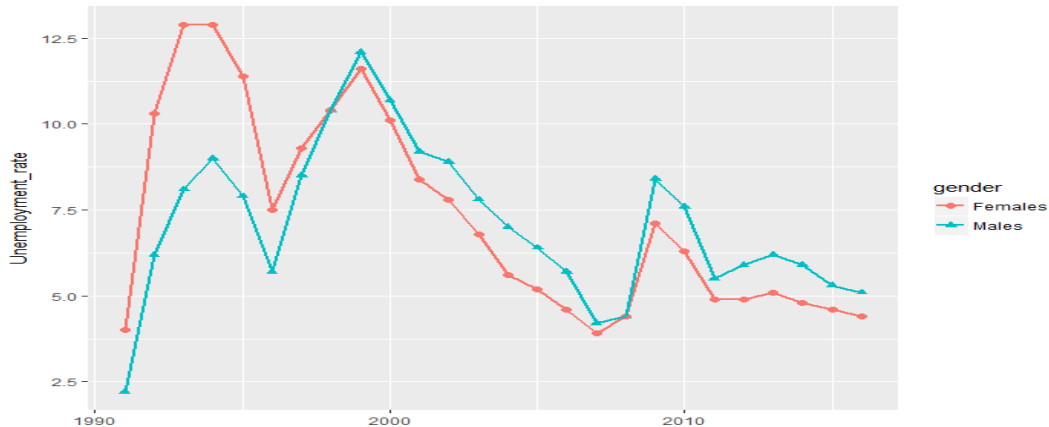
The unemployment rate is gaining more and more attention in the scientific field. In order to see what are the main causes that lead to a high level of unemployment it is important to analyze its evolution of the unemployment rate divided by gender, by region, by age, by attainment level or parallel with another economic phenomena.

In this study, we will focus on analyzing the unemployment rate by gender and by region.

In the next figure, we have the evolution of the unemployment rate by gender. We can see that the evolution of these two rates is quite similar. For the first years included in the analysis, the unemployment rate for males is smaller than the unemployment rate for females. This happened until 1998 when the unemployment rate for females matched the unemployment rate for males. The biggest gap was in 1993 with 4.8 percentage points between the males and females rate (8.1% for males compared to 12.9% for females). After 1998, the unemployment rate for females was smaller than the unemployment rate for males in each year, except 2008 year for which we had equal rates

(4.4%). The biggest gap for this second case was in 2004 with a difference of 1.4 percentage points (5.6% for females compared to 7.0% for males).

Figure 1. Unemployment rate by gender in Romania for 1991 – 2016 period



Source: [www.insse.ro](http://www.insse.ro)

The next analysis is made for males and for females by using the K-Means algorithm. This algorithm is maybe the most used clustering method. It uses simple principles and can be very easily understood even though you do not have statistical knowledge. It is very flexible and it can be adapted to many real-world cases. The statistical tool used for this study is R with k-means library. We collected the data from the National Institute of Statistics site ([www.insse.ro](http://www.insse.ro)).

### 3. Results and discussion

Before applying the K-Means algorithm, we looked at the data. We noticed that the unemployment rate for women has the smallest value compared to the unemployment rate for males and total level, even though the female population is bigger than the male population. This means that females find a job easier than males.

Figure 2. Male summary

Region	unempl_rate_m	immigrants_m	emigrants_m	population_m
Length:42	Min. : 1.000	Min. : 20.00	Min. : 48.0	Min. :101710
Class :character	1st Qu.: 3.650	1st Qu.: 47.25	1st Qu.: 124.2	1st Qu.:154655
Mode :character	Median : 5.850	Median : 67.50	Median : 183.0	Median :199542
	Mean : 6.117	Mean : 383.71	Mean : 238.3	Mean :229757
	3rd Qu.: 7.875	3rd Qu.: 205.00	3rd Qu.: 271.5	3rd Qu.:275292
	Max. :14.800	Max. :3535.00	Max. :1623.0	Max. :856053

Source: [www.insse.ro](http://www.insse.ro)

Figure 2. Female summary

Region	unempl_rate_f	immigrants_f	emigrants_f	population_f
Length:42	Min. :1.100	Min. : 20.00	Min. : 58.0	Min. :101487
Class :character	1st Qu.:3.600	1st Qu.: 47.25	1st Qu.: 152.0	1st Qu.:157874
Mode :character	Median :4.700	Median : 67.50	Median : 224.0	Median :207347
	Mean :5.014	Mean : 279.69	Mean : 304.8	Mean :240726
	3rd Qu.:6.500	3rd Qu.: 195.50	3rd Qu.: 333.2	3rd Qu.:289098
	Max. :8.900	Max. :2378.00	Max. :2011.0	Max. :988259

Source: [www.insse.ro](http://www.insse.ro)

This happens at the aggregate level and not per region. We have regions where the unemployment rate for females is bigger than the unemployment rate for males, as Cluj where the unemployment rate for females is 2.5% while for males is 2.0%, as Constanta with an unemployment rate for females of 4.4% compared to 2.9% for males, as Bucuresti with a rate of 1.7% for females and 1.4% for males.

We have regions where the gap between the two-unemployment rates is quite big. In Vaslui the difference between the unemployment rate for males and for females is 5.9 perceptual points (14.8% the unemployment rate for males and 8.9% the unemployment rate for females). Teleorman is another region with the same pattern, with an unemployment rate for males of 13.2% and 8.2% for females.

In order to establish the correct number of clusters we made some simulations and we decided to use six clusters. A smaller number of clusters would lead to a higher number of regions per cluster, which were not likely to be very useful.

The k-means algorithm assigns each of the n examples to one of the k clusters, where k is a number that has been determined ahead of time. The goal is to minimize the differences within each cluster and maximize the differences between the clusters (Lantz, 2013, p. 289).

Firstly, we perform the clustering for the male database. After running the K-Means algorithm, we obtained 6 clusters of different size. The first cluster contains 7 regions, the second cluster contains 7 regions, the third cluster contains 12 regions and the fourth cluster 5 regions, the fifth cluster contains 10 regions and the last cluster contains 1 region. The smallest cluster has 2.4% of the regions, while the largest cluster has 40% of the regions.

Figure 3. Male clusters

```
> male_clusters$size
[1] 7 7 12 5 10 1
```

Source: [www.insse.ro](http://www.insse.ro)

Although the large gap between the smallest cluster and the largest cluster is concerning, we cannot draw a conclusion without examining the data more carefully. We will find more details after looking at the cluster's homogeneity.

For a more in-depth look, we will examine the centroids (coordinates of the clusters).

Figure 4. Male centroids

	unempl_rate_m	immigrants_m	emigrants_m	population_m
1	4.700000	708.4286	367.4286	340700.1
2	6.042857	285.5714	264.0000	272271.4
3	6.450000	48.5000	129.6667	155355.4
4	7.520000	27.8000	84.8000	113083.0
5	6.530000	544.0000	198.4000	207327.7
6	1.400000	2997.0000	1623.0000	856053.0

Source: [www.insse.ro](http://www.insse.ro)

The rows of the output refer to the number of clusters and the numbers across each row indicate the mean of each cluster for each variable of interest. For the unemployment rate, we can see that the last cluster has the smallest value. This last cluster has also the highest number of population even though it contains only one region. The number of emigrants and immigrants is the highest compared to the rest of the clusters. This leads us to conclude that the region included in this cluster is the most developed region compared to rest of them. The region included in this cluster is Bucuresti, the capital of Romania, which is by far the most developed area in Romania.

At the opposite side, we have the fourth cluster with a mean for the unemployment rate equal to 7.52%. The regions included in this cluster have the smallest mean value for the number of emigrants, immigrants and for population. If we look at the difference between the mean number of emigrants and the mean number of immigrants (570000), we can say that this cluster maybe contains undeveloped regions. The regions included in this cluster are Salaj, Covasna, Tulcea, Ialomita and Mehedinti.

We also have a cluster (cluster number 3) for which we have a big unemployment rate (6.45%), a small number of immigrants and a big number of emigrants (compared to the number of immigrants). This means that the regions included in this cluster contains undeveloped regions as well. The regions included in this cluster are Bistrita-Nasaud, Satu Mare, Alba, Harghita, Braila, Vrancea, Calarasi, Giurgiu, Teleorman, Gorj, Valcea si Caras-Severin.



Clusters 6 and 1 contain regions with a small mean for unemployment rate of 1.4% and 4.7%. The different thing for these clusters is the number of immigrants, which is very big (almost double) compared to the number of emigrants. This lead us to conclude that the regions included in these two clusters are very popular for people who are looking for a better job, for better living conditions. The regions included in the cluster 1 are Cluj, Iasi, Suceava, Constanta, Prahova, Dolj and Timis.

The rest of the clusters (5 and 2) contains the following regions. Cluster 5 contains Maramures, Sibiu, Botosani, Neamt, Vaslui, Buzau, Ilfov, Olt, Arad and Hunedoara regions, while cluster 2 contains Bihor, Brasov, Mures, Bacau, Galati, Arges and Dambovita regions.

In the next part, we will perform the clustering for females. As per male database, for females we obtained 6 clusters of different size as well.

The first female cluster contains 8 regions, the second cluster contains 9 regions, the third cluster contains 6 regions, the fourth cluster contains 1 region, the fifth contains 10 regions and the last cluster contains 8 regions. Excluding the cluster number 4, the rest of the clusters have almost the same number of regions – between 14% and 24%. As per male database, we have here as well one cluster with only one region. The next step in our study is the centroids analysis.

Figure 5. Female clusters

```
> female_clusters$size
[1] 8 6 1 9 8 10
```

Source: [www.insse.ro](http://www.insse.ro)

The third cluster, which contains only one region, is the most developed one, as per male clustering. It has a very small unemployment rate (1.7%), the biggest cluster population and the biggest flow in terms of immigrants and emigrants. The immigrants are coming mostly from the rest of the Romania regions, while the emigrants leave Bucuresti to migrate outside the country, to more developed countries. This cluster and the last cluster are the only ones that have the number of immigrants bigger than the number of emigrants. The difference between these two clusters is that the sixth cluster has a big unemployment rate (5.14%). The regions included in the sixth cluster are Maramures, Sibiu, Botosani, Neamt, Vaslui, Buzau, Ilfov, Olt, Arad and Hunedoara.

Figure 6. Female centroids

	unempl_rate_f	immigrants_f	emigrants_f	population_f
1	4.95	34.75000	136.7500	125541.1
2	4.10	498.66667	503.0000	362701.8
3	1.70	2116.00000	2011.0000	988259.0
4	5.70	51.33333	159.5556	166859.1
5	5.25	266.75000	329.1250	287043.5
6	5.14	376.50000	260.8000	214362.4

Source: [www.insse.ro](http://www.insse.ro)

At the opposite side, we have the fourth cluster, which has the highest unemployment rate (5.7%), a small population and immigrants and a big number of emigrants. The regions included in this cluster are Satu Mare, Alba, Harghita, Braila, Vrancea, Calarasi, Teleorman, Gorj and Valcea. Another cluster with big gap between the number of immigrants and the number of emigrants is the first cluster. The unemployment rate for this cluster is 4.95%, the population is the smallest compared to the rest of the clusters and the number of emigrants is four times higher than the number of immigrants. The regions included in this cluster are Bistrita-Nasaud, Salaj, Covasna, Tulcea, Giurgiu, Ialomita, Mehedinti and Caras-Severin.

The fifth cluster has a big unemployment rate, while the difference between emigrants and immigrants is not as big as the above-mentioned clusters. The regions included in this cluster are Bihor, Brasov, Mures, Bacau, Suceava, Galati, Arges and Dambovita. The second cluster has almost the same path as the fifth cluster. The regions included in the second cluster are Cluj, Iasi, Constanta, Prahova, Dolj and Timis.

#### 4. Conclusions

After making the clustering for females and for males, we obtained 6 clusters with different number of regions. Bucuresti is by far the most developed region, being the only region that makes up a cluster. This cluster is the only cluster that has the unemployment rate for males smaller than the unemployment rate for females. We also have clusters where the difference is slightly bigger. The cluster 5 for females has the unemployment rate 5.14% while the cluster 3 for males has the unemployment rate 6.53%. Here we have same structure in both clusters.

The rest of the clusters do not have the same structure in terms of regions included. The cluster 3 for females and 5 for males include almost the same regions except Suceava region, which is included in addition in the male cluster. The unemployment rate for males (4.7%) is higher than the unemployment rate for females (4.1%).

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# Unemployment Evolution in Romania

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## Abstract

*The labor market occupies the main stage in the specialty literature research. One of the most important phenomenon to understand is the unemployment, having implication in many areas as sociology, demography, economics and others.*

*The purpose of this study is to find a relationship between the unemployment rate and other economic indices: number of emigrants, number of immigrants, import, life expectancy, GDP and available population for Romania for the 1991 – 2016 period.*

**Key words:** unemployment, multiple regression, regression with interaction

**J.E.L. classification:** J11, J60, J61

## 1. Introduction

Strong and widely accepted evidence shows that the natural rate of unemployment varies over time with substantial amplitude. The frictions in the labor market that account for positive normal levels of unemployment are not simple and mechanical (Hall, 2003).

Within a dynamic labor market, overlapping individuals and jobs is a complex process, precisely for this reason there will always be jobseekers as well as available jobs waiting for individuals to be hired. Taking into account economic efficiency, we can say that there is an optimal level of unemployment and that the unemployment rate will always be positive.

Unemployment occurs when a worker departs from a job and spends time finding a new job. In addition, unemployment arises when a person looks for a new job after a period out of the labor force (Hall, 2005, p. 3).

In order to assess the evolution of this economic phenomenon, it is important to take into account all the repercussions and effects that unemployment may have (both in the short and long term). A high level of unemployment can be the result of unemployment and unemployment flows and / or a high level of unemployment (Blanchard, 2005, p. 6).

## 2. Data and methods

The data included in this analysis contains indices as unemployment rate, the number of immigrants, the number of emigrants, the available population, the GDP and life expectancy. We collected the data from the National Institute of Statistics site for 1991 - 2016 period and the statistical tool used is R ([www.insse.ro](http://www.insse.ro)).

Before performing the statistical analysis, we included three more indices in our database. They have actually the unemployment rate value as: for the current year we will have the unemployment rate for the previous year, for two years ago and for three years ago – we called these indices “unemployment rate t-1”, “unemployment rate t-2” and “unemployment rate t-3”. Doing this we will bring more accuracy to do prevision of the unemployment rate. We had to remove the first three years in order to have complete information and the years included in the analysis are from 1998 until 2015 (for 2016 we did not have data for GDP).

In the below picture we have the correlation matrix. If we look at the unemployment rate we can see that it is highly correlated with the import (-0.82) and with GDP (0.78). We also have medium correlation between the unemployment rate and the available population (0.65), life expectancy (-0.67) and GDP (0.45). We also have low correlation between unemployment rate and the number of emigrants (0.17).

Figure 1. Correlation matrix

	unempl_rate	emigrants	immigrants	import	available_population	GDP	life_expectancy	unempl_rate_t1	unempl_rate_t2	unempl_rate_t3
unempl_rate	1.0000000	0.1795983	-0.3067518	-0.8287797	0.6459943	-0.7808544	-0.6716665	0.7873320	0.5377599	0.4347001
emigrants	0.1795983	1.0000000	0.0407417	-0.2758063	0.6226018	-0.2710394	-0.3160269	0.2418358	0.3094522	0.1836177
immigrants	-0.3067518	0.0407417	1.0000000	0.6385186	-0.3370474	0.6541519	0.7089370	-0.3781827	-0.4326616	-0.4665037
import	-0.8287797	-0.2758063	0.6385186	1.0000000	-0.7384423	0.9914482	0.9573293	-0.8034333	-0.7721717	-0.7490915
available_population	0.6459943	0.6226018	-0.3370474	-0.7384423	1.0000000	-0.7018409	-0.7662491	0.6117616	0.5473647	0.4355353
GDP	-0.7808544	-0.2710394	0.6541519	0.9914482	-0.7018409	1.0000000	0.9652603	-0.8081659	-0.8194794	-0.7889695
life_expectancy	-0.6716665	-0.3160269	0.7089370	0.9573293	-0.7662491	0.9652603	1.0000000	-0.7020221	-0.7582627	-0.7673134
unempl_rate_t1	0.7873320	0.2418358	-0.3781827	-0.8034333	0.6117616	-0.8081659	-0.7020221	1.0000000	0.7960144	0.4999910
unempl_rate_t2	0.5377599	0.3094522	-0.4326616	-0.7721717	0.5473647	-0.8194794	-0.7582627	0.7960144	1.0000000	0.7697083
unempl_rate_t3	0.4347001	0.1836177	-0.4665037	-0.7490915	0.4355353	-0.7889695	-0.7673134	0.4999910	0.7697083	1.0000000

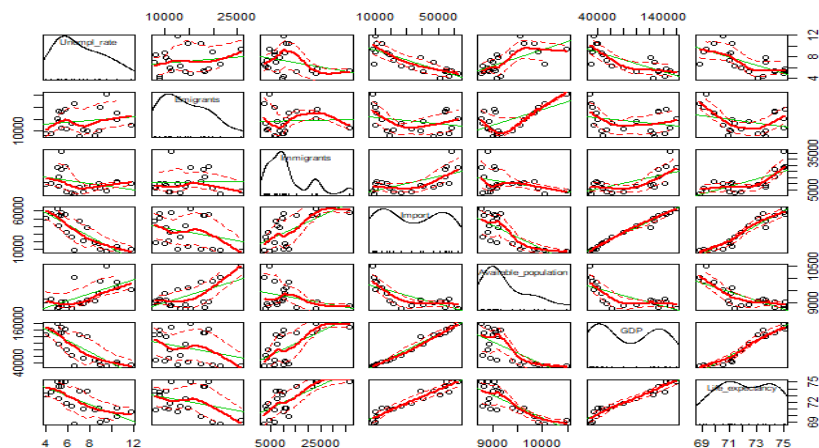
Source: [www.insse.ro](http://www.insse.ro)

The next analysis made is for males and for females by using the K-Means algorithm. This algorithm is maybe the most used clustering method. It uses simple principles and can be very easily understood even though you do not have statistical knowledge. It is very flexible and it can be adapted to many real-world cases. The statistical tool used for this study is R with k-means library. We collected the data from the National Institute of Statistics site. [4]

If we look at the correlation between the other indices, we have high correlation between the number of immigrants and life expectancy (0.70), between import and life expectancy (0.95). The number of immigrants is highly correlated with GDP (0.86) and with the import (0.85). The import has the biggest correlation value with the GDP (0.99). We also have low correlation between the indices included in the analysis. The number of emigrants is very low correlated with the number of immigrants (0.04), the number of emigrants import is low correlated with the import (-0.27) and with GDP (-0.27).

Next, we made a scatterplot between each index and the rest of them, in order to see the graphic representation of the correlation. We can see that we have both positive and negative correlations between the indices included in the analysis. The very strong correlation between import and GDP and import is represented in the below figure showing us the linear distribution.

Figure 2. Scatterplot matrix

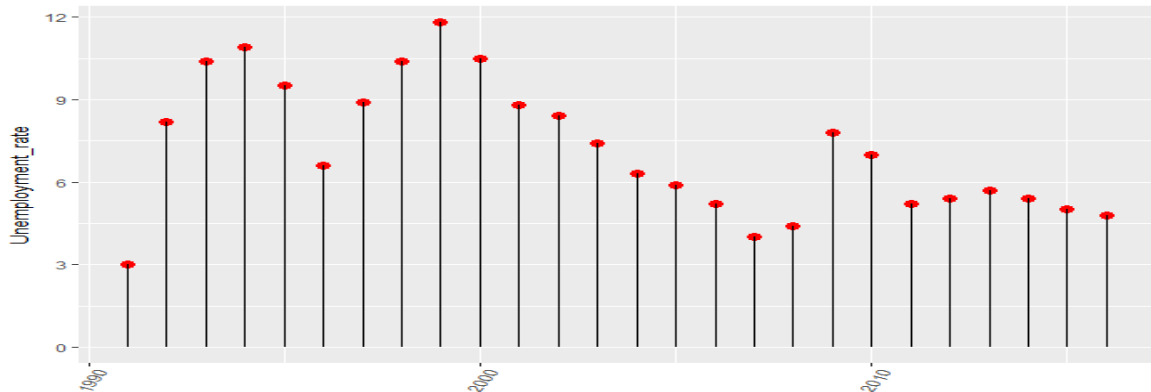


Source: [www.insse.ro](http://www.insse.ro)

### 3. Results and discussion

Next, we analyzed the evolution of the unemployment rate starting with 1991 until 2016. According with the below figure, we can observe that we have years for which we have the unemployment rate above 10% (1993, 1994, 1998, 1999 and 2000) with the highest rate in 1999 – 11.8%. At the opposite side we have years with a level of unemployment rate below 5% (1991, 2007, 2008, 2015 and 2016) with the lowest level in 1991 – 3%. Starting with 2011 we can see that the unemployment rate is quite stable with values vary from 5.7% in 2013 to 4.8% in 2016.

Figure 3. Unemployment rate in Romania for 1991 – 2016 years



Source: [www.insse.ro](http://www.insse.ro)

After doing some tests, we reduced the number of indices included in the multiple regression. Therefore, our database for the multiple regression contains only the following indices: unemployment rate (dependent variable), import (independent variable), immigrants (independent variable). In the next part, we conducted a multiple regression with interaction (between the independent variables) in R with the LM model.

The equation of our model is:

$$\text{unempl\_rate} = \beta_0 + \beta_1 \cdot \text{import} + \beta_2 \cdot \text{immigrants} + \beta_3 \cdot \text{import} \cdot \text{immigrants}$$

Below you can find the output of the regression model.

Figure 4. Regression output

```
Residuals:
    Min       1Q   Median       3Q      Max
-1.2635 -0.3456 -0.1685  0.3490  1.5103

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  7.296e+00  8.313e-01  8.776 1.01e-07 ***
import      -5.744e-05  2.096e-05  -2.740 0.013958 *
immigrants   4.403e-04  9.940e-05  4.429 0.000367 ***
import:immigrants -6.715e-09  1.856e-09  -3.619 0.002120 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

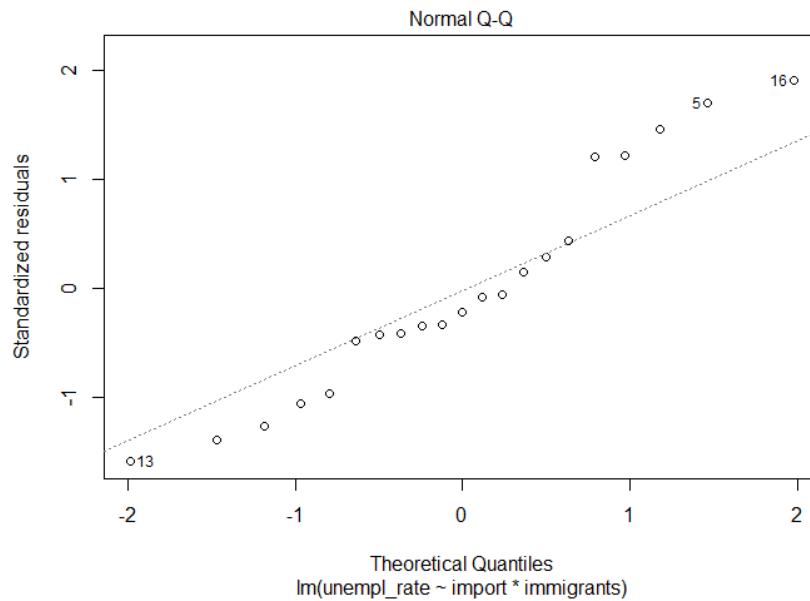
Residual standard error: 0.8615 on 17 degrees of freedom
Multiple R-squared:  0.8703,    Adjusted R-squared:  0.8474
F-statistic: 38.03 on 3 and 17 DF,  p-value: 9.294e-08
```

Source: [www.insse.ro](http://www.insse.ro)

Since our p-values are smaller than 0.05, we can affirm that our independent variables are statistically significant for this analysis. The overall p-value has a value smaller than the critical value ( $9.294e-08 < 0.05$ ) as well. The adjusted R-squared tells us the independent variables explain around 85% of the dependent variable variation.

In order to validate the model, we have to perform some more tests. The Q-Q plot shows that our data residuals is normally distributed. The points are around the line showing the normal distribution.

Figure 5. Normal Q-Q plot

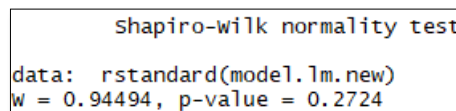


Source: [www.insse.ro](http://www.insse.ro)

Since the correlation between our independent variables is medium (0.63), we do not have the multicollinearity assumption met.

Another test made in order to test the normality is the Shapiro Test. According to this test, we have the null hypothesis, which tells us that the data is normally distributed. This test returns two values – one of them is W (0.9697) which tells us that the data is almost perfectly fitted (W = 1 represent the “perfect fit”), the second value is the p-value (0.792). Since the p-value is higher than the critical value, we cannot reject the null hypothesis, which tells us that the data is normally distributed.

Figure 6. Shapiro – Wilk normality test



Source: [www.insse.ro](http://www.insse.ro)

Below you can find the model equation:

$$\text{unempl\_rate} = (7.296e+00) + (-5.744e-05*\text{import}) + (4.403e-04*\text{immigrants}) + (-6.715e-09*\text{import}*\text{immigrants})$$

#### 4. Conclusions

After performing the multiple regression with interaction, we obtained the coefficients of the independent variables. For the "import" variable, we obtained the coefficient =  $-5.744e-05$ , at one unit of "import" variable increasing the "unemployment rate" is decreasing with  $-5.744e-05$  units.

For the "immigrants" variable we obtained the coefficient =  $4.403e-04$ , at one unit of "immigrants" variable increasing, the "unemployment rate" is increasing with  $4.403e-04$  units. For the interaction of the independent variables we obtained a coefficient =  $-6.715e-09$ , at one unit of "import\*immigrants" variables increasing, the "unemployment rate" is decreasing with  $-6.715e-09$  units.

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## Trends in the Romanian Higher Education System

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### Abstract

*The Romanian Higher Education system is currently facing a mass students drop out that is specific for both Public and Private sectors, leading to a disappearance of Public Universities, while the State ones have a relatively constant number. The system recognizes the fact that some of the State-owned Universities, even though face the same challenge, manage to increase their numbers of subscriptions. The article analyses the performance of four of the leading universities in Romania and tries to diagnose their management issues that lead to a high difference of their evolution and performance. By using the method of grounded theory, the research uses resources as universities and ministries reports, as well as website information and national and international statistics. Results show that a better/lack of adaptation for the studies programs to the requirements of the labor market is the key for the current evolution and involution of the four subjects.*

**Key words:** university, global actor, management, crisis

**J.E.L. classification:** I23

### 1. Introduction

Along time, university was subject to a permanent transformation, in order to better serve for the needs of the society, going from traditional to virtual. The Higher Education system transformations can only be described by two words: evolution and revolution (Duderstadt, 1997, p. 3), with a special view over the newly-introduced concepts of virtual universities that risk the loss of the sense of the academic communities due to an increase in specializations and an imbalance among the research vs. teaching.

After a long process of surviving in an unstable political and economic environment, the romanian universities face a major crisis, based on a cumulus of factors that tend to be specific for each of them.

As part of the top Romanian educational system, the Universitaria Consortium (as Bucharest University, Babes-Boylai University from Cluj-Napoca, West University from Timisoara and Alexandru Ioan Cuza University from Iasi) seeks for achieving performance and innovation, focusing on research and development.

### 2. Literature review

The idea of University was at first created by Sheldon Rothblatt (1997. P. 17), a concept very different from previous views – an institution whose activity varies according to the social and political context, based on a need and not on an philosophical idea, despite the fact that in Europe, the university institutional background is the second oldest after the church.

The contemporary idea of university system implies a variety of integrated dimensions like knowledge, adoption of a cultural function for the society, completing the traditional common university functions, an environment based on cultural values with a vital role for the community.



In a contemporary university environment, we consider that Victor's Balridge (1971, p. 6) arguments still stand: he argued that sociologists and administration theorists did not succeed in their work for constructing appropriate intellectual models when about academic performance analysis. The author presents three models – the university of governance, the bureaucratic and the collegial and finally a new political model, as ways of analyze and understand the academic dynamic within universities.

As a paradigm, the university environment was for a long time a neglected area of study for researchers and theorists, their interests being turned out mostly over businesses and government agencies performances and achievements, developing administrative models and leaving behind one of the most important subject of all: universities administration, issues and concerns.

Reconstructing mentally processes and behaviors specific for universities on a miniature scale would represent as Thomas Kuhn (2012, p. x) would claim, a reconstruction of reality on a miniature scale. On the XXIst century environment, the way selected by scientists when dedicating a research for the universities environment is critical to the research, because it will greatly influence aspects like type of issues selected for study, the theoretical perspective adopted and also the evidence accepted as being relevant for the case.

Except for the bureaucratic, collegial and political models that were previously mentioned, in the relevant literature there are other views: (1) the ones that consider an university as a singular institution Humboldt, Newman, Y. Gasset (Esteban et. al., 2016) and (2) views over the universities as being an part of a dedicated system: educational, social or other, where an university is an seen as a singular isolated actor.

For this paperwork, we will consider the contemporary idea of university as follows: (1) at first, all universities (despite different categories, ranks, cultures they are part of, curricula etc) are based on a singular ideal, a base for their individual missions, models, vision, functions for the society. Secondly (2) the paperwork will rally the opinion of Habermas (2009) who considers that it is impossible to include all the universities within a singular global ideal to whol all the universities should relate to. For Europe this idea is not entirely valid, since due to the geoeconomic and geopolitical constructions, the last decades worked in favor of a general university model followed by most of the universities. These general european characteristics are a result of universities collaboration through numerous values and experience share, cooperation and collaboration for achieving excellence; here is why we will name a few of the general values that correspond to the majority of the european universities, including romanian: recognizing in a reflexive method the need for knowledge and all its implications; adding to the three basic functions of the universities (teaching, research and services) the new idea of adopting, performing and promoting of a new cultural function of universities and not at last, assuming by universities of a distinct leading role that accompanies the traditions and perpetual values.

For the public institutions, public funding is generally related with the number of the registered students. There are also other type of arrangements taken into account, like the type or level of programs, but the numbers stay as an essential feature. As a general rule, the large universities require for a considerable part of founding, investing in a variety of all levels programs that result in achieving performance. On the other side, the smaller universities lean towards being teaching institutions, their programs behind destined mostly for the undergraduate (De Groof et. al., 2004, p. 18).

Although without any chance of proving and quoting this saying, we consider as being very relevant for the purpose of this paperwork the idea of Einstein that claims that there is no problem that can be solved by using the exact same level of consciousness that created it (Granados, 2015). Not only in Europe the higher education system is currently facing an increasing number of challenges specific for national, international and also institutional levels. There are two main challenges for the universities acting internationally: first refers to the role of supranational organizations and their influence in regard with general rules and norms governing legislative aspects that may encourage improvements and trends relevant for the management of public institutions. The second aspect regards the encouragement of international collaboration and cooperation among universities, by sharing knowledge and educational innovation. The European Commission (2014, p. 23) in one of its strategies in regard with the european (EU) university environment tries to promote new technologies, new pedagogies, stressing over the need for the

current models of higher education in EU to promote on-line delivered programs, but also encouraging institutions to keep and improve the traditional students attending traditional courses.

Here is a selection of the most important general challenges for the universities and other higher education institutions: (1) the need for improving and adapting more efficient models of resources management (as human or economic) and also a more transparent internal democracy system; (2) encouraging changes for the knowledge creation – as promoting interdisciplinary and transdisciplinary approaches both on educational and also institutional management; (3) inserting/adopting/accepting new teaching and learning methods with the aim of integrating critical/creative thinking; (4) the forth aspect regards information and communication technologies and also (5) becoming more aware about social responsibility actions and knowledge transfer-mechanisms.

The stakeholders needs in regard with the Romanian Universities do not only cover general values like tradition and responsible attitude, but their values should be oriented towards quality, competency, fairness, collegiality, cooperation and communication (Nica, Nestian, Leon, 2014, p.1) considered as essential values for the success of the institutional practices. This perspective admits the fact that universities have transformed into life long learning organizations, where knowledge management is the main tool for running this environment and where a more entrepreneurial leadership style (Maric, 2013, p. 217) for the management teams is recommended.

### **3. Methodological Approach**

The purpose of this study is to determine which of the Consortia members have better chances for achieving performance, measured through two key-factors: the number of students and the number of specializations (majors) for each of the four cases.

Starting with the idea that each University performance is analyzed from a stakeholder perspective, the research has the next hypotheses: (1) the number of universities in Romania is continuously decreasing; (2) while the number of public universities is constant, the private universities are disappearing; (3) the number of students in Romania is subject to an annual decrease; (4) not all the universities are affected by this students crisis.

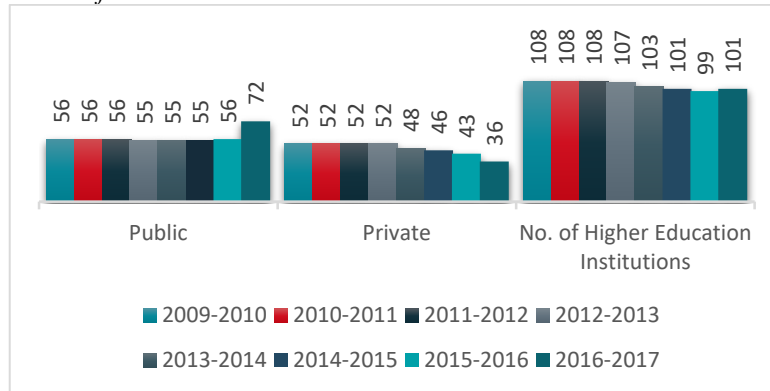
As a qualitative study, the research method used was the grounded theory, completed with a case study concerning four of the top romanian universities: Bucharest University, Babes-Boylai University from Cluj-Napoca, West University from Timisoara and Alexandru Ioan Cuza University from Iasi.

### **4. The University Environment of Romania**

The romanian tertiary educational system is based on the functioning of Universities (Ministerul Educatiei, 2017) divided as following: 55 State Universities, 36 Private Universities, 7 Military Universities and 10 other institutions that are temporary accredited to functioning (foundations, cultural institutes etc.). covering 38 counties and Bucharest, the public educational system can be found across 48 cities, while the private one can be found in only 22 cities and one rural location (M. E. N., 2016, p. 4).

For the period 2010-2017 Romania was characterized by a descendent rate for the Higher Education, caused at first by a decrease in the number of universities and private faculties, in parallel with keeping constant parameters for the State Higher Education. The academic year 2015-2016 marked the most important decrease of private faculties number (with 22 less than the previous year).

Graph no. 1. Number of Universities in Romanian Public and Private Universities



Source: own calculations based on Ministerul Educatiei Nationale din Romania

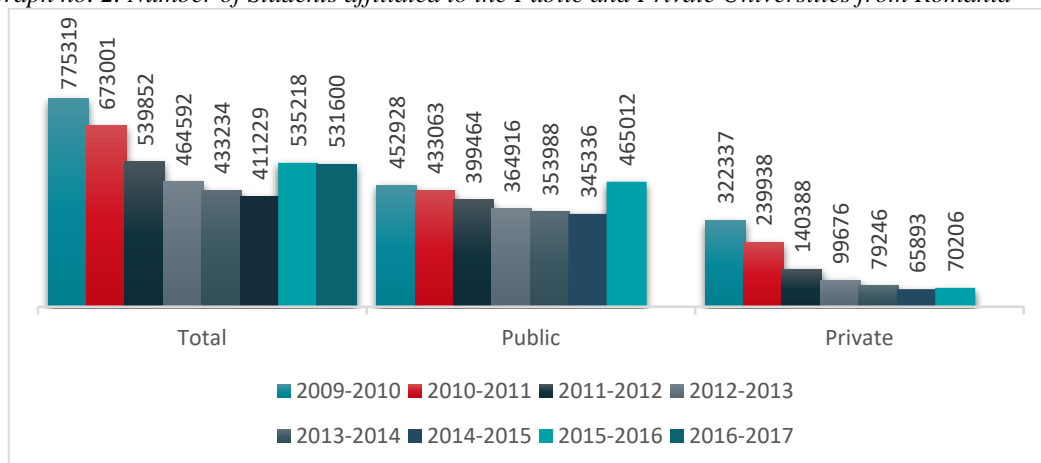
It is important to mention that for the period 2016-2017 we counted as Public Higher Education Institutions and the provisory accredited Institutions and Foundations that collaborate and develop activities under State Universities tutoring.

It is important to define the students number increase/decrease across the considered time period, in order to see if these numbers will follow the same pattern as the one of the universities.

Data shows that starting with the 2009-2010 academic year, both public and private Universities suffered great losses concerning students numbers. The crisis year was 2014-2015 when in Romania was registered the smallest number of students within the last 17 years. Both public and private environments were affected but, while the number of State Universities was kept constant, the private university sector suffered an implosion, reaching in the period 2015-2016 to less than ¼ of the number of students from 2009-2010.

The phenomena is still a subject for research, the causes that determined romanian pupils not to enroll for tertiary educational environment are not entirely clear. The literature connects at first the negative effect of the lack of the uniformity of the high-school exams and subjects of study, that create insecurity among students, determining them not to desire a Bachelor Degree.

Graph no. 2. Number of Students affiliated to the Public and Private Universities from Romania



Source: own calculations based on Ministerul Educatiei Nationale din Romania

Another cause may be the borders opening after Romania's EU integration: it is clear that a great loss in the higher education sphere belongs to the private Universities, whose previous students were searching for a certain education quality and that showed preference for leaving the country and work instead of staying in and study. Among other potential causes we count the lack of training for the students that receive a Bachelor's Degree and only have theoretical and not a practical background and also the decision of the Romanian Ministry of Education of eliminating all the Technical schools chosen by many for training after graduating high-school. We consider

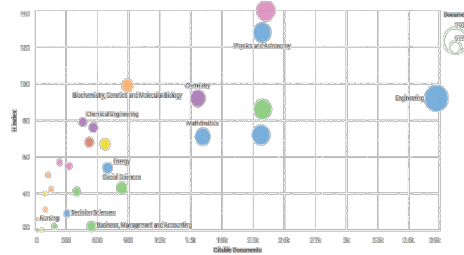
that this factor was standing first of all at the base of the unrealistic inflow of students before 2010, since the targeted segment of population was always the same: low-average graded high-school students that did not have the chance of continuing their education after high-school than in a public-private university and to whom once given the chance of working/achieving experience abroad, chose this pathway, to the detriment of universities.

It is important to mention here that Romania is subject to a negative flow of nationals studying abroad, compared to the number of foreigners that choose Romania as a Higher Education destination.

### 5. The Romanian Higher Education Actors: Case Study

Although the romanian educational system showed a constant progress over the last decades, by increasing the institutional performance and the students results, it was shown that in Romania there is a limited number of students to whom it is given the chance of achieving educational performance (Kitchen et. al., 2017, p. 16). There results depend on the fields of study and educational performance, where Romania shows a preference for Medicine, Phisics and Astronomy, Engineering, Energy or Social Sciences, as the map for the research on national level shows:

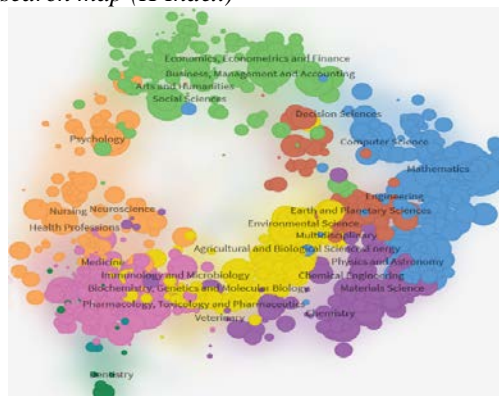
Graph no. 3. Research Areas in Romania (2015-2016)



Source: Scimago Journal&Country Rank

Comparing Romania's research map with the one of East Europe, it is easy to see that Romania occupies a middle position when about H Index.

Graph no. 4. Romania's research map (H Index)



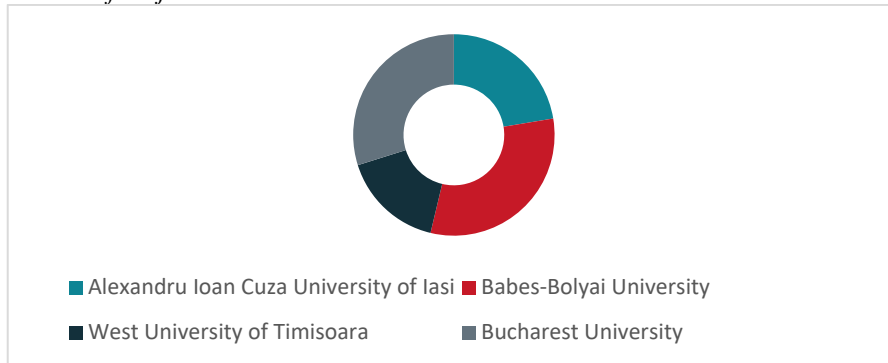
Source: Scimago Journal&Country Rank

Romanian Universities generally have middle position when about international rankings – Academic Ranking of World Universities, Center of World Universities Rankings, Leiden Ranking, Performance Ranking of Scientific Papers of World Universities, Scimago Institutions Ranking, Times Higher-Education World University Rankings, University Ranking by Academic Performance and continuing. The data shows that Romania is internationally visible only through 15 Universities, among which only 5 comply with the requirements of being world-class.

Amongst the most important universities in Romania are West University of Timisoara, Babes-Bolyai University, University of Bucharest and also Alexandru Ioan Cuza University of Iasi. As four of the most important educational actors in Romania, the four Universities followed the national pattern in regard with the decrease of students numbers starting with 2010.

But it is important to also take into consideration that when comparing the numbers for the four entities, one of the most important factors is the number of Faculties for each of it; as the Graph no. 5 explains, Babes Boylai University comprises its activities trough a number of 21 Faculties, and also the higher number of students among the 4 subjects of this study, followed by Bucharest University with 20 Faculties, Alexandru Ioan Cuza from Iasi with 15 Faculties, while West University of Timisoara only runs 11 Faculties and also the smallest no. of students/year.

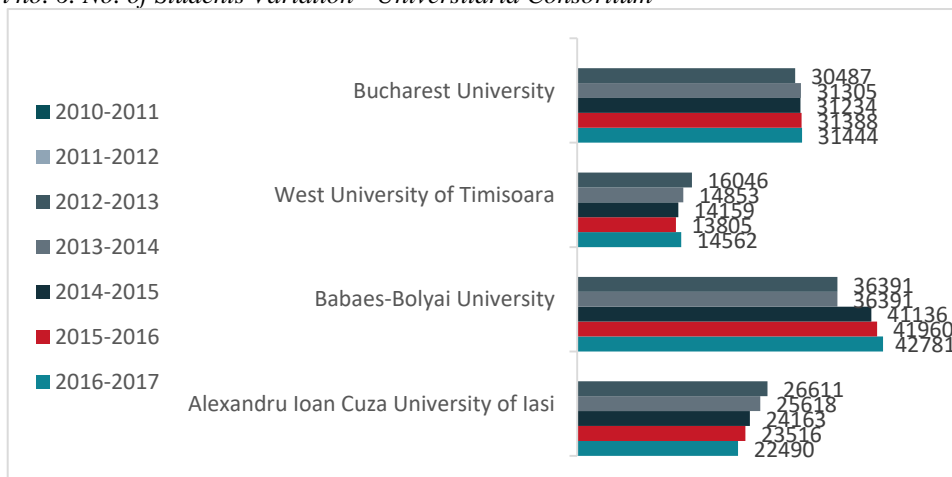
Graph no. 5. No. of Majors - Universitaria Consortium



Source: own calculations based on Universities websites

The subject of this research is to find reasons and solutions for the decrease of the number of students for some of the subjects, and also to analyze the recovery and achieving performance solutions for the others.

Graph no. 6. No. of Students Variation - Universitaria Consortium



Source: adapted after CNFIS 2013

As it can be easily seen, Alexandru Ioan Cuza University of Iasi is the only University from the 4 studied that shows a descendent pattern starting with 2010, with a no. of students decrease of over 4 Thousand. On the same side of the line, but with a smaller loss is West University of Timisoara that continued to loose students in the period 2010-2015, but that gained almost 1000 students in the period 2016-2017, compared with the previous academic year. A positive trend is also specific for the Bucharest University that starting with 2010 did not follow the national pattern of losing students, but gained slowly. The success case of this research is Babes-Boylai University who's showed a positive pattern in regard with the no. of students for the entire period 2010-2016; an important increase in the students numbers was registered in the academic year 2014-2015, with a surplus of almost 5 thousand students compared with the precedent period of time.

Comparing performance across the four selected universities, from a simple websites survey it can be easily seen that organizational management system for all the cases does not coincide: while the traditional is still prevailing in Universities like Alexandru Ioan Cuza or Bucharest University, the West of the Country presents more innovative strategies, based on needs of the societies; among all, Babes-Boylai University is the only one which proposes for 2017 four new Bachelor Programs.

The main identified problems for the institutional management of these universities include a series of factors are common to the entire national system and that tends to only be solved by some of the management teams; the research showed that at the base of the decrease of the numbers of students in Romania is the decreased natality that will reflect heavily in the following years across the higher-education environment, determining an increase in the quality of teaching and academic performance across universities, but also an increase competition for performing higher education services. The discussion brings into light the fact that some universities continue to increase their number of students, while others suffer losses, within the same background; the explanation follows the a simple pattern: some institutions like Babes Boylai for example have a specific target, following market needs and insertion on the labor market for the next graduates, while other institutions inserted new study areas but imported them from the international higher education environment, without domesticating it.

The second issue identified as being the key for the success of some institutions and the failure for others is the number of sport for students for each specialization/year that varies according to the society needs; none of the universities studied did non manage to perform market needs studies and implement this strategy of variable spots for students for a no. of years, until the market needs are fulfilled, and so, avoiding a surplus of Bachelor Degrees with no insertion to the labor market.

A third key-issue identified as problematic for all the universities is the organizational management that is lacking flexibility and continuity for its actions; the research showed that one of the strategic feature for the organizational functions is creativity and the lack of vision of the entire romanian system, where institutions are not singular actors, but partners that aim for providing the same baseline for the services performed, and tending towards performance.

Another negative driver for all the four universities is represented by the plagiarism public scandals, bribery, different types of harassment and false degrees that are not helping and leading towards performance and that included important names from the organizational systems of the four universities.

Number of specializations offered by each University is a key indicator for their performance; by analysing the data, it was revealed the fact that Babes-Boylai University offers a number of 143 Majors for its 21 Faculties, Alexandu Ioan Cuza University shows an offer of 247 Majors, West University - 75 while University of Bucharest has approx. 100 Majors. Along with the number of students, this is a key indicator for the academic performance of the four universities studied; the data shows the fact that the universities that have the best performances (measured in number of students/year) dropped a large number of specializations and have new academic offers that try to adapt students to the current romanian working environment's needs.

## **6. Recommendations**

The research draws attention over a number of recommendations for all the four Universities studied.

First of all, all the actors need to analyze the current situation considering the values offered to the stakeholders.

A second argument regards the need for the four Universities to establish strategic and operational objectives that will lead to qualitative deliverables: improving universities public image, identifying categories of needs for the stakeholders and developing collaboration strategies with them and also training the employees in regard with the new clients – students of the Universities.

For a better and a faster adaptation process, the four actors need to create structures that will coordinate and monitor the students evolution within the labor market; creating structures that will correlate the students needs and the society needs on long term.

Creating and implementing strategies and operational programs that follow the students and stakeholders needs.

The most important recommendation for the universities is to find motivation for implementing strategies in regard with the labor market – creating partnerships with companies and other representatives, both teacher and students trainings and working experience with partners from the labor market that work outside the borders, and also sensitization of the Education Ministry to better finance Universities activities.

## 7. Conclusions

The romanian educational system is currently facing a crisis that mainly reflect the institutional management system and values. From a strategic point of view, all the universities subscribe to the european strategies, with an effort of achieving performance and fulfilling targets. The four Universities taken into consideration for this study don not entirely follow the national pattern, only one of it suffering a large decrease in number of students enrolled each year. When considering data in regard with the educational offer, the main trait of the four subjects is that they are preparing students only with a theoretical background, not sufficient for the insertion in the current romanian working environment.

It is important to stress out that the universities from the East Romania suffer from a great disadvantage, namely the lack of investments and a limited working environment for the graduates. Despite that, their management system is lacking consistency, and as a basic recommendation, we propose them to renounce on their large numbers of Majors, and find strategies for training students and implementing practical programs inside the labor market for them, in order to gain a competitive advantage.

The west universities are the winners seen as students enrolled for their programs o studies; with a wider managerial view and a relative young team, achieving performance means for these universities to study the labor market necessities and propose for the next generations of students an educational background that fits to their needs.

As a final remark we maintain the idea that the romanian educational system, even though is a part of european strategies and each of its actors follows the objectives of the Europe 2020 Strategy, is on a long distance from achieving international performance and delivering qualitative results. The reasons are diverse, and from a geo-economic point of view, some universities are lacking advantage compared to others; the lack of strategies on a national level reflects their academic performance, and the fear is that increasing competitiveness will prevail the universities reputation and will further health practices that are specific to different management systems from less known institutions.

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## Macroeconomic Diagnosis and Prediction Through Software

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### Abstract

The competitive and dynamic nature of the business environment in the global economy determines managers to respond to a number of situations for which they need complex information. This has led to the need to develop new tools and to interconnect them with existing systems.

This paper presents aspects of the combined use of artificial intelligence techniques for the evolution of an economic entity based on a set of economic indicators over a long period of time. Based on the set of economic indicators, a measure  $D(x)$  can be defined on the space of the forms defined by the set of these indicators, as it will characterize the analyzed economic activity at different times.

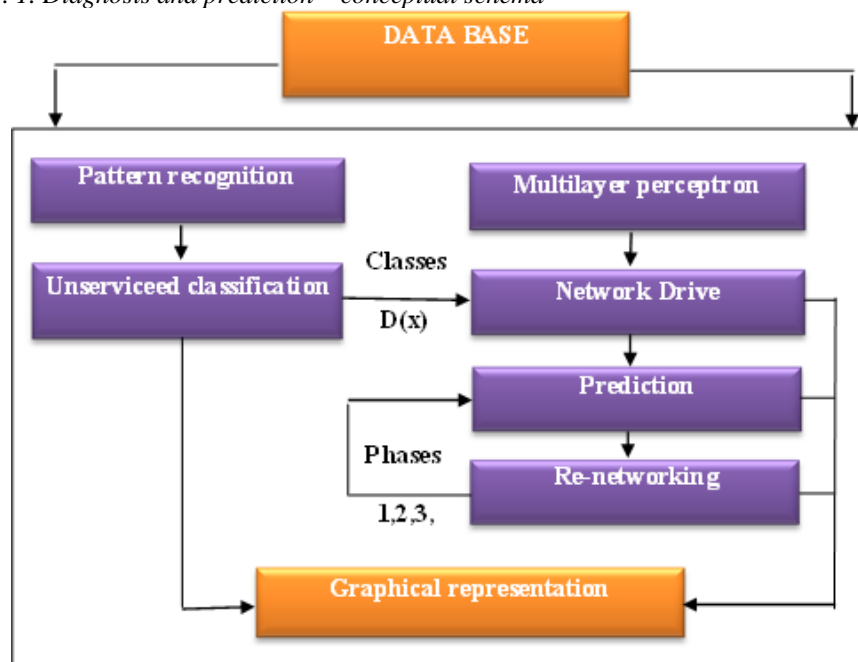
**Key words:** macroeconomic diagnosis, prediction, set of classes, database

**J.E.L. classification:** M30, M31

### 1. Introduction

Generally, in the case of forecasting, indicators of an economic nature are used, indicators that are used in different techniques of artificial intelligence. Form Recognition is one of the techniques currently used in predicting and analyzing various economic indicators. To define a form, a set of indicators should be considered at a given time.

Figure no. 1. Diagnosis and prediction – conceptual schema



The plurality of forms is divided into classes through the pattern recognition component of the program, the set of forms is divided into classes. The renumbering of classes that go from negative evolution to positive evolution and whereby economic growth or decline can be highlighted, economic stagnation defines an orderly relation to the multitude of classes that have been achieved through the multiplicity of forms. The conceptual scheme for diagnosis, prediction and graphic representation is presented in Figure 1. (Morariu et al, 2009, pp.213-223), (Iancu, 2016, 102-112).

The database contains as inputs information about the evolution over time of the values of the set of indicators, and the output is represented by a qualitative variable containing the result of the activity evaluation using the classes that were defined by the size  $D(x)$ .

## 2. Analyzing the activity of the economic entity using the graphical representation form

In the  $xOy$  coordinate system, a graphical representation of the economic activity of an economic entity can be obtained by defining the shapes that are represented in the plane on the  $Ox$  axis by points that actually represent the year corresponding to the form and  $y$  represents the class to which the respective form belongs. In order to be as plausible as possible, we must have as many classes as possible, given the number of data taken into account. Representing the economic entity's activity from negative evolution to positive evolution is given by class numbering. In this respect, on the set of classes a relation order is defined according to the algorithm described below.

Let be a form  $x(x_1, x_2, \dots, x_n)$  with the characteristics  $x_i$  normalized. The importance of the weighting characteristic in conducting these economic analyzes based on economic indicators is given precisely by these weights. These weights can represent some partial-type correlation coefficients that are actually results of a regression model, but at the same time these beams can be determined by some field experts (Morariu et al, 2009, pp.213-223).

In the calculation of the distance  $D(x)$  for each space form, the following formula is used (Morariu et al, 2009, pp.213-223):

$$D(x) = \sum_{i=1}^n p_i x_i$$

The activity described by form  $x$  is measure  $D(x)$ .

The calculation of the mean of  $M(c)$  for each type of class  $c$  is calculated using a formula of the type (Morariu et al, 2009, pp.213-223):

$$M(c) = \left( \sum_{x \in c} D(x) \right) / p$$

where  $x$  represents those forms belonging to the class  $c$  class, and  $p$  represents the number of forms in class  $c$ . The average of the sizes in the distance  $D(x)$  is represented by the mean  $M(c)$  formed by the mean of the sizes  $D(x)$  belong to a class of type  $c$  (Iancu, 2011, pp.49-58).

For example, Class  $c_1$  is in relation "<" to class  $c_2$  if  $M(c_1) < M(c_2)$ . Thus, on the set of classes, a relationship was established on the basis of which the classes would be renumbered to represent the activity analyzed from negative evolution to positive evolution.

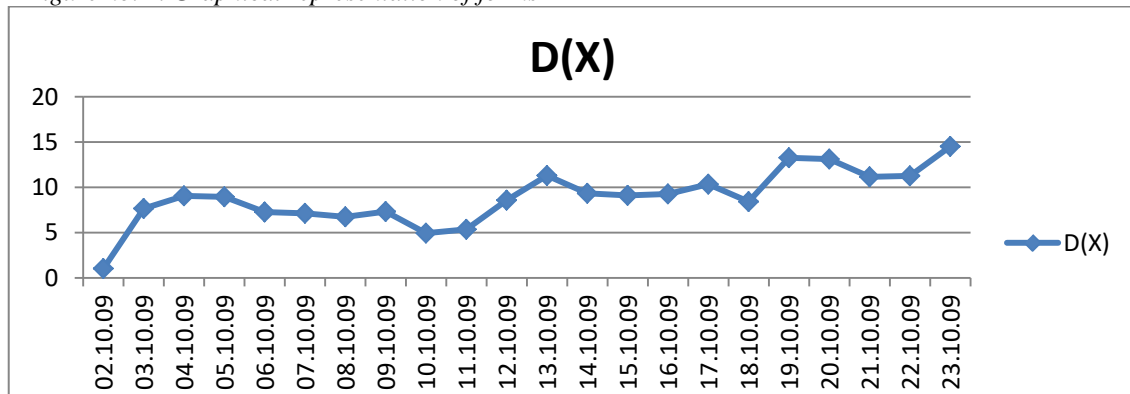
We can consider the corresponding  $D_{t_1}(x)$ ,  $D_{t_2}(x)$  sizes for two time intervals  $t_1$  and  $t_2$ ,  $t_1 < t_2$  are considered (Morariu, 2010, pp.87-90), (Morariu et al, 2009, pp.213-223):

- the positive evolution of the activity defined by form  $x$  at time  $t_2$  relative to  $t_1$  is given by the relationship of the two sizes where  $D_{t_1}(x) < D_{t_2}(x)$ ;
- the stagnation of the activity defined by form  $x$  at time  $t_2$  relative to  $t_1$  is given the relationship between the two sizes where  $D_{t_1}(x) = D_{t_2}(x)$ ;
- the negative evolution of the activity defined by form  $x$  at time  $t_2$  relative to  $t_1$  is given by the relation between the two sizes where  $D_{t_1}(x) > D_{t_2}(x)$ .

For the mean of  $M(c)$  we can make a similar interpretation that will lead to the same result.

The evolution of the activity of an economic entity in the coordinate system  $xOy$  can be done with a more accurate graphical representation as follows: a point in the  $xOy$  plane is a form in which the  $Ax$  represents the time, and on the axis  $Oy$  is  $D(x)$  corresponding to the  $x$  form (figure 2).

Figure no. 2. Graphical representation of forms



### 3. Experimental results - macroeconomic prediction

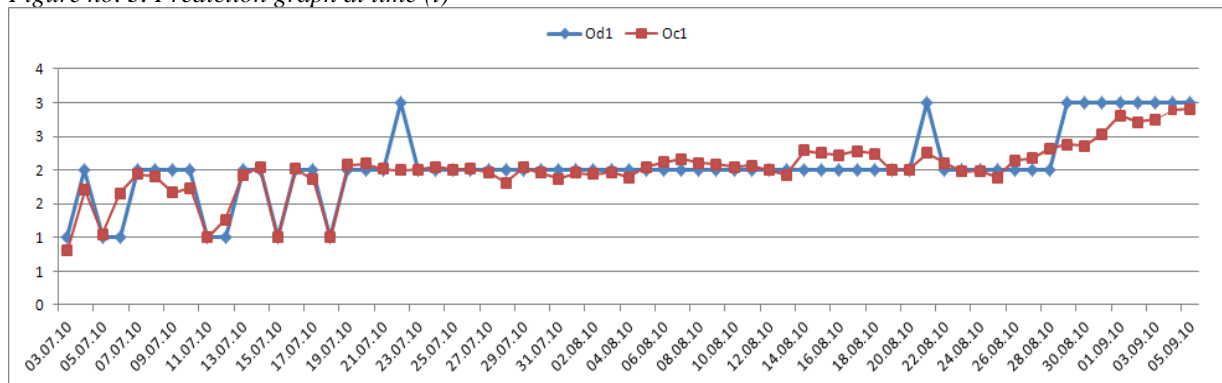
The evolution of the indicators in the table below is considered:

Table no. 1. Indicators used in prediction

Code	Indicators	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
I1	AI	1398	1447	1488	1530	1573	1615	1654	1693	1701	1723	1767	1798
I2	EG	16814	20135	23455	26700	30350	34300	38500	43000	47180	54889	57989	63505
I3	IG	22401	27481	33769	39820	45500	51650	58100	64700	66700	68720	73700	74800
I4	OP	20769	25458	31261	36850	42110	47800	53750	59850	68200	68735	70140	71070
I5	ANE	9473	9290	9295	9305	9320	9335	9350	9365	9545	9845	10430	10980
I6	AE	5791	5669	5775	5875	5960	6025	6095	6145	6212	6401	6504	6709
I7	SMB	1864	2018	2158	2280	2400	2510	2630	2745	2846	2898	2932	2989
I8	AC	1859	1759	1723	1720	1708	1695	1685	1680	1673	1656	1603	1597
I9	FE	2436	2548	2660	2772	2884	2996	3108	3220	3332	3444	3556	3668
I10	FV	4656	5768	6880	7992	9104	10216	11328	12440	13552	14664	15776	16888

The shape features are given by the following macroeconomic indicators: AI, EG, IG, OP, ANE, AE, SMB, AC, FE, FV. The values of these indicators for a given year represent the forms. Considering the fact that the diagnosis cannot be made without diagnosis, it was taken as a time interval for the diagnosis of the years 2004-2009. For prediction, the years ranged between 2010 and 2015.

Figure no. 3. Prediction graph at time (t)



Using the data normalization operation and the unsupervised classification of the data using the threshold algorithm with threshold value = 1 as well as the Euclidean distance result a grouping of the forms in 5 classes numbered according to the given details. Network training rate is a number between 0 and 1 and plays an important role in the convergence of the learning process and the achievement of an optimal solution.

#### 4. Conclusion

Relevant representations can be obtained through classes or  $D(x)$ . Class representation is even better as the number of classes is higher (the ideal case is when each form belongs to a new class).

For chaotic time series, prediction is a difficult issue to solve. A better approximation can be obtained using specific models for nonlinear systems (Galuskin, 2007), (Graupe, 2007), (Morariu, 2010). Thus, for the solution of complex problems, multilayer neural networks (Nikola, 1998), (Iancu, 2016, pp. 133-135), (Iancu, 2016, pp.25-28) can be used due to the ability to detect nonlinear dependencies in the input data.

The number of  $k$  precedent values of type  $x(t_1), x(t_2), \dots, x(t_k)$  give the predicted value  $x(t_k + 1)$  of an  $x$  variable at a future time  $t_k + 1$ .

Both the independent variables and the independent prediction independent variable are a function of time, but the predictive variable may be different from the independent variables.

Multivariate prediction can be achieved by using previous values of predictive values of independent values at a given time as well as variable dependent predictions of type  $x$ . Univariate predictions can be performed successfully with neural networks.

The neural network training procedure goes with network entrainment for as many years as possible so that the results are as eloquent as possible and then follow the predictions for the next period. The prediction for the next period is achieved by using previously obtained values that are used in the training process.

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## Rural Tourism and Agro-tourism in Romania

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### Abstract

*Rural tourism is an important form of sustainable tourism, because it has a low negative impact on the natural environment, capitalizes and protects natural and cultural resources and contributes to the welfare of local communities.*

*By harnessing natural and cultural resources of rural space, rural tourism is an important form of tourism, which generates important tourist flows. Agro-tourism or agri-tourism is an important segment of rural tourism, which contributes to satisfying the needs of tourists with activities and products made in their own household.*

*In Romania, after 1990, the transition from the centralized economy to the market economy based on private property determined the development of rural areas and consequently of rural tourism, including the development of agro-tourism.*

**Key words:** tourism, rural tourism, agro-tourism

**J.E.L. classification:** L80, L83

### 1. Introduction

The concept of sustainability has become a mediating term in bridging the ideological and political differences between the environmental and development lobbies, a bridge between the fundamentally opposed paradigms of eco and anthropocentrism (Wearing and Neil, 1999, p.15). Tourism has been both lauded and denounced for its ability to develop and therefore transform regions into completely different settings. (Fennell, 2003, p.4).

Sustainable tourism is a form of tourism that has a minimal impact on the natural environment, ensuring its preservation and protection and rational exploitation of natural resources, but also taking into account the impact on the cultural and socio-economic environment, by harnessing cultural resources and by contributing to the welfare of local communities.

J. Swarbrooke, in “Sustainable Tourism Management” considers the following types of tourism which are highly compatible with the concept of sustainable tourism (Swarbrooke, 1999, p.19):

- ecotourism;
- cultural tourism which involves visitors learning about the history and culture of an area;
- urban attractions which provide new uses for derelict sites;
- small-scale rural “agro-tourism” which brings income to farmers;
- conservation holidays where tourists do conservation work during their vacations.

Thus, if rural tourism, including agro-tourism, does not turn into mass tourism but is practiced on a small scale, it is an important form of sustainable tourism alongside ecotourism.

### 2. Rural tourism - the important form of tourism in Romania

Rural tourism is closely linked to the rural area that constitutes the tourist destination. For holiday tourism especially, the attraction of a destination typically reflects scenic resources and climate, and the arts, heritage, culture and lifestyles of a local population (Middleton and Hawkins, 1998, p.87).

One geographical aspect of the development of tourism in an area is that it leads to improvements in the infrastructure, which also benefits the local population and their opportunities for local recreation (Aronsson, 2000, p.137). Thus, tourism can play a positive role in diversifying and developing the economy of rural areas where traditional activities like agriculture are in decline, salaries are low and depopulation rife (Swarbrooke, 1999, p.164).

Rural tourism can be defined as a tourism product that accentuates the importance of the supply management and marketing activities within rural areas (Lee and Stanculescu, 2011, p.15).

Rural tourism is often identified with farm tourism but rural tourism is a wider concept and includes also such specific features as the development of nature trails, picnic sites, interpretation centers and agricultural and folk museums (Medlik, 1993, p.129). Farm tourism is a holiday tourism centered on a working farm, which takes various forms but invariably includes accommodation and often other services for users. Farm tourism may be seen as a form of rural tourism and is also called agricultural tourism or agri-tourism and vacation farm tourism (Medlik, 1993, p.61).

Rural tourism is a form of tourism that unfolds in rural areas and has a functional structure of services and heterogeneous accommodation. The revenues from rural tourism have a permanent character and the services are offered by an employed and specialized staff (Dinu, M., 2002, p.261).

Agro-tourism is achieved by harnessing the natural environment, the accommodation offer and the various agro-tourism services provided by agro-touristic households and farms. The incomes obtained from agro-tourism have a complementary character because the household or agro-touristic farm realizes the basic incomes from agricultural activity or other types of activities, such as: processing of agricultural raw materials, handicrafts, etc.) (Abargaonitei, 2010, p.101)

From the point of view of the accommodation space, agro-tourism can be defined as an activity that exploits the existing accommodation surplus in the peasant household, prepared and arranged especially for the reception of guests (Platona, 2002, p.28). Agro-tourism uses only tourist boarding houses and agro-tourist boarding houses for accommodation and meals, benefiting from an unpolluted and picturesque environment, natural tourist attractions and cultural-historical values, the traditions and customs present in rural areas, the farmer's hospitality (Nistoreanu, Gheres *et al*, 2010, p.114).

In Romania, the agro-tourism can contribute to sustainable development in rural areas through (Glavan, 2003, p.146-147):

- sustainable use of tourism resources and maintaining the natural, cultural and social diversity of rural areas;
- integration of agro-tourism into national and local development planning and strategy;
- supporting local economies in the social and economic development of the community, but also in protecting nature and cultural values;
- development and promotion of local tourist offer.

After 1990, rural tourism started to develop in Romania. The core was the Moieciu-Bran area, and then the phenomenon spread throughout the country, as tourists began to prefer unpolluted air and tranquility in rural areas instead of hotels (Bran *et al*, 1997, p.128). Thus, the facilities for the development of rural tourism in the mountain area, the Danube Delta and the Black Sea coast were started.

The Romanian village is an original tourist product that generates tourist flows because it is based on (Nistoreanu *et al*, 2003, p.208):

- a wide range of natural and cultural resources;
- various tourist facilities and tourist experiences;
- traits of the specificity and uniqueness of our country: people, history, culture, traditions and customs.

In Romania, rural settlements with a tourist function, namely tourist villages, are not homologated and legalized by legislation, therefore they have not been identified, organized, arranged and promoted. In the rural area only the rural tourist boarding houses is promoted, without mentioning the ethnographic area it belongs to (Glavan, 2006, p.143). Therefore, in many rural areas, rural tourist boarding houses were built without respecting local specific architecture and

without the use of environmental friendly building materials. This is very dangerous for rural tourism because it leads to the loss of local identity and the transmission of specific elements of urban settlements.

*Table no.1. Establishments of tourist's reception with functions of tourists' accommodation and the tourists' accommodation capacity, by type of establishments, in Romania*

	2004	2007	2009	2011	2012	2013	2014
Existing accommodation capacity (number of beds)							
TOTAL	275941	283701	303486	278503	301109	305707	311288
Hotels	160370	168857	179479	175149	181702	183330	186236
Motels	5992	5614	5836	7219	8078	8493	7883
Tourist inns	385	186	136	77	81	61	143
Hostels (The hotels for youth included)	1180	3522	4396	6140	7562	8482	9116
Tourist villas	16107	15333	15772	12590	14775	14074	13812
Bungalows	4854	4461	4553	2481	2663	2834	2722
Tourist chalets	6215	5577	5887	5928	5150	5183	5128
Holiday villages	56	160	215	307	352	372	717
Camping sites	26894	25006	25475	12801	12816	11945	12925
School and pre-school camps	30198	20320	18875	10689	10908	9851	9759
Tourist halting places	1226	1152	2025	1813	1847	1800	2209
Tourist boarding houses (Urban tourist boarding houses)	8100	13429	16653	20499	25019	27325	27295
<b>Agro-tourist boarding houses (Rural tourist boarding houses)</b>	9405	15448	19783	20683	27453	28775	30480
Houselet-type units	4365	4120	3945	1732	2199	2665	2398
Ship accommodation places	594	519	456	395	504	517	465

*Sources:* realized by author, based on data provided by National Institute of Statistics (*Romanian Tourism in Figures*, 2007, p.16; 2010, p.23; 2014, p.22; 2015, p.22).

The development of private property in Romania has led to an increase in accommodation capacity in agro-tourist boarding houses. Thus, according to the data in table no. 1, there is an increase in the number of accommodation places of the agro-tourist boarding houses from 9405 in 2004 to 30480 in 2014, which represents a growth of 3.4 times. This increase is due to the demand for holidays in rural areas of Romania, especially the demand from foreign tourists.

As seen in figure 1, from 2004 until 2014, the trend of increasing accommodation capacity in agro-tourist boarding houses has been maintained, even during the economic crisis of 2007-2011.

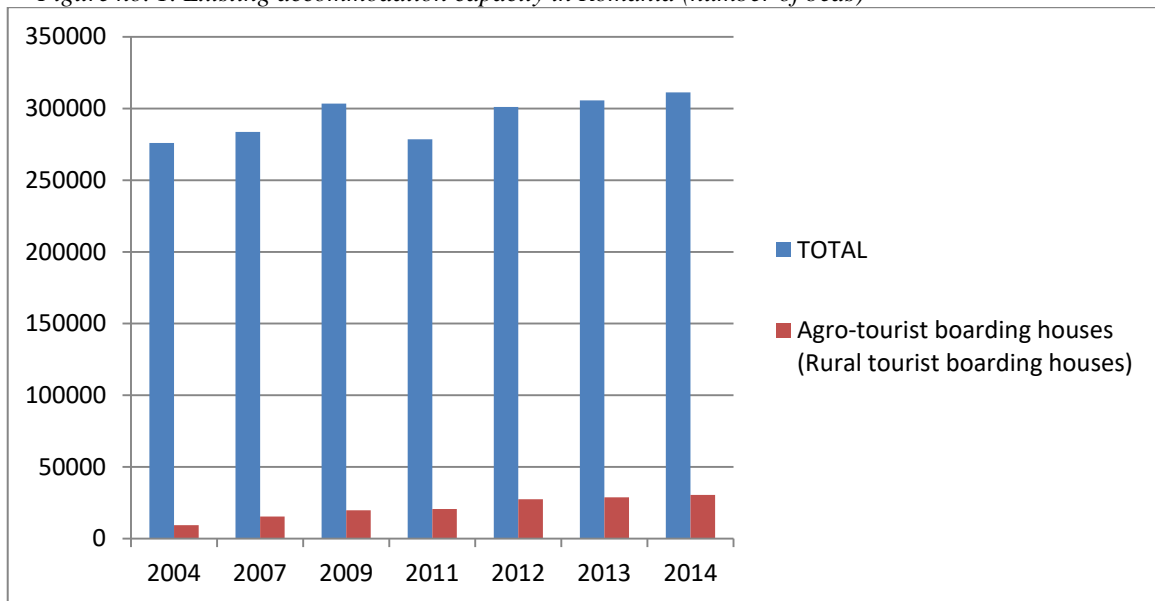
This growth is based on investments made in rural areas in order to start a family business as a source of permanent income generated by rural tourism or as an additional income from agro-tourism.

If we consider the total accommodation capacity, there is only an increase of 12.8% in 2014 compared to 2004, when in the case of accommodation places (number of beds) in agro-tourist boarding houses and rural tourist boarding houses, there was an increase of 224%. This highlights the higher dynamics recorded by the rural tourism segment, including agro-tourism, in Romania.

However, this superior development in the case of rural tourism and agro-tourism does not indicate a mass tourism that contravenes the principles of sustainable tourism. This is evidenced by the data in Table no.1: in 2004, the accommodation in rural tourist boarding and agro-tourist boarding houses accounted for only 3.41% of the total existing accommodation capacity in Romania compared to 9.8% in 2014. It should also be noted that in Romania, accommodation is also carried out in the homes of the locals, without this being included officially in the tourist circuit. Therefore, the segment of rural tourism and agro-tourism is higher than that recorded in the statistical data, which means that rural tourism and agro-tourism represent a strong motivation

among tourists, especially foreigners.

Figure no. 1. Existing accommodation capacity in Romania (number of beds)



Source: Table no.1.

Romania has a rich natural and cultural potential in rural areas, which is a great advantage for attracting tourists to rural tourism and agro-tourism.

This is evidenced by the number of tourists staying in rural tourist boarding and agro-tourist boarding houses (Table no.2 and Figure no.2). The analysis of these data reveals the following:

- During the period 2004-2014, there is an increase in the total number of tourists accommodated in establishments of tourist reception with functions of tourists' accommodation in Romania, from 5638517 to 8277646, which represents a 46.8%
- In the period 2007-2011, as a result of the economic and financial crisis, there was a reduction in the number of tourists both on a total and in the structure
- The same trends were registered as the structure between 2004 and 2014, namely: for foreign tourists there was an increase of 53.1% in 2014 compared to 2004 and a growth of only 26.9% for Romanian tourists
- The largest decrease in the number of tourists took place in 2009, but this year there is also the largest decrease in the number of Romanian tourists as a result of the economic crisis. Thus, although the existing accommodation capacity registered the largest increase in 2009, the largest decrease in the number of tourists in the analyzed period was also recorded in that year, which is a significant loss for the owners of the accommodation units.

Table no. 2 Tourists accommodated in the establishments of tourist's reception with functions of tourists' accommodation in Romania (number of tourists)

	Total		Tourists accommodated in agro-tourist boarding houses	
	Foreigners	Romanians	Foreigners	Romanians
2004	4279023	1359494	131589	17396
2007	5420968	1550957	268065	20443
2009	4865545	306404	1275590	19282
2011	5514907	1516699	336005	24691
2012	6030053	1656436	416939	30174
2013	6225798	1717355	463563	38183
2014	6551339	1726307	507868	41434

Sources: realized by author, based on data provided by National Institute of Statistics (*Romanian Tourism in Figures*, 2007, p.35-36; 2010, p.42-43; 2014, p.36; 2015, p.36).

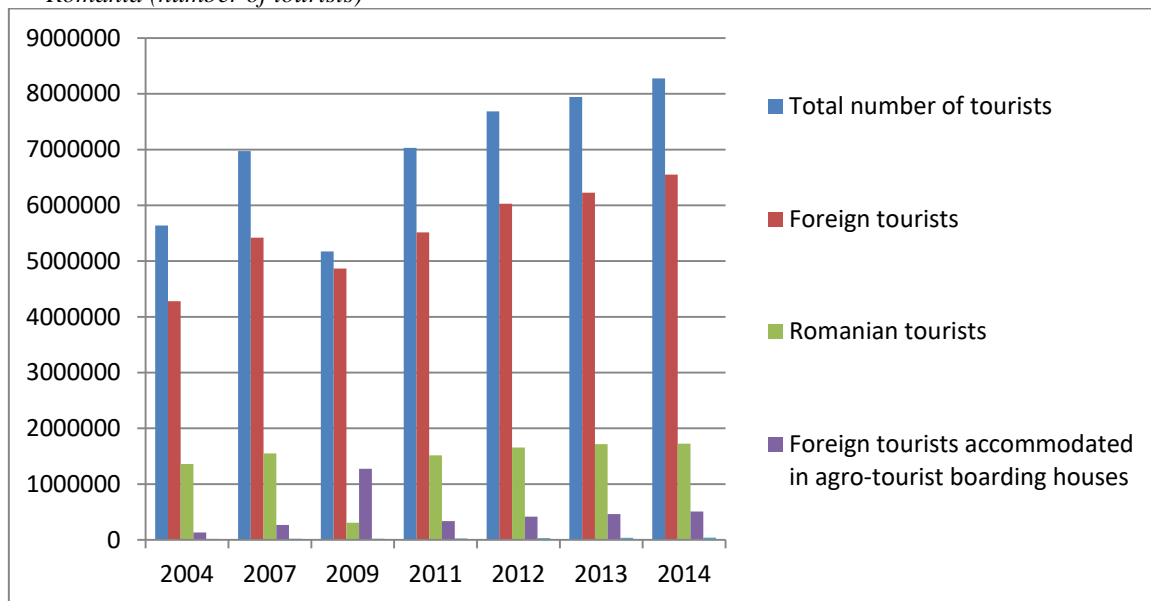


In the analyzed period, it is noticed that the number of foreign tourists is much higher compared to the number of Romanian tourists, and this highlights the orientation of the Romanian tourists towards tourist destinations outside Romania.

If we are considering tourists accommodated in agro-tourist boarding houses, there is an upward trend in 2014 compared to 2004, both for Romanian tourists and foreign tourists. Thus, in 2014 compared to 2004 for foreign tourists it had an increase of 285% and for Romanian tourists had an increase of 138%.

These increases reflect the importance of rural tourism and agro-tourism in Romania and its attractiveness to tourists, especially in the case of foreign tourists. However, although rural tourism and agro-tourism have registered significant increases, it should be noted that the share of foreign tourists staying in rural and agro-tourism pensions in Romania in total foreign tourists was 3.07% in 2004 and 7.75% in 2014. In the case of Romanian tourists staying in rural and agro-tourist pensions, the share in total Romanian tourists was in 2004 of 1.28% and 2.4% in 2014.

Figure no. 2 . Tourists accommodated in the establishments of tourist's reception with functions of tourists' accommodation in Romania and tourists accommodated in agro-tourist boarding houses in Romania (number of tourists)



Source: Table no.2

Increasing interest in rural tourism development and agro-tourism in Romania is based on:

- hospitality offered to tourists in rural areas by hosts;
- preserving traditions, customs and their valorization within the rural areas and agro-tourist boarding houses in Apuseni, Bukovina, Maramures, Transylvania, Dobrogea, including the Danube Delta;
- the existence in many rural areas of traditional activities, a low degree of industrialized activities and pollution;
- existence of natural resources unaltered by industrial activity;
- the high quality of the services offered as well as the authentic, natural and traditional products and preparations offered within the agro-tourist boarding houses;
- possibility for tourists to participate in the activities within the household and to get in touch with the style and way of life specific to the Romanian rural areas;
- existence of associations working in the field of rural tourism and agro-tourism, which aim at developing this form of tourism, guaranteeing the quality and authenticity of rural products and services.

### 3. Conclusions

Rural tourism and agro-tourism represent a very important form of tourism for Romania, which contributes to the satisfaction of the tourism motivations specific to this tourist segment and also represents an alternative offered to the local communities to obtain an income.

Therefore, for its development it is necessary to consider:

- general infrastructure that negatively affects this form of tourism;
- inappropriate legislation in the field that does not provide enough facilities to local communities;
- infusion in rural areas of elements specific to urban tourism, which affect the specific characteristics of rural tourism and agro-tourism.

Consequently, in order to maintain the characteristics specific to the Romanian rural tourism, all measures must be taken to preserve unaltered and to protect the natural and cultural resources specific to rural areas and to establish strategies at central and local level for the promotion of rural tourism and agro-tourism, both internally as well as internationally.

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## Travel Agencies in Romania

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### Abstract

*Travel agencies play a very important role on the tourism market as it mediates the operations between direct service providers and tourists. Thus, travel agencies develop touristic travels and sell them to tourists or reserve places for transport or accommodation.*

*To operate legally in Romania, travel agencies must have a travel (tourism) license, a document that gives them the right to act as a tour operator or as a retailer.*

*The travel agency is responsible for selecting service providers (carriers, hoteliers), thus influencing the quality of tourist services.*

*If the hotel service provider does not provide quality services then the intermediary is guilty of this and consequently the tourists are dissatisfied. In Romania, this situation has reduced the number of foreign tourists who visited our country.*

**Key words:** travel agency, tourists

**J.E.L. classification:** L80, L83

### 1. Introduction

The development of tourist activity is not possible without the existence of travel agencies. They offer tourists the services provided by service providers, either in their initial form or in the form of tourist arrangements. Thus, tourists have the opportunity to purchase tourist trips, which would not benefit if there were no travel agencies.

That is why the purpose of this paper is to highlight the importance of tourism agencies and their contribution to the tourism activity as well as the impact they have on tourism demand in countries like Romania.

### 2. Travel agencies: conceptual delimitations

Early travel agencies were easy to define because there were no differences between them in terms of size and the activities they performed. Changes in travel – primarily its availability and affordability- have caused changes in agencies (Landry and Fesmire, 1994, p.54).

The travel industry can be divided into two components. The retailer or travel agent sells directly to the public. They sell airline and railroad tickets, cruises, independent travel, and group tours, either tours they themselves prepare or tours that a wholesaler has put together. The second component of this industry is selling tours by the tour operator as a wholesaler (Hudman *et al*, 1989, p.144). In the view of Buhalis, “a retail travel agent is essentially a commissioned intermediary who serves as sales outlet for tourism principals and wholesalers and as such the travel agent usually does not own the services he or she sells to travelers” (Buhalis *et al*, 2001, p.13).

Tour operators purchase separate elements of transport, accommodation and other services, and combine them into a package which they then sell directly or indirectly to consumers (Holloway, 1998, p.192). Elements of an inclusive tour (a package) are (Page, 2009, p.297):

Basic elements:

- aircraft seat;
- accommodation at destination;

- return transfer from airport to accommodation;
- services of a tour operator representative;
- insurance.

Optional add-ins:

- car hire;
- excursions.

Alternative forms:

- multi-destination packages that visit more than one destination;
- optional extensions to the package to extend the itinerary;
- liner tours by coach operators.

Some authors (Stanciulescu, 2005, p.89; Snak *et al*, 2001, p.119; Neagu, 2000, p.75-76) consider that travel agencies perform more functions, namely:

- advisory / information function;
- production function (creative or manufacturer);
- the trading function (promotion and distribution);
- intermediate function;
- control function.

### 3. Travel agencies in Romania

Travel agencies are economic agents that act as intermediaries on the tourism market. In Romania, they are two types: tour operator travel agencies and travel agencies with sales activity.

In Romania, in order to operate legally, tourism agencies must hold a tourism license, which is differentiated according to the two types of agencies.

According to the Romanian legislation, "The Tourism License is a document issued by the central public institution responsible for tourism certifying the capacity of a legal person, the license holder, to market tourism services in terms of quality and safety for tourists." (Monitorul Oficial al Romaniei, Nr. 353 bis/14 June 2013, p.3, <http://turism.gov.ro/wp-content/uploads/2013/05/Ordin1.pdf> ).

In order to obtain a tourism license, an economic agent must meet certain conditions, among which the insurance policy is essential. The insurance policy is used to repatriate tourists if the travel agency goes bankrupt.

The lack of real control by the Romanian Ministry of Tourism has made a large number of travel agencies operating in Romania not complying with legal requirements and consequently illegal operation. Thus, the main reason for the withdrawal of the tourism license was the lack of a valid insurance policy, as indicated in Table 1.

Table no. 1 Number of travel agencies in Romania

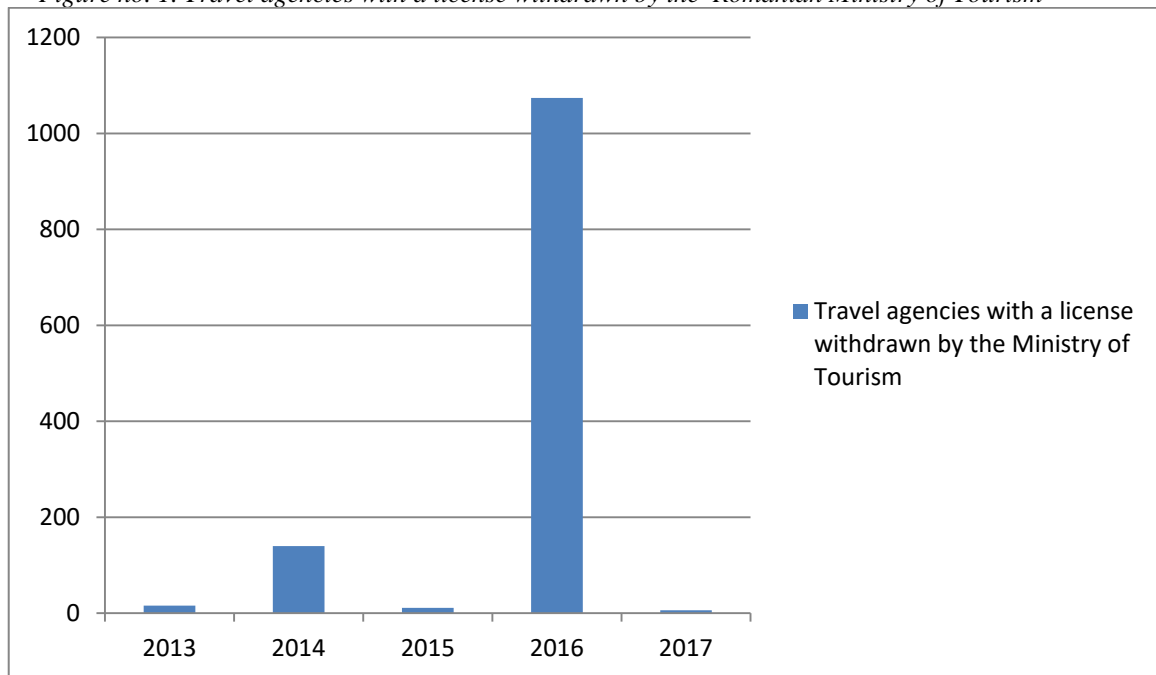
Year	Travel agencies licensed	Travel agencies with a license withdrawn by the Romanian Ministry of Tourism
2013	Data unavailable	16
2014	Data unavailable	140
2015	Data unavailable	11
2016	1584	1074
2017	2644	6

Sources: realized by author, based on data provided by Ministry of Tourism: <http://turism.gov.ro/autorizare-turism/>; <http://www.anat.ro/anat-sustine-ant-in-demersul-de-verificare-si-inchidere-a-agentiilor-de-turism-care-nu-detin-polita-de-asigurare/> <http://www.lumeapresei.ro/anat-sustine-ant-in-demersul-de-verificare-si-inchidere-agentiilor-de-turism-care-nu-detin-polita-de-asigurare/>

As travel agencies were considered to have no essential role on the Romanian tourism market, they have come to the point where they act by breaching of the legislation in force.

From the available data, we notice that after 2013, with the change in the legislation on the granting of tourism licenses, the number of travel agencies with a withdrawn tourism license increased.

Figure no. 1. Travel agencies with a license withdrawn by the Romanian Ministry of Tourism



Sources: realized by author, based on data provided by Ministry of Tourism: <http://turism.gov.ro/autorizare-turism>; <http://www.anat.ro> <http://www.lumeapresei.ro/anat-sustine-ant-in-demersul-de-verificare-si-inchidere-agentiilor-de-turism-care-nu-detin-polita-de-asigurare/>

ANAT is the employers' association of tourism agencies in Romania, representing their professional interests at national and international level. The Association has as its members 500 tourism agencies, the most important in the country, which accumulates over 85% of the sales of travel and travel packages, estimated at almost one billion euros annually and together has more than 4,600 employees. The tourism industry in Romania has over 120,000 employees and contributes to the national economy by almost 2% of GDP. There are currently more than 1,800 active tourism agencies in the records of the National Tourism Authority that comply with the main operating conditions: they have a valid insurance policy, a license issued by competent authorities and a tourism patent for the manager (<http://www.anat.ro/anat-sustine-ant-in-demersul-de-verificare-si-inchidere-a-agentiilor-de-turism-care-nu-detin-polita-de-asigurare/>).

The importance of travel agents on the Romanian tourist market is evidenced by the data in Table 2. Thus, the following trends registered by the tourists participating in the internal tourism activities, by tourist areas:

- running a large number of tourists, both through the tour operators and through the retailer agencies;
- decreasing the share of tourists in river and sea cruises;
- the small percentage owned by the Danube Delta, although it is a destination with strong tourist attractions and ecotourism specific elements.

Table no. 2 Number of Romanian tourists taking part in the domestic tourist actions, by tourist areas

	Tour operator agencies				Agencies with sale activity			
	2008	2010	2012	2014	2008	2010	2012	2014
Seaside area	60,10	43,80	36,54	48,86	34,29	62,34	59,65	43,76
River cruises	0,10	0,12	0,02	0,06	-	0,02	0,13	0,05
Maritime cruises	0,09	0,04	0,03	0,02	-	0,008	0,07	0,47
The Danube Delta	1,05	1,90	1,08	1,37	0,56	2,10	2,86	1,52
Cultural tourism	3,40	3,43	0,73	0,92	-	0,47	2,21	7,39
Religious pilgrimage	1,10	1,63	0,14	0,27	1,67	1,39	1,20	0,24
Mountain area	25,11	24,16	33,30	15,55	42,13	17,63	16,80	15,43
Spa area	-	11,82	6,03	7,59	-	9,85	7,18	6,27
Other areas	9,05	15,10	22,13	25,36	21,35	6,19	9,90	25,37
TOTAL	100	100	100	100	100	100	100	100

Sources: National Institute of Statistics (Romanian Tourism in Figures, 2010, p.79; 2012, p.62; 2014, p.57; 2015, p.57; [http://www.insse.ro/cms/sites/default/files/field/publicatii/romanian\\_tourism\\_2017.pdf](http://www.insse.ro/cms/sites/default/files/field/publicatii/romanian_tourism_2017.pdf) )

#### 4. Conclusions

In Romania, travel agencies play a very important role in the tourism market. Their activity has been affected by certain factors, such as:

- the economic crisis of 2008;
- the lower quality of tourist services provided by certain tourist services providers, in hotels, restaurants;
- decrease of tourists' confidence in travel agencies, due to non-observance of the legal conditions of operation of travel agencies;
- reduced promotion for certain tourist destinations.

Consequently, in order to gain the confidence of tourists in Romanian travel agencies, they have to comply with the legislation established by the Romanian Ministry of Tourism, and the Romanian Ministry of Tourism must permanently verify that the travel agencies meet all the established conditions.

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## English Through the Filter of the Mother Tongue in Economics Students’ Formal Writing

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### Abstract

*This study presents an analysis of a series of errors made in English by Romanian economics students, which are due to associations with the mother tongue. The study specifically dwells on formal misselection, misformations and distortions. 125 papers were used in the study, which were collected in the academic year 2016/2017 from 59 first year finances and banking students, 26 third year marketing students and 40 first year management students. Finances and banking students wrote a report starting from a chart, marketing students wrote a cover letter, while management students wrote a business email. Different topics were provided in order not to limit the students’ vocabulary to one topic only.*

**Key words:** formal misselection, misformations, distortions, ESL, mental lexicon

**J.E.L. classification:** A22

### 1. Introduction

When it comes to the human ability of retaining information, we understand that, like a computer or a library, the mental lexicon is always being updated. This update implies the addition of new words, the creation of new connections between existing words and even the disuse of words no longer common. This phenomenon is present in all users of language, be they native speakers or second language learners (McCarthy, 1990, p. 42). Although there is extensive research on the mental lexicon of native speakers and bilinguals, that of second language learners needs further exploration. Opinions seem to be divided into two separate sides, with some studies claiming that second language learners have separate word stores and others finding evidence to support the presence of a single one. While earlier studies lack any significant indication that the mental lexicons of native speakers and second language learners bare similar constitution (Channel, 1988), more recent investigations claim that they are in fact organized in a similar manner (Wolter, 2001). With this research in view, we look at the most common mistakes made by second language learners in the field of economic sciences and attempt to identify their connection to the mental lexicon.

### 2. Object of the research

The aim of the paper is to analyze and identify the most common lexical mistakes made by Romanian economics students in English formal writing. Starting from the idea of the mental lexicon as “a person’s mental store of words, their meaning and associations” (Richards & Schmidt, 2002, p. 327), we focused on the ways in which Romanian students made use of their personal mental library or computer (McCarthy, 1990, p. 34) in order to solve the task at hand.



According to McCarthy, "the total model for the place of any word in the lexicon will have to be three-dimensional, with phonological nets crossing orthographic ones and cross-crossing semantic and encyclopedic [personal knowledge] nets" (McCarthy, 1990, p. 41). Ronald Carter claims that "mistakes in lexical selection may be less generously tolerated outside classrooms than mistakes in syntax" (Carter, 1998, p. 185). The most likely cause of this effect is that lexical selection is mostly made of words which communicate the desired content. When a speaker makes unsuitable lexical connections (i.e. lexical errors), s/he makes the desired output message difficult, if not impossible, to be understood or interpreted by the intended receiver. We will focus in our paper on a taxonomy of the errors that Romanian university students made when producing academic English writing and on the analysis of these errors. We believe our findings have implications for vocabulary learning and teaching in a wide range of language contexts.

### 3. Procedures and methods of research

The research is based on the analysis of 125 papers of Romanian economics students: 59 first year finances and banking students, 26 third year marketing students and 40 first year management students (a similar study was carried out by Hemchua and Schmitt (2006)). Finances and banking students were given the task to write a report starting from a chart, marketing students had to write a cover letter, while management students had to write a business email. These papers were later analyzed and in this process, we identified a series of misconceptions and word associations. We used Carl James' error classification of second language learners' output, introduced in his research *Errors in Language Learning and use: Exploring Error Analysis* (1998). Furthermore, considering the two types of errors he introduced, formal and semantic, we have concluded that his depiction of formal errors is the one to best suit our scope. Therefore, directing our attention towards formal errors we further introduce the three-type classification made by James in his study, namely, 1. formal misselection, 2. misformations and 3. distortions (James, 1998).

Drawing from Laufer's "synformic confusions" (1991), James introduces four sub-types of Formal misselection involving similar lexical forms (visual and sound similarity) and refers to them as the mala-propism type (James, 1998). The first sub-type introduced is the suffix type. As the name suggest this refers to words which hold the same root but support different suffixes, such as, considerable / considerate. The second sub-type under discussion is entitled the prefix type, and as the name suggests, refers to words which have the same root but different prefixes, such as, consumption / resumption / assumption. The third sub-type to be introduced is the vowel-based type, namely words which bare similarity in the number of vowels present and to some extent in their pronunciation, such as, manual / menial. And the final sub-type, the consonant-based type, referring to words with similar structure or pronunciation, such as, save/ safe.

The second type of formal errors introduced, misformations, refers to words which do not exist in the second language. The obvious origin of these errors comes from the speaker's mother tongue. For this reason, they are also called "interlingual misformation errors" and James (1998) sub-divides them into three types, namely, borrowing, coinage and distortions. The first sub-type of this division, borrowing, refers to words directly introduced from the mother tongue into the second language without any sort of change, such as, "It is a great eveniment" (paper 88). where the Romanian word *eveniment* is supposed to replace the English word *event*. The second sub-type, coinage, refers to words which are invented from the mother tongue and given an English-like ending or appearance, such as, "I inregistretred for the course" (paper 103). Here, the Romanian word *inregistrat* is given a new form, in an attempt to express the English word *registered*. The third and final sub-type in this category, calque, is an attempt to translate a word or a sentence from the first language into English, regardless of the correct matching of prepositions or word order. For example, the sentence "I want to be the best in everything" (paper 13), while it might make sense in Romanian, in English the correct sentence would sound close to "I want to be the best at everything". To this category we would like to add capitalization, namely a lack of capital letters for some categories of words, which is resulted from the fact that in the mother tongue the words are not capitalized, while in the second language they are, for example, *indian* or *i*.

The third type of formal errors, distortions, refers to words which do not exist in the second language and are the result of an incorrect use of the target language, resulting in the misspelling of words. We have here as well a series of five sub-types defining the possible types of misspelling. The first sub-type, omission, refers to the neglect of a vowel or consonant, such as, *buiness* (paper 35), as opposed to *business*. The second sub-type of error, overinclusion, refers to the adding of a vowel or a consonant, such as *bussiness* (paper 39), as opposed to *business*. The third sub-type, misselection, refers to the wrong selection of vowels or consonants in a word with the result sounding or appearing similar, such as, *olso* (paper 14) instead of *also*. The fourth sub-type, misordering, refers to the rearrangement of letters in a word, but maintaining the same number of letters and keeping with the pronunciation, such as *whit* (paper 35) instead of *with*. The final sub-type, blending, refers to the combination of two forms of a word which doubles its final letter in certain circumstances, for example, *gratefull* (paper 46), resulting from the combination of *grateful* and *gratefully*.

#### 4. Results and discussions

Table 1 presents the frequency of the lexical errors made by the students (hierarchically).

Table no 1: Frequency of lexical errors

Error types	No of errors (Total=314)	%	No of papers containing the error (N=122)	%
<b>1. Formal misselection</b>				
1.1 Suffix type	8	2,54	7	5,73
1.2 Prefix type	7	2,22	7	5,73
1.3 Vowel-based type1	7	2,22	7	5,73
1.4 Consonant-based type	10	3,18	10	8,19
<b>2. Misformations (interlingual)</b>				
2.1 Borrowing (L1 words)	29	9,23	26	21,31
2.2 Coinage (inventing)	43	13,69	37	30,32
2.3 Calque (translation)	46	14,64	40	32,78
2.4 Capitalization	10	3,18	8	6,55
<b>3. Distortions (intralingual)</b>				
3.1 Omission	80	25,47	48	39,34
3.2 Overinclusion	30	9,55	22	18,03
3.3 Misselection	34	10,82	27	22,13
3.4 Misordering	8	2,54	7	5,73
3.5 Blending	2	0,36	2	1,63

Source: Corpus analysis

The research revealed that, as far as the formal misselection errors are concerned, the consonant-based type error is the most frequent. Examples like *trough* instead of *through*, *whit* instead of *with*, *where* instead of *were* show that Romanian students are still tributary to the Romanian language spelling which is very phonetic. The next most frequent error is the suffix type, which means that the students have difficulties in deciding on the written representation of the final syllable of certain words: *agence* instead of *agency*, *to applie* instead of *to apply*, *respons* instead of *response*, *advice* instead of *advise*. In other cases, the errors are caused because of the lack of knowledge of grammatical rules: *studyed* instead of *studied*. The prefix type and the vowel-based type errors are the least frequent in this category. The vowel-based type errors prove the students' difficulty in adapting to a less phonetic language (*by* instead of *be*, *for* instead of *four*, *feel in* instead of *fill in*), while the prefix type errors seem to be caused by an interference with the students' mental lexicon, which determines them to form new words in English by applying a prefix that is used in Romanian for a word with a similar meaning in the target language (e.g *inregistered* instead of *registered*, because of the influence of the Romanian word *inregistrat*).

Among the misformation errors, the calque and the coinage errors are the most frequent and they represent about 28% of the total number of errors. Students tend to transfer words or expressions from the first language to the target language by using a word-for-word translation. As a result, incorrect structures in the target language are obtained: *in time of ten years* instead of *in ten years' time*, *participating at* instead of *participating in*, *to keep the meeting* instead of *to hold the meeting*. Also, learners invent words from the mother tongue and give them an English-like ending or appearance: *inregistered* instead of *registered*, influenced by the Romanian *inregistrat*, *modified* instead of *modified*, influenced by the Romanian *modificat*, *procentage* instead of *percentage*, influenced by the Romanian *procentaj*. Rarer, but still present are borrowing errors, where students introduce words from the mother tongue into the target language without any change: *voluntar* for *volunteer*, *financiar* for *financial*, *partener* for *partner*, *egal* for *equal*. These errors are proof of insufficient vocabulary knowledge of the learners, who resort to words borrowed from their mother tongue in order to maintain the flow of their speech. The least frequent of the interlingual errors of misformation are the capitalization errors. In Romanian, words denoting nationalities, months of the year or days of the week as well as adjectives denoting nationalities are not capitalized, so, learners are prone to writing *indian* instead of *Indian*, *monday* instead of *Monday*, *april* instead of *April*.

As far as distortion errors are concerned, omission has the highest frequency and it also ranks at the top of all the formal errors included in the research. Thus, students neglect vowels or consonants such as in *tomorow* instead of *tomorrow*, *complains* instead of *complaints*, *necessary* instead of *necessary*, *impresed* instead of *impressed*, *sumer* instead of *summer*. This can be due to the lack of double consonants in Romanian. There are also omission errors due to the fact that Romanian is a very phonetic language: *respons* instead of *response*, *sincerly* instead of *sincerely*, *belive* instead of *believe*. In this case, the students fail to write the correct spelling of certain words because they overlook the mute vowels, or they are unaware of certain sounds. Next, misselection errors are closely followed by overinclusion errors. Students select the wrong vowels in words such as *responsability* instead of *responsibility*, *olso* instead of *also*, *latter* instead of *letter*, *excellance* instead of *excellence*, because of the difference between the pronunciation and the written word. Overinclusion errors are in a way opposed to the omission errors, but they share the same cause, that is the lack of double consonants in the students' mother tongue. Once the students are aware of the general spelling rules in the English language, they struggle so much to fit these rules that they start adding vowels or consonants ever where they are not needed: *metting* instead of *meeting*, *tommorow* instead of *tomorrow*, *bussiness* instead of *business*, *verry* instead of *very*, *haelp* instead of *help*, *aboute* instead of *about*. The fact that Romanian is a phonetic language lays at the basis of the next type of errors, the misordering errors, where students write *buisness* instead of *business*, *togheter* instead of *together*, *whit* instead of *with* and *aswering* instead of *answering*. The least frequent error in this category is blending. This comes from a logical association that students make between the base word and *full* or *full of*, resulting in such misspelled words as *gratefull* instead of *grateful* or *thnakfull* instead of *thankful*.

## 5. Conclusions

All in all, omission errors (25.47%) rank at the top of all the types of errors included in the research, followed by calque (14.64%) and coinage (13.69%), which can lead to the conclusion that even if omission, an intralingual error, is at the top of the rank, the next two interlingual errors are even more frequent, as they add up to 28.33 % of the total errors registered in the research. The least frequent errors are those derived from formal misselection and blending.

The table below shows the error types in order of their frequency.

Table no. 2: Rank order of frequency of formal errors

Error types		No of errors (Total=314)	%	No of papers containing the error (N=122)	%
1	Omission	80	25,47	48	39,34
2	Calque (translation)	46	14,64	40	32,78
3	Coinage (inventing)	43	13,69	37	30,32
4	Misselection	34	10,82	27	22,13
5	Overinclusion	30	9,55	22	18,03
6	Borrowing (L1 words)	29	9,23	26	21,31
7	Consonant-based type	10	3,18	10	8,19
8	Capitalization	10	3,18	8	6,55
9	Misordering	8	2,54	7	5,73
10	Suffix type	8	2,54	7	5,73
11	Prefix type	7	2,22	7	5,73
12	Vowel-based type	7	2,22	7	5,73
13	Blending	2	0,36	2	1,63

Source: Corpus analysis

When analyzing the corpus, we were faced with the following problems: the three authors sometimes judged errors differently, sometimes we could not agree what an error is and sometimes it was hard to determine if the source of the error was interlingual or intralingual in nature. Error analysis is a useful tool, but it has its limitations. Siemensen pointed out that error analysis only partially reflects interlanguage, whereas performance analysis studies the learner's overall performance (Siemensen, 1998, p. 94). As a parenthesis, who is to say that an error will not become norm in the future? English, as an international language, has influenced Romanian specialized vocabulary in the context of globalization see Nadrag's and Galbeaza's studies on the influence of English economics terminology on the Romanian language (Nadrag & Galbeaza (Buzarna-Tihenea), 2013; Nadrag, et al., 2012). The same can happen in reverse, if an error which is very common among non-native speakers begins to replace the norm.

Nevertheless, the results of this research emphasize the necessity of vocabulary learning strategies in the classroom, so that the students can find the ways to understand and solve their language problems. According to Nadrag et al., students "can better acquire specialty terms in less time when the teaching/ learning process is focused on: 1) similarities and differences between the two languages (Romanian and English); 2) communicative activities; 3) working conditions" (Nadrag, et al., 2012, p. 231).

To lower the level of interlingual errors, students should be encouraged to use monolingual dictionaries and taught how to correctly read the phonetic transcription of words. They should divide certain problem words into syllables to become aware of certain groups of sounds and the way they are represented in writing. Students should do phonetic exercises to practice simple vowel sounds or groups of sounds. One example of such exercise would be the minimal pairs (sit-seat, desk-disk, wet-wait, bat-but, had-head etc.). Other types of difficulties could be overcome through thorough practice of the English prepositions, expressions and word order structures as well as through the development of the students' vocabulary knowledge. Students could improve their ability to choose among different suffixes and prefixes if they became aware of certain patterns in the creation of different parts of speech. Through extensive practice, they should create a classification of their own, a corpus to which they can relate whenever they encounter a similar situation. Explaining the etymology of some words can also give the students an insight into why those words are written in a particular way. As far as preposition and fixed word order are concerned, students should learn chunks of language and try to integrate them in new and different contexts. This way, they will assimilate the structures and use them automatically.

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## Considerations on the Common Agricultural Policy in Romanian Agriculture

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### Abstract

*In Romania, aspects related to the implementation of the Common Agricultural Policy are paramount in achieving all the objectives of the 2020 Strategy. It acts in an integrated manner with other Community policies, making an important contribution to the growth of people in the agricultural sector and the related activities to achieve the social and territorial inclusion, to the role it can play alongside other environmental, cohesion, research and development policies as well as knowledge and innovation in agriculture in order to promote an expected level of competitiveness in the internal and external market. Through this paper, we wanted to carry out a synthesis analysis of some aspects related to the common agricultural policy during the two programming periods, which is why in Romania this will have to be coordinated with the new international commitments, sustainable development, climate change and support for the migration phenomenon.*

**Key words:** Common Agricultural Policy, agriculture, rural development, objectives, pillars.

**J.E.L. classification:** D00, O13, Q18, R10.

### 1. Introduction

In the Romanian agriculture, after the accession to the European policies in the field, these have been adapting to the community requirements, taking into account the national specifics. At the heart of the Common Agricultural Policy (CAP) there are some fundamental principles through which the objectives related to the production and consumption of agricultural products are to be achieved, among which (Măcriș, 2009; Mănescu et al., 2016):

- *The uniqueness of the market, which involves the elimination of trade and customs barriers among Member States, creating a unique framework for confronting demand and supply;*
- *Community preference refers to the orientation of consumption towards Community products, avoiding imports while creating the necessary framework for benefiting the community domestic producers;*
- *Financial solidarity, namely joint fund management and protection.*

There are two important mechanisms at EU and Member State level to finance measures and forms of financial support, these being: EAFRD (The European Agricultural Fund for Rural Development) and the EAGF (European Agricultural Guarantee Fund). The EAGF finances a series of expenditure to support the evolution of European communities, namely: direct payments to farmers in accordance with legal provisions; measures to inform and promote agricultural products on the Community's internal market or through various international organizations; the Community contribution to control programs and veterinary and phyto-sanitary measures; intervention measures to regulate agricultural markets; computer accounting systems in the field of

agriculture; expenditure on fishery products; collection, preservation and the effective use the full genetic potential (Anghel, et. al., 2017; Dima and Man, 2013).

The EAFRD is the financing instrument created by the EU to support Member States in implementing the CAP, through which a series of rural development programs are funded.

So Common Agricultural Policy can therefore be described as having the following dimensions: market support, financial support schemes and rural development, which are interconnected, their sustainability being given by the ability to act collectively. The first two dimensions are funded exclusively from the EU budget, while the rural development dimension is co-financed by the Member States (European Commission, 2013). The budget allocated to the CAP is significant, accounting for about 40% of the EU budget. However, it is important to highlight that the CAP budget represents, in 2014, only 1% of total EU public spending. The CAP has two major objectives: to increase agricultural productivity and ensuring optimal living conditions for all Community members. Achieving these objectives in rural areas is facilitated by providing adequate and specific financial support to each EU country.

From the analysis of the literature, it is clear that the CAP represents a set of mechanisms and rules that concern two fundamental aspects for rural areas, namely: regulates the production and marketing resources at EU level; sets out the mechanisms and levels of rural development (Man and Măcriș, 2014, 2015; Burja and Burja, 2015). The CAP is based on two pillars: *the pillar 1* on market measures to ensure food security, the regulation of supply-demand relations, the increase of farmers's incomes and the *second pillar* includes measures related to the development of the entire agricultural and agri-food sector, as well as the economic and social development of rural areas. The European funds for agriculture are accessed on the basis of the NRDP (National Rural Development Program), which details the modalities and conditions for investment financing for rural areas (Ciurea and Ioanăș, 2017). Although the CAP has generated a number of benefits and benefits, there are still some controversies and criticisms concerning the inefficiency of using EU funds in relation to budgetary efforts, the distortion of the international market due to the protectionism of EU products, and the redeployment of funds among member countries (European Commission, 2014; Răscolean and Rakoș, 2015).

In the future, agriculture must be geared towards knowledge and introduction of the latest technologies, so that rural areas are a priority in rural development. We believe that vocational training, knowledge transfer, innovation are important tools that can help improve the implementation of other measures and priorities in this area.

## **2. Data and Methodology**

In order to accomplish this work, data from the official statistics of the European Union, the National Institute of Statistics and EC Regulations were used and processed for the period 2007-2013 and 2014-2020. The methodology of this study was based on the qualitative and quantitative analysis of some budget items that were processed and interpreted statistically. Regarding the introduction of the paper, a series of scientific papers of this field have been consulted, from where was obtained the most relevant information.

## **3. Analysis of the Common Agricultural Policy in the first programmed period**

The Common Agricultural Policy in the period 2007-2013 focused its attention on the important economic, social, environmental and territorial objectives. Its evolution in the analyzed period was based on the four thematic axes that represented the major dimensions of rural development policy. The CAP budget for 2007-2013 provided for different allocations for Member States, with a structure appropriate to the specific conditions and objectives agreed at Commission level. Of the total CAP budget, over the period 2007-2013, Romania accounted for 3.6%. Of the total 40.7%, represent Pillar 1 and 59.3% Pillar 2. Thus, it is clear from the total budget of the CAP that France received the largest allocation, namely 17.3% followed by Italy with 15, 6%, Germany 12.9% and Spain 10.7%. In the CAP budget, our country ranks eight in the EU Member States, which means it has benefited from a fairly large financial allocation. The above mentioned issues can be found in table no.1.

The agricultural policy measures implemented in Romania since 2007 have been numerous, including: single land payments; national complementary payments per hectare and livestock, as well as other forms of support from the state budget for sensitive activities in relation to the market and with a view to eliminating the gap with the EU (Rusali, 2013).

Table no. 1 The level of CAP budget allocations in the first programmed period

Countries	Pillar 1 and Pillar 2 (mil. euro)	Percent of budget UE27 (%)	Budget unique payments (mil. euro)	The share of the total amounts for the states	Budget allocations Pillar 2 (mil. euro)	The share of the total amounts for the states
France	64,386	173	58,423	90.1	6,442	9.9
Italy	58,265	15.6	26,973	76.5	8,292	23.5
Germany	48,420	12.9	40,307	83.2	8,113	16.8
Spain	39,894	10.7	32,680	81.9	7,214	18.1
United Kingdom	29,737	7.9	27,827	93.6	1,910	6.4
Poland	28,269	7.5	15,039	53.2	13,230	46.8
Greece	18,188	4.9	14,480	79.6	3,708	20.4
<b>Romania</b>	<b>13,524</b>	<b>3.6</b>	<b>5,502</b>	<b>40.7</b>	<b>8,022</b>	<b>59.3</b>
Ireland	11,723	3.1	9,384	80.0	2,339	20.0
Hungary	10,298	2.7	6,494	63.1	3,804	36.9
Austria	9,117	2.4	5,205	57.1	3,912	42.9
Portugal	7,936	2.1	4,007	50.5	3,929	49.5
Denmark	7,646	2.0	7,201	94.2	445	5.8
Check Republic	7,316	2.0	4,500	61.5	2,816	38.5
Sweden	7,156	1.9	5,331	74.5	1,835	25.5
Holland	6,432	1.7	5,946	92.4	486	7.6
Finland	6,038	1.6	3,958	65.6	2,080	34.4
Bulgaria	5,098	1.4	2,489	48.8	2,609	51.2
Belgium	4,680	1.2	4,262	91.1	418	8.9
Slovakia	3,892	1.0	1,923	49.4	1,969	50.6
Lithuania	3,611	1.0	1,868	51.7	1,743	48.3
Leetonia	1,767	0.5	725	41.0	1,042	59.0
Slovenia	1,612	0.4	712	44.2	900	55.8
Estonia	1,209	0.3	494	40.9	715	59.1
Cyprus	379	0.1	217	57.3	162	42.7
Luxemburg	349	0.1	259	74.2	90	25.8
Malta	97	0	20	20.6	77	79.4
<b>UE 27</b>	<b>374, 518</b>	<b>100.0</b>	<b>286,223</b>	<b>76.4</b>	<b>88,295</b>	<b>23.6</b>

Source: date adapted to according to European statistics.

#### 4. Analysis of the Common Agricultural Policy in the second programmed period

In this programming period, the European agricultural programs are oriented towards *sustainable rural development*, which aims at developing a strong rural economy, modernizing the infrastructure, improving equipment and techniques specific to the countryside, as well as the efficient use of existing resources. The evolution of agriculture in the rural economy must be based on the economic and social functions of the agri-food system: ensuring a balanced supply of the population, achieving a profitable export of products and protecting the environment. Due to some aspects of the evolution of the economy at Member State level, EU agriculture faces a number of issues, such as food security, with significant differences in production and distribution; productivity decline and deterioration in trade activity; the impact of price changes on costs for buyers of agricultural products as well as for agricultural producers; increased production due to rising costs; climate change, natural resource conservation issues, resource efficiency as well as sustainable development (Man et al., 2011).



Therefore, the strategic objectives of Romanian agriculture for this programming period are: competitiveness, sustainable development and efficiency. In this respect, the main aspect that will lead to the proper use of the amounts available under the CAP is to simplify the procedures and mechanisms for attracting funds and implementing them, with the European Commission organizing a series of seminars, consultations and then implementing a set of concrete measures addressing the above-mentioned issues.

For the period 2014-2020, the main trends in EU rural development are as follows: increasing the competitiveness of agricultural holdings and promoting innovative technologies in order to ensure sustainable development; support for food chain; encouraging innovation and the transfer of knowledge in agriculture, forestry and rural areas; conservation of ecosystems related to agriculture and forestry; efficient use of resources, reduction of carbon emissions and climate change in the agriculture, agri-food and forestry sectors.

Of the total CAP budget, Romania is 5.3% in 2014-2020, with an important budget for rural development as well as for direct payments. In terms of the budget allocated to the CAP, Romania is ranked as one of the 28 EU member states, which means it has benefited from an important financial allocation. We also found that out of the total CAP budget, France received the highest allocation of 15.8%, followed by Germany with 11.2%, Spain with 10.8%, Italy with 9.6% and Poland with 8.4% (See Table 2).

*Table no. 2. The level of CAP budget allocations in the second programmed period*

Countries	Budget pillar 1 (in mil. euro)	Budget pillar 2 (in mil.euro)	Budget Pillar 1 + Pillar 2 (in mil.euro)	Percent of the total of sums for the member states
France	45,050	9,910	54,960	15.8
Germany	30,575	8,218	38,793	11.2
Spain	29,168	8,291	37,459	10.8
Italy	22,962	10,430	33,392	9.6
Poland	18,086	10,941	29,027	8.4
United Kingdom	21,411	2,580	23,991	6.9
<b>Romania</b>	<b>10,491</b>	<b>8,016</b>	<b>18,507</b>	<b>5.3</b>
Greece	12,009	4,196	16,205	4.7
Hungary	7,622	3,455	11,077	3.2
Ireland	7,279	2,190	9,469	2.6
Austria	4,154	3,938	8,092	2.3
Portugal	3,470	4,058	7,528	2.2
Check Republic	5,242	2,170	7,412	2.1
Bulgaria	4,540	2,339	6,879	2.0
Denmark	5,417	629	6,046	1.8
Sweden	4,187	1,745	5,932	1.7
Finland	3,142	2,380	5,522	1.6
Holland	4,575	607	5,182	1.5
Lithuania	2,730	1,613	4,343	1.3
Slovakia	2,314	1,890	4,204	1.2
Belgium	3,146	552	3,698	1.1
Croatia	1,065	2,325	3,390	1.0
Leetonia	1,415	969	2,384	0.6
Slovenia	819	838	1,657	0.5
Estonia	838	726	1,564	0.4
Cyprus	300	132	432	0.2
Luxemburg	201	101	302	0.1
Malta	30	99	129	0.0
<b>UE 28</b>	<b>252,239</b>	<b>95,338</b>	<b>347,577</b>	<b>100</b>

Source: Author's projection according to the official statistics of the European Commission

The direct payments represented by Pillar 1 represent the most important form of support for farmers, being a financial incentive that influences the quantity and quality of agricultural production. As a general principle of granting direct payments, the European Commission (EC) through EU Regulation no. 1307/2013 proposed targeting direct support to farmers who are actively engaged in agricultural activities. It can be appreciated that this measure is just and beneficial for farmers, so only those who practice agriculture effectively will receive direct financial support. In the period 2007-2013, this support was also given to inactive farmers, a measure that can be regarded as unproductive because the sums allocated to inactive farmers could be directed to active farmers, with the possibility to increase their activity (IER, 2012).

The objectives of the CAP are to increase competitiveness so that farms become efficient and sustainable. Therefore, farms in Romania and beyond have to cope with the economic, technological, social and environmental challenges and act in accordance with the principles of sustainable development. In this context, farms have to fulfil multiple functions, being the main actor of sustainable development.

## 5. Conclusions

This paper wanted to be an analysis of influence of the Common Agricultural Policy on Romanian agriculture during the first programming period and the beginning of the next period. The analysis revealed that Romania was one of the countries that benefited from the CAP tools, receiving significant sums that were used in the agricultural sector and rural areas. Among the achievements of this policy in Romania can be mentioned: direct payments that supported a million beneficiaries, rural development funds promoted sustainable agricultural practices and improved the potential of different agro-industrial sectors and industries, and the public resources used which stimulated economic growth and created jobs in rural areas, encouraging even young farmers.

Based on the findings made on this scientific approach, it is necessary that the state institutions, through decision-makers, pay more attention to the evolution of the rural environment in the current period (2014-2020) and alignment with the EU Member States' rural development directions, should target:

- simplifying the mechanisms and procedures for attracting and implementing various programs and projects;
- development of a competitive agriculture with the efficient capitalization of resources;
- facilitating the setting up of young farmers and their involvement in agricultural and non-agricultural activities in rural areas;
- strengthen the position of farmers on the market by developing short circuits between producers and consumers;
- supporting agri-environment measures according to the territorial specificity;
- supporting the LEADER approach by providing legal and institutional support as well as by providing an increased area of action as this type of partnership structure has had a significant impact on the modernization of the rural environment during the 2007-2013 period;
- giving more attention to natural disadvantaged areas through additional financial support.

In our opinion, the CAP is a key component of the agricultural sector in the development of Romanian economy and society.

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## Medical Services - A Significant Component of the Economic Activity

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### Abstract

*Medical services and their quality represent an important aspect for each individual, for the whole society, and the health of the population is a motor of the economy in the productive sphere. The main conditions that a high-quality health system must meet are: general coverage, response to needs, equity, efficiency, state responsibility towards public health. The present study is a comparison of marketing health services in Romania and worldwide.*

*The current consumer of health services is more educated and more concerned with health needs than in the past. The marketing of these services has begun to be viewed from a new perspective, more aggressive and more marketing-oriented and business oriented. The most important methods of promoting medical services refer to advertising in mass media, the Internet, social networks, professional advertising vs. institutional advertising. Private healthcare services are very well promoted in comparison with the health services in the public health system.*

**Key words:** medical services, quality, marketing

**J.E.L. classification:** D4

### 1. Introduction

Medical services and their quality are an important aspect for every individual, for the whole society, and the population's health is an engine of the economy in the productive sphere.

The meaning of service refers to the use word, so it can be said that the price of the good is in direct relation to the utility present for the consumer.

At present, services are an integral part of modern economies, serving communities, economic units, institutions and individuals, while also making a decisive contribution to the creation of gross domestic product, employment and, implicitly, the growth and development of economies (Ratiu M. P., 2006, p.49).

### 2. Medical services - peculiarities in Romania and worldwide

Health services, unlike other services, are demanded by a very large number of people, and health care means very high costs. In all countries, there is a national health policy that sets out how access to and use of health care is made. The mechanism includes the collection of resources for the payment of medical care (health insurance), allocation of resources and payment of production factors. In Romania, the main source of financing for health service providers is the financing from health insurance houses (Rațiu M. P., 2009, p. 273).

The health care of the population is closely linked to the degree of cultural development and the multitude of existing health services. Only with a very good state of health, man can effectively participate in the production process.

Regarding public health services to ensure the health of the population, the level of their quality can be expressed by the proportion of expenditures allocated to health from the state budget or the local budgets; the number of physicians per 100,000 inhabitants; the number of hospital beds per 1000 inhabitants. The state of health of the members of a human community contributes directly to

the evolution of the society as a whole, yet it is determined by the level of economic and social development, as well as by the diversity and quality of health services .

Romania, as a member of the EU, must ensure equal opportunities for citizens, guaranteeing non-discriminatory access to basic medical care as their fundamental right. At present, 3.4% of GDP is allocated to health in Romania, while in the rest of the EU countries it is allocated up to 4% and 14% of GDP. Unlike other Western countries, roumanians pay from their pocket for medicines and medical analyzes. 30% of the money in the system, while in Germany these payments represent 4%. In order to lower costs in the health services sector, prophylactic attitudes are mandatory, and the system should focus on treating disease early. From this point of view, Romania occupies an unfavorable position, at least half of the money collected in the insurance budget goes to hospitals (Ratiu M. P., 2009, pp. 274-275).

The core medical package should be redefined so as to cover the social component, but also requires the development of complementary private insurance schemes that will complement the core service package. Also, the medical services tariffs for each type of medical service must be regulated .

The way it is organized today, the Romanian health system has taken over something from several Western models: from the British, the way of organizing primary care was taken over; from the Germans the principle of equity was taken over and the organization of hospitals through the DRG system (payment of doctors according to the cases solved) according to the australian model (Minca D., et.al, 2004, p. 198).

The main conditions that a high-quality health system must meet are: general coverage, response to needs, equity, efficiency, efficiency, state responsibility towards public health. It all depends on the relationship between the socio-economic conditions of the respective country and the ever-increasing expectations of the patients .

Particular elements of the health system refer to:

- Patient-directed services, as the primary purpose of the service,
- Increasing the quality of health services offered,
- Involvement of internal human resources (doctors, employees) and external (Ministry of Health, patients) in achieving the objectives proposed by the unit.

The development of an effective health system is directly influenced by adopted care policies, dependent on their funding, cost-performance relationships and patient expectations (Popa F., et.al, 2007, pp. 54-63).

Private medical services, alternative to the public health system

Private medical services aim at paying full consultation, investigations, gaining considerable profits from the work of medical analysis laboratories and high-performance imaging paraclinic laboratories.

The basis for pricing in any market economy is based on demand and supply play. An important element in the setting of tariffs is the cost: in services with a specialized narrow monopoly position a satisfactory profit margin is obtained. The company's pricing policy is more focused on specific customer segments, with differentiated pricing. Diversification of tariffs for the same services by categories of customers aims at attracting categories that at the practiced tariff do not require consumption of the respective company. Each bidder has various possibilities to differentiate his services from those of competition by category.

The service market is usually imperfect, each service company having the specific brand and structure of the service, which allows it a relative power in pricing (Jivan A., 1998, pp. 121-122).

### **3. Marketing in the field of health services**

Promotional activities in the field of health services are influenced and diversified by the high level of available communication channels. In addition to traditional media, promotional tools include elements that ensure the tangibility of services, namely interpersonal contact with healthcare workers, physical elements of the distribution system, and consumers. Among these services, the main role is played by interpersonal communication, whether internal or external, mainly public relations activities, advertising has a diminished role compared to other areas of

applicability of service marketing, mainly due to the fact that it is considered unethical, being severely restricted by legal means .

Promoting is the most visible component of the marketing organization of health organizations. The application of marketing to these organizations materialized until the early 1990s, using only promotional techniques, from which the public relations and the organization of events were detached. Thus, most hospitals, as well as other organizations in the field, used public relations on a large scale, by circulating information on the work of the organization, announcing new developments, publishing internal publications (later client-oriented) and educational materials of the target audience. Also, many organizations (especially large ones and professional associations) have set up department for relations with the government, responsible for the consequences of legislative changes that could affect their work ( Evans W.D., 2006,p. 1207–1210).

In addition to these techniques, many organizations were somewhat involved in informal marketing activities when hospitals sponsored educational seminars or participated in different community events.

In the course of its development, the communication activity carried out by health organizations did not target the final consumer but the primary care physicians, who through the system of referrals and referrals contributed to the increase of the demand for their services (Balaure, V., 2002, p. 13-124).

It was only after the 1990s that organizations began to straighten their efforts directly and towards the final consumer. The consumer has become the center of these concerns, and marketing is seen as an integrated function of the work of health organizations. The consumer of the '90s is more educated and more concerned about health needs than in the past. During this period, marketing has begun to be viewed in a new perspective, as a consequence of the new generation of health system managers, who are more market oriented and business-oriented (Radulescu V., 2008,p. 71-75).

In addition, health communication and promotion is not only used in health at the level of organizations but is an important component of the Ministry of Health activity .

For example, under the Romanian legislation in force (Law 95/2006 on Health Reform), the Romanian Radio Broadcasting Company and the Romanian Television Society are obliged, within the program grids, to reserve free of charge the broadcasting space necessary for the promotion of the information campaigns, education and communication on public health issues. Although, even though health services are not always considered beneficial by healthcare professionals and other audiences, promotion actually makes the link between the organization's activities reflected in the product, price and distribution and its actual or potential consumers. Within these services, the promotion is distinguished by a series of elements determined by its links with the other components of the mix, as well as by a set of objectives, strategies and specific structures (Olteanu, V., 2003, p.59-62).

The means of communication can be grouped by taking into account the categories of receptors:

- internal communication, which addresses the actual customers and their employees, a component of interactive marketing;
- external communication, targeting both current and potential customers, a component of external marketing (Kotler, P., 2008, p.128-135).

Internal media means of communication are made up of material carriers, through which messages, information are provided to actual customers engaged in the process of service during the purchase and consumption of services. These include: advertising at the point of sale (posters, billboards, leaflets), information signs and user guide, ambience.

Internal interpersonal communication means are human carriers, which provide information and performs a number of other promotional elements during the service, including contact staff, other staff and customers.

The means of external media communication support classical media, their use in services, usually by the content of the message and the way of their transmission. These include: advertising, symbols, signposting, architecture, mail advertising.

Advertising has a lower focus on services compared to other means, and when used it is closely related to other means, and in particular: brand, symbols, contact person, customer, price (Evans W.D., 2006,p. 1207–1210).

In the health services, its role is even lower, being considered unethical and as such restricted. While in other areas promotion was generally accepted, such initiatives were discouraged or even prohibited in health. Restrictions did not involve public relations activities, educational activities or communication of the organization's activity, but media advertising. Even if restrictions are not so much, advertising in this area is still a controversial topic (Bernhardt J.M, 2006, p.2-4).

Among the forms of advertising, the most used health services are:

- institutional advertising, which aims to establish a positive attitude and attachment to the organization and its offer among the public;
- professional publicity, aimed at specialists in various fields, in this case physicians, by inserting advertisements in specialized publications (Radha A.,2011, p. 418-424).

In the United States, the importance of promoting the complex medical services of a hospital, whether public or private, involves the healthcare consumer in knowing the health procedures used in special headlines in nationally spread newspapers, on Twitter or on YouTube. Discussions are being held with specialists from various fields, videos are presented on the internet with various types of operations, as well as vital announcements in case of catastrophes, fires, floods to call the population in hospitals in case of force majeure. All studies have shown that the Internet is the most important vector for promoting health services regardless of the public or private health system. (<http://www.toprankblog.com/2010/01/social-media-healthcare-marketing/>)

#### 4. Conclusions

The development of an efficient healthcare system is directly influenced by adopted care policies, dependent on their funding, cost-performance relationships, marketing services and patient expectations.

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## Evaluation of Social Justice in Europe

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### Abstract

*This paper debates the concept of social justice in Europe and puts it in parallel with economic results. All of us want to live in a fair and just society, where the relationships between individuals are democratic, that includes the same opportunities and social privileges or an equitable distribution of wealth. In this context, is it true that a high level of economic growth has as consequence a high level for social justice? We want to see if this supposition is valid for European countries and also to spot the Romanian position with reference to social justice in conjunction to economic growth.*

**Key words:** social justice, composite indices, regression

**J.E.L. classification:** D63, O52

### 1. Introduction

The concept of social justice is not a new one, but the procedures for measuring it change time to time. The researchers want to include new aspects that reflect social problems in terms of fairness and justice.

In the ancient philosophy the concept of social justice appears in Plato, Aristotle and Socrates. They gave special importance to the idea of justice; for them social justice meant goodness and it was seen like the ideal of perfection in human relations. (Aristotle, 1998) (Plato, 1986) (Plato, 1975)

A remarkable political philosopher, John Rawls, who developed his ideas in the second half of the twentieth century, discussed the theory of justice as fairness. His theory presents the principles of justice required in order to govern a modern social order, taking into account the fact that all persons are free and equal. (Rawls, 2011)

Our contemporary concept of social justice starts from the assumption that the aim of present human structures is to create equal opportunities for a sustainable social market economy. This concept promotes equal opportunities through the development of individual capabilities to the detriment of distributive justice. (Schraad-Tischler, 2016, p.77)

Also, we mention that all religions of the world debate in their doctrine the issue of social justice, but the concept is approached differently from one religion to another.

### 2. Measuring the Social Justice

At the European level, The Social Justice Index is a common tool used for measuring the social justice problems. This is a composite indices, which has the next six main components: poverty preventions, social cohesions and non-discrimination, labour market access, equitable education, intergenerational justice and health.

It comprises 28 quantitative and 8 qualitative indicators. The weight of the six directions is different. So, the dimension of poverty is the most powerful, with a triple weight, followed by access to the labour market and to equitable education with double weight. The other three dimensions are included in indices at the simple weigh. The scores for Social Justice Index are between 1 and 10, where 1 is the worst and 10 is the best.



### 3. Social Justice Index for EU countries – some comparisons

As we mentioned above, the values for Social Justice Index are between 1 for the countries where the social justice is almost absent and 10 for the countries where the social justice is the best.

The latest published Index of Social Justice is calculated for the year 2017. The values index higher than 7 are for Denmark, Sweden and Finland in order. The EU average for index is 5.85, with 0.10 units higher than in the previous year. In the bottom of ranking are in order Spain, Italy, Bulgaria, Romania and Greece with the smallest values of index. Romanian occupies the penultimate position with an index value of 3.99 and it is followed only by Greece. The relative distance for EU average for Romanian is -31.79%. This value indicates that our country still has to work in the field of social justice and a flash analysis indicates that the components that pull us down the rankings are poverty prevention, equitable education and social-cohesion and non-discrimination.

Table no. 1 – Scores of Social Justice Index in dynamics

Country	Social Justice Index (weighted) in 2014	Social Justice Index (weighted) in 2015	Social Justice Index (weighted) in 2016	Social Justice Index (weighted) in 2017	The Relative Distance to EU average (%) for 2017
Sweden	7.48	7.40	7.51	<b>7.39</b>	26,32
Finland	7.08	7.29	7.17	<b>7.31</b>	24,96
Denmark	7.17	7.13	7.16	<b>7.14</b>	22,05
Czech Republic	6.66	6.74	6.85	<b>6.84</b>	16,92
...					
<b>EU Average</b>	5.62	5.63	5.75	<b>5.85</b>	0,00
...					
Spain	4.78	4.75	4.76	<b>4.96</b>	-15,21
Italy	4.69	4.69	4.80	<b>4.84</b>	-17,26
Bulgaria	3.83	3.85	4.03	<b>4.19</b>	-28,38
<b>Romania</b>	<b>3.72</b>	<b>3.54</b>	<b>3.91</b>	<b>3.99</b>	-31,79
Greece	3.58	3.64	3.66	<b>3.70</b>	-36,75

Source: Social Justice in the EU – Index Report 2017 and own calculation

For the year 2017, the ranking shows us that for three countries the values are over 7, such as Sweden, Finland, Denmark, countries with the highest level for social justice. These are followed by other ten countries with a level of index comprised between 6 and 7. The average of indexes for all 28 European countries is 5.75, and this value divides the countries in two parts: 14 countries with values of Social Justice Index higher than European average and 14 countries with values below the European average.

A deep analysis of the components highlights the fact that between European countries takes place a separation between northern countries and southern countries in terms of social justice, a considerable differentiation between them can be noticed. For example, when we analysed the components of Social Justice Index we discovered that the risk of poverty still represents a threat in the case of countries such as Greece or Spain. In this specific case the percentage of people being currently exposed to the risk of social exclusion and to the threat of poverty are in order 35.7% and 28.6%. [Index Report 2016]. In the case of young people or children, the situation is even worse. It is also worth mentioning the case of Romania and Bulgaria, here the situation is not favourable, the values 1.77 and 1.39 are much closer to 1 value, a fact which indicates serious issues regarding relative poverty and social exclusion.

In terms of equitable education access, the highest score is recorded for Denmark with a value of 7.84, followed by Sweden, Finland and Slovenia. The performance of these countries is explained by high level of public expenditure on early-childhood education and by efficient reforms in education. For other countries the low values demonstrate the need for reform in the

field of education in order to reduce the gap and to assure an equitable education. For example, Romania's score is 4.91 and this value ranks it 27th out of 28 countries.

The access to labour market is also an important aspect of social justice. The score for this component is highest for Denmark, Germany, United Kingdom and Austria. These countries have a high level of employment rate, around the value of 75%. Romania is situated on the 21th position, and the aspects considered are: employment rate (61.6%), unemployment rate (6,1%), youth unemployment rate (20.6%), older employment rate (42.8%), involuntary temporary employment rate (76,8%), low-skilled unemployment rate (7.3%), long-term unemployment rate (3.1%), in-work poverty rate (14,3%) and the ratio disabled/non-disabled for the employment rate (0.78 ratio).

Table no. 2 – The main Components of Social Justice Index in 2017

Country	Poverty Prevention Score 2017	Equitable Education Score 2017	Labour Market Access Score 2017	Social cohesion and non-discrimination score 2017	Health Score 2017	Intergenerational justice Score 2017	Social Justice Index (weighted) in 2017
Sweden	6.62	7.77	7.03	7.50	8.16	7.97	<b>7.39</b>
Finland	7.03	7.62	6.73	7.46	6.99	7.20	<b>7.31</b>
Denmark	7.00	7.84	7.63	7.31	7.43	7.19	<b>7.14</b>
Czech Republic	7.81	6.35	6.46	6.11	7.61	5.66	<b>6.84</b>
...							
<b>EU Average</b>	<b>6.33</b>	<b>6.28</b>	<b>6.07</b>	<b>5.96</b>	<b>6.37</b>	<b>5.47</b>	<b>5.85</b>
...							
Spain	4.35	5.32	4.10	5.88	7.04	4.75	<b>4.96</b>
Italy	4.16	5.40	5.17	4.88	5.79	4.10	<b>4.84</b>
Bulgaria	1.39	6.23	5.44	4.02	5.20	5.20	<b>4.19</b>
<b>Romania</b>	<b>1.77</b>	<b>4.91</b>	<b>5.50</b>	<b>4.33</b>	<b>4.21</b>	<b>5.18</b>	<b>3.99</b>
Greece	2.53	5.27	3.46	4.36	3.99	3.60	<b>3.70</b>

Source: Social Justice in the EU – Index Report 2017

Social cohesion and non-discrimination score take into consideration aspects like gender discrimination against people with disabilities, equality in parliament, the share of youth that are not in education, employment or in training, the employment rate of immigrants and their descendants. The performance is noticeable for Netherland, Sweden, Finland and Denmark. Poor performances are registered for Hungary, Croatia, Bulgaria and Romania and this reflects considerable difficulties in preventing discrimination for the vulnerable groups: adults and children infected with HIV, people with disabilities or the persons of Roma minority.

Regarding of health we remark that the highest ranks are for Sweden, Denmark and Luxembourg. The last places in the rankings are occupied in order by Romania, Greece and Latvia. This part includes problems like healthy life expectancy and qualitative indexes for measuring the health policy or health system outcomes.

Sweden, Denmark and Finland also lead the top of countries with the highest level of intergenerational justice, with score values higher than 7 and at the end of the list we find in order: Italy, Cyprus and Greece. So, once again, the Northern countries proved to be successful example in this continuous concern of maintaining the interests of younger generations and, at the same time, not diminishing the efficacy of their policies for the young and old alike. In the rankings Romania is on the 17th with score value of 5.18, the EU average score being 5.47.

#### 4. Testing the Relationship between Social Justice Index and Economical Results

In practice, there are a lot of indicators for measuring the economical results, at the macroeconomic level and microeconomic level. Here we refer at the performance on the macroeconomic level and to the specific indicators which highlight it.

One of the main macroeconomic aggregates, Gross Domestic Product (GDP) synthesizes the results of economic activity produced, on the specific country territory during a time level, usually one year. It includes the total value of final goods regardless the contribution of the internal or foreign subjects. We use here GDP at current prices, measured in euro per capita, because we consider that it is more relevant for comparisons.

Statistics have numerous tools to emphasize the relationship between the variables and we have chosen the regression analysis to study the relationship between social justice and GDP per capita. The regression studies the relation between two or more variables, as well as the discovery of the law relative to the form of the relations between variables (Jaba, 2002)

Here, the regression model is the simple factorial linear one. The mathematic relation is:

$Y = \alpha + \beta X + e$ , where Y is the dependent variable, X is the independent variable, and e is the error or residual variable, which is the sum of the influences of the other variables not included in the model on the variable Y.

$\alpha$  and  $\beta$  are the parameters of the regression equation, and  $\beta$  indicates the degree of dependence between the variables, that is by how much Y increases or decreases when variable X increases or decreases by a unit.

In our case the independent variable is the GDP per capita in Euro at current prices and the data sources for this indicator are Eurostat Databases. The dependent variable is Social Justice Index, with values between 1 the worst and 10 the best.

We investigated the regression analysis for two indicators, with values for 2016: GDP per capita and Social Justice Index. We started from the supposition that a high level of GDP determines a high level of social justice in Europe.

We have used EViews 7.1. to estimate the parameters of the regression model. The regression equation has as the factorial variable the value of the GDP per capita and as resultant variable the Social Justice Index (SJI). At the same time, we have considered that this model will include a free term, c and we used least squares as estimation method for parameters.

The EViews 7.1. processing provided the following results:

$$SJI = 4.87 + 0.000031227 * GDP$$

Using the T-Test, we found that the estimators of the regression equation parameters are significantly different from zero, and the results are guaranteed for a probability of 99%.

The value of adjusted  $R^2$  is 0.29, therefore, the intensity of the relation between the variables is low and we can conclude that the pecuniary aspect is not one of the most important elements that ensure the social justice.

## 5. Conclusions

Even if significant progress has been made at EU level with regard to social justice, practical reality shows that inequities persist within each member state and also between member states.

We also observe the separation between southern and northern countries in the field of social justice. There are some countries which occupy the first places for all Social Justice Index components: Finland, Denmark, Sweden, and Netherlands. In opposition, there are some other countries that consistently record low values of Social Justice Index components: Spain, Italy, Romania, Bulgaria and Greece.

For Romania, despite the high economic growth, the general level for social justice is low. The areas with the most serious problems are poverty prevention and health, areas that require profound reforms.

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## Labour Productivity: Concept and Tendencies

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### Abstract

*This paper addresses the important topic of increasing labour productivity. The expansion of this indicator has a multitude of economic and social implications, also affecting the average consumer. Following the presentation of some theoretical elements related to labour productivity, we make some comparative references and we recall the necessary correlation with salaries. Then we refer to the labour productivity determined by the National Institute of Statistics (INSSE) for the period 2011-2014, both when it comes to labour productivity per employed person, as well as to hourly labour. Obviously, the indicators in question are considerably below the European average. But for a relative mitigation of the gaps, we indicate some ideas in the Conclusions and Recommendations section of our paper.*

**Key words:** Labour power, wages, production costs, quantity of products, scientific progress, INSSE.

**J.E.L. classification:** E24

### 1. Some theoretical elements on labour productivity

The wealth of a state, according to economic science, is measured by the social productivity of labour – which is based on its specific character – productivity expressed in gross domestic product per capita.

A significant synthetic indicator of the efficiency of the economic activity of the companies, labour productivity “reflects the efficiency or fruitfulness of the work spent in the process of production” (Toropu, 2013).

The increase in labour productivity, which implies the achievement of a larger quantity of products in the same time unit, is influenced by managerial factors, the level of the technical equipment, the qualification/training of the personnel, the working conditions/climate, the level of rewards, etc. (Cojocaru *et al.*, 2004; Cojocea, 2004; Burciu, 2008; Bostan, 1999). We recall here that the specialty literature (Atkinson, 1982) refers more extensively to the factors of influence of labour productivity, from the natural, technical, economic to the psychological ones.

In the context of the desire to increase the performance of production expenditure, it must be noted that the efficiency of the use of the production factors prevails and not the production volume, which – based on the escalation of the qualitative factors – may increase, maintaining the level of the resources.

The scientific and technical progress (Cojocea, 2004) is the one that generates “a revolution of technical capital, material, energetic and human resources ..., replacing the old equipment with modern one, changing the structure of the labour force and, despite all this, savings in labour are obtained”.

At the same time, starting more than three decades ago, aiming to ensure the conditions for increasing the efficiency of labour, it has been argued that “science potentates the labour more and more” (Drăgănescu, 1983).

## 2. The correlation with the wages

What needs to be permanently kept in mind for the "health" of the economy is that the distribution of income (salary, profit, interest, rent) can only take place in direct connection with the increase/appreciation in productivity (Garello & Naudet, 1991).

Lately, it has been stated more and more that "the increase in wages must not exceed the productivity of labour, and in these conditions – specific to the Romanian economy (our note) – the salaries cannot be raised by more than 9-10% (per year). There may be deviations from this margin, for example, increases of 5% in certain branches, while salaries in other segments may increase by 15%, but per total, the increase in revenues cannot exceed 10% (Lazea, 2009).

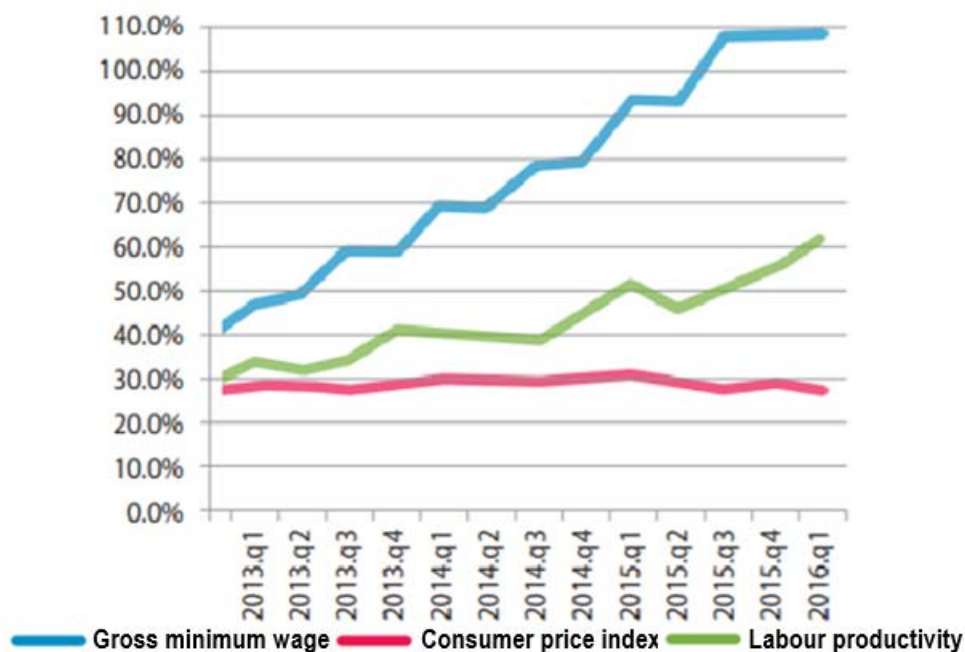
Two years ago, the productivity of Romanian employees reached about 2/3 of the average registered in the European Union, compared to 2004, when it was about 1/3 of the same average. However, "we need 10, 15 or maybe even 20 years to reach the average of the other EU states" (Sorin Faur, apt Demetriad, 2016).

Currently, the share of wage earnings in GDP remains very small in Romania (35%), the only time it has reached 40% of GDP was in 2008, before the crisis. The average in the EU is approx. 47% and remained constant at this level for more than a decade (Georgescu, 2016). At the same time, according to the same source, in Romania "the share of the Romanian companies' profits was increasing ... The operational profit of the companies reached in 2014 not less than 57% of GDP, 17% above the European average and twice as much as the wage average".

Starting in 2013, "seven successive increases of the minimum wage have taken place, the measures being correlated with those regarding the tax cuts and economic recovery. The share in average wage increased between 2013 and 2016, at a high growth rate compared to that of the economies in the region" (Socol & Marinas, 2016).

Suggestive comparisons of the dynamics of the minimum wage with those of labour productivity at national level (determined as a ratio between the gross added value and the employed population) and of the consumer price index are shown in Figure no. 1.

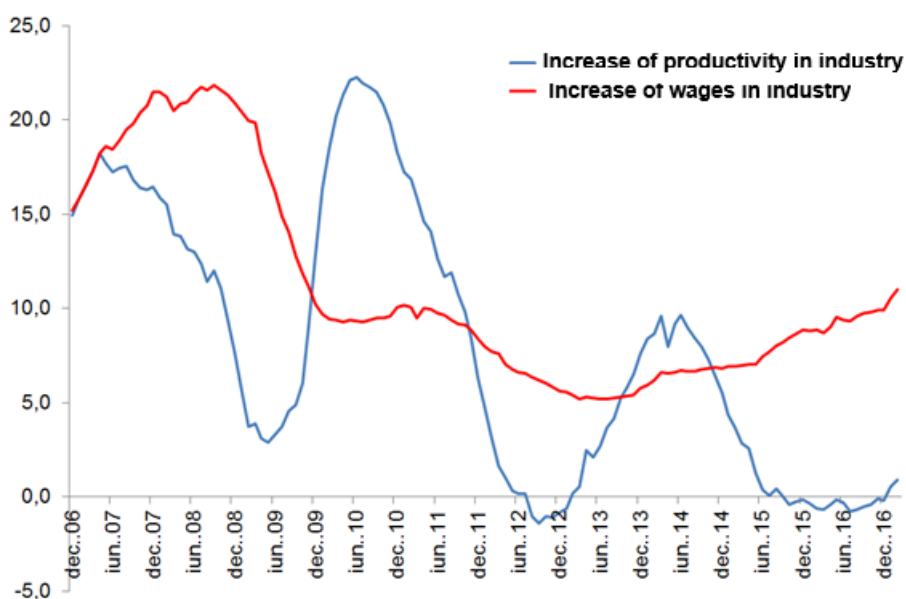
Figure no. 1. Lack of correlation between minimum wage and labour productivity (2008-2016)



Source: <http://library.fes.de/pdf-files/bueros/bukarest/13271.pdf>

Below is the graphical representation (Figure no. 2) of the correlation of wages with the labour productivity as it applies specifically to the industry (2006-2016).

Figure no. 2. The correlation of the wages with the labour productivity in industry (2006-2016)



Source: BCR (2017), <http://www.raducraciun.ro/usor-cu-dublarea-salariilor-pe-scari-2/>

### 3. The labour productivity determined by the National Institute of Statistics (INSSE)

The Romanian Statistical Yearbook (INSSE, 2016) devotes a considerable amount of space to this indicator.

Here it is mentioned that the labour productivity per employed person was calculated as the ratio between the gross value added and the number of occupied persons and the productivity per hour worked was calculated as the ratio between the gross value added and the number of worked hours.

But here is how the productivity of labour, per occupied person is presented (Table no. 1).

Table no. 1. Labour productivity, by employed person (2011-2014) (lei / person)

Activity (CANE Rev.2 divisions)	2011	2012	2013	2014
<b>Total</b>	<b>54593,8</b>	<b>60413,9</b>	<b>65512,6</b>	<b>68469,5</b>
<i>Agriculture, forestry and fishing</i>	13351,6	10488,7	13275,8	12485,6
<i>Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning production and supply; water supply; sewerage, waste management and decontamination activities</i>	82034,4	84330,8	90722,3	91996,8
<i>Construction</i>	66361,1	70201,1	71705,0	65604,6
<i>Wholesale and retail; repair of motor vehicles and motorcycles; transport and storage; hotels and restaurants</i>	36865,1	61768,6	55963,5	58466,8
<i>Information and communication</i>	187508,7	163370,7	219900,8	219595,7
<i>Financial intermediation and insurance</i>	162586,3	144516,5	218092,9	217771,5
<i>Real estate activities</i>	1184408,9	1921346,8	2003027,7	1822359,1
<i>Professional, scientific and technical activities; administrative and support service activities</i>	97647,8	97802,3	122125,5	117837,2
<i>Public administration and defence; compulsory social security; education; human health and social work activities</i>	50054,7	54611,6	59369,0	73841,5
<i>Arts, entertainment and recreation; repair of household goods and other services</i>	63578,9	81944,1	73760,4	80689,4

Source:

[http://www.insse.ro/cms/sites/default/files/field/publicatii/anuar\\_statistic\\_al\\_romaniei\\_2016\\_format\\_carte.pdf](http://www.insse.ro/cms/sites/default/files/field/publicatii/anuar_statistic_al_romaniei_2016_format_carte.pdf)

The labour productivity per worked hour is presented in Table no 2.

Table no 2. Labour productivity per hour worked (2011-2014) (lei / hour)

<b>Activity (CANE Rev.2 divisions)</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Total</b>	<b>54593,8</b>	<b>60413,9</b>	<b>65512,6</b>	<b>68469,5</b>
<i>Agriculture, forestry and fishing</i>	13351,6	10488,7	13275,8	12485,6
<i>Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning production and supply; water supply; sewerage, waste management and decontamination activities</i>	82034,4	84330,8	90722,3	91996,8
<i>Construction</i>	66361,1	70201,1	71705,0	65604,6
<i>Wholesale and retail; repair of motor vehicles and motorcycles; transport and storage; hotels and restaurants</i>	36865,1	61768,6	55963,5	58466,8
<i>Information and communication</i>	187508,7	163370,7	219900,8	219595,7
<i>Financial intermediation and insurance</i>	162586,3	144516,5	218092,9	217771,5
<i>Real estate activities</i>	1184408,9	1921346,8	2003027,7	1822359,1
<i>Professional, scientific and technical activities; administrative and support service activities</i>	97647,8	97802,3	122125,5	117837,2
<i>Public administration and defence; compulsory social security; education; human health and social work activities</i>	50054,7	54611,6	59369,0	73841,5
<i>Arts, entertainment and recreation; repair of household goods and other services</i>	63578,9	81944,1	73760,4	80689,4

Source:

[http://www.insse.ro/cms/sites/default/files/field/publicatii/anuar\\_statistic\\_al\\_romaniei\\_2016\\_format\\_carte.pdf](http://www.insse.ro/cms/sites/default/files/field/publicatii/anuar_statistic_al_romaniei_2016_format_carte.pdf)

Obviously, as we mentioned above, the indicators in question are consistently below the European average. But for a relative mitigation of the gaps, we present some ideas in the next section of our paper.

#### 4. Conclusions and recommendations

The increase of the productivity of labour has a multitude of economic and social implications, reaching up to the level of the average consumer. Starting from what Albertini has written (1998), we understand that productivity is first of all, by aiming to create goods and delivering services / products that are as useful, diverse/various and qualitative as possible, an efficient compilation of production factors. Obviously, it is about the classical factors – labour, capital and natural resources.

The improvements in the analyzed subject assume that it is taken into consideration that the managerial element is essential in the context of increasing the productivity of labour. This is designed to lead to a better/intensive use of the production capacities, working time, by rationalizing the management and organization of the economic activity.

Furthermore, on the other hand, by qualification, the workforce becomes more productive, the skills and knowledge of the worker allowing for a more rational use of working time and more efficient use of the production lines, leading to the achievement of a finite product/service of superior quality.



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## The Phenomenon of not Declaring Paid Activities to the Public Authorities

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### Abstract

*In the actual situation when an employer receives the work of a person without the completion of the individual labour contract (in written form) before the start of the work, we are dealing with the “black”/undeclared work, and respectively, with the failure of declaring to the public authorities the remunerated activities. It does not matter if the non-declaration is partial or total. As it takes place on a large scale, we are talking about a phenomenon. It produces both financial (budgetary) as well as social negative consequences, affecting, in time, the workers. We refer in this paper to certain issues connected to this theme, with particular reference to Romania.*

**Key words:** undeclared work, social insurance, significant concepts, sanctions, legislative expressions

**J.E.L. classification:** J81, O15, K31, K34

### 1. The concept of undeclared work

In the real economy, we often encounter the situation when various employers either do not declare the entire activity of the employee to the specialized state institutions or declare only partly the activity. In both cases we are dealing with what we call undeclared / unofficial / “black” work which implies that the employees can not benefit from the protection deriving from the laws on labour, and, on the other hand, they fail to exercise to the State - in relation to their income from the performed work – the tax attribute, in whole or in part. In other words, “it is not registered, it is not taxed, it is not protected, it is not ensured and it is not socially assisted” (SOCINRO, 2017).

A recent definition is the one found in a legislative act amending the Labour Code, according to which the undeclared work represents: a - the employment of a person without having concluded an written individual contract a day before the beginning of the activity; b - the employment of a person without prior registration of the employment agreement to the Electronic Registry of Employees no later than the day before the start of the activity; c - work provided by an employee having its employment contract suspended; d - twork provided outside working hours by an employee working part-time” (the Romanian Government, 2017a).

At the same time, we must point out that, in the sense of what we mention here, the specialty literature is relatively abundant (Anita, 2011; Bostan, 1999, 2007; Costea, 2010; Drosu-Saguna & Tofan, 2010; Tofan & Cigu, 2017), dealing with this issue from various angles.

It should be noted that at the European level, the undeclared work is seen / defined in terms as simple as possible, namely “any paid activities that are lawful as regards their nature, but are not declared to the public authorities” (Romanian Government, 2017b). Also, in all EU Member States, there is relatively efficient legislation to prevent and fight this phenomenon, but, however, the phenomenon is present in different dimensions and takes various forms.

Most often we encounter: “a - the agreement between the native employer and the Romanian employee who accepts to perform the work without signing an individual labour contract; b – the illicit use of the day labour or seasonal workforce (day-labourers, apprentices, etc.) by various employers or service providers, especially in the agricultural or constructions sectors; c - the lack of identification of the entire volume of work and its lack of taxation, at the same time with the

keeping of double evidence and the "cash-in-hand" wages representing an amount in addition to the one being paid officially" (SOCINRO, 2017).

For the reasons given, since 2001, the issue in question falls under the incidence of the Employment Guidelines for the Member States and is also integrated into the European Employment Strategy (D.L., 2014).

## 2. Unofficial work in Romania: dimensions, prevention, combat

If at the level of the 28 EU Member States, 50% of the surveyed citizens (Eurobarometer Special Surveys, 2014) mention the advantages for both parties as the main reasons for the undeclared work, 21% mentioned the difficulty of finding a job with legal forms, 16% - the perception that taxes are too high and 15% - the absence of other incomes, in Romania there is rather the difficulty of finding a job with legal forms or the lack of another source of income.

Then, while most of the undeclared European work occurs in sectors such as home repair, gardening, cleaning and childcare, in Romania, "the most common areas are constructions (during the construction season), services, security firms, clothing, part of the agriculture sector (...), public alimentation, we must not forget the restaurants, referring to the summer period" (Capital.ro, 2015).

Referring to certain dimensions of the phenomenon, we show that an official document of the Fiscal Council, elaborated / published in 2014 (Fiscal Council, 2014), states that "among the sectors with the highest share of undeclared work from the total of the undeclared labour is the civil constructions sector (66,2% of the workforce is undeclared), repair, maintenance and installation of machinery and equipment (63,6% undeclared work), IT services (60,3%), manufacture of textile products (48,1%), land transportation and by pipelines (40,6%)".

The calculations of the same state body, in terms of the impact on the budget - tax evasion resulting from the undeclared work, prejudicing the income taxes (IV) and social security contributions (CAS), indicate significant values (Table no. 1):

Table no. 1. The evolution of the tax evasion from the undeclared work

Mil. lei	2009	2010	2011	2012	2013
<b>Total tax evasion from undeclared work</b>	14.652	16.665	17.510	16.966	16.414
<b>Income tax</b>	3.473	3.950	4.151	4.022	3.891
<b>Social Security contributions</b>	11.179	12.715	13.359	12.944	12.523

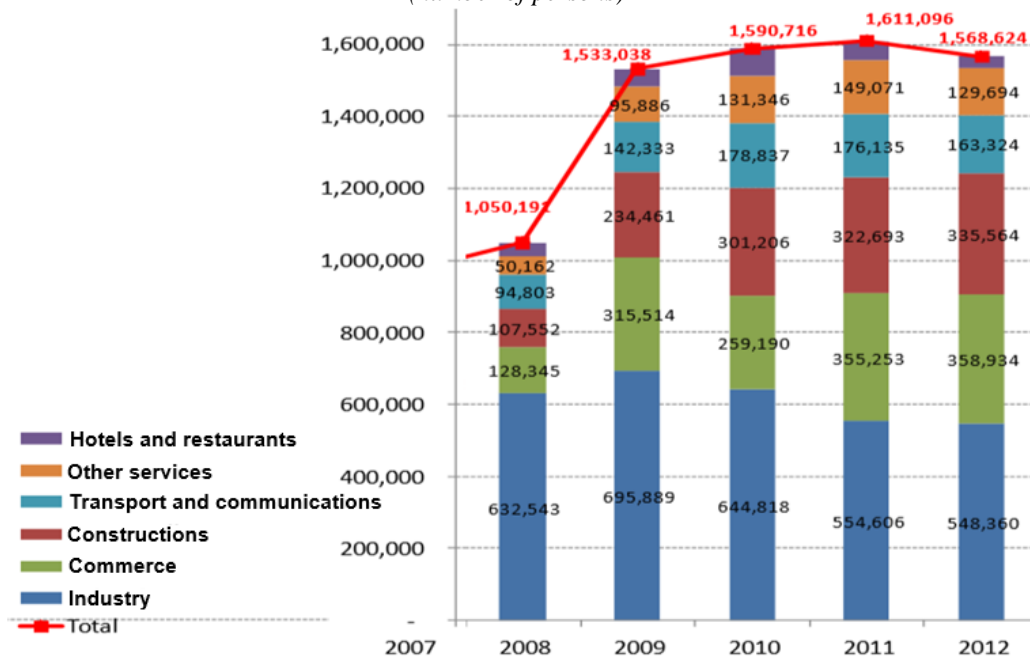
Source: <http://www.consiliulfiscal.ro/ra-2013.pdf>

The Fiscal Council is also the state body that highlights that five years ago, "in Romania there were about 1,57 million undeclared employees, employers and individual entrepreneurs ("black market"), representing approximately 27.7% of the total of employees, employers and individual entrepreneurs in the economy". The evolution of the undeclared work and the unregistered individual entrepreneurs is shown in Chart no. 1.

As it can be observed from what we presented above, in Romania, the phenomenon of non-declaring the paid activities to the public authorities, presenting a particular social risk, has a magnitude which, through its action and consequences, cannot be neglected.

Even more, it is estimated that "Romania is among the first countries in Europe when it comes to illegitimate workers. Every day, more than 1,5 million Romanians work without benefiting of the security of a legal contract. Such evasion damages the Romanian state with 4 billion Euros annually (...)" (Capital.ro, 2015).

Chart no. 1. The evolution of the undeclared work and undeclared individual entrepreneurs (number of persons)



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

It is for such reasons that it is necessary to ensure the current verification of the compliance with the legal obligations by the employers in the field of labour relations. Such tasks appertain to the Labour Inspection (State Authority), which is a specialized body of the central public administration, subordinated to the Ministry of Labour and Social Justice (Romanian Parliament, 1999).

The specific attributions of the above mentioned institution are oriented towards: “the prevention, detection and sanctioning of the undeclared work, aiming, by its specific means, to decrease and to fight against this phenomenon, the ultimate goal being to obtain the employment with individual labour contracts of as many employees as possible in order to reduce the risks of the occurrence of undeclared work in all economic and social fields“ (Labour Inspection, 2017). At the level of year 2016, according to the above mentioned source, the results of the control actions on the detection and combating of undeclared work cases are as follows:

- 74.097 control activities carried out;
- 3.164 disclosed employers, of which 2.901 were sanctioned for work without legal forms (88 employers were sanctioned for using employers aged 15 - 18 without concluding the legal labour contracts) and 263 acts referred to by the Labour Code, republished, as representing crimes, for employing more than 5 persons without legal work contracts;
- 9.936 persons found working without legal employment forms, of which 2.415 women and 123 young people aged 15 – 18;
- 6.041 persons for whom the individual work contracts have not been transmitted and registered with the Electronic Registry of Employees (REVISAL) and 22.415 persons for whom the contracts have been sent by the employer with delays;
- 2.860 individual labour contracts concluded and registred with REVISAL for employees found to be working without legal forms;
- 42.171.700 lei - the value of the penalties applied for work without legal forms, of which 42.127.000 lei applied to employers (99,89%) and 44.700 lei applied to the persons discovered to be working without an individual work contract (0,11%);
- 3.702 measures applied as consequence of the found inconformities.

Source: <https://www.inspectiamuncii.ro/>

Although the results of the control work on the fight against the undeclared labour seem to register certain efficiency, the discussion should be nuanced. Therefore, it is precisely for the reason of making this activity more efficient that the legal framework applicable in this direction has recently been amended. The severely amended norm (Labour Code) states that starting with the 1<sup>st</sup> of August 2017, "to keep a copy of the individual work contract for the employees who work in that place", "the conclusion of the additional act amending the individual work contract prior to making the change" and "keeping at the workplace the record of the hours worked daily by each employee, highlighting the starting and ending time of the work program" (Romanian Government, 2017b).

At the same time, the disincentive character of the legal norm was emphasized, for the situation of the undeclared work, the amount of the contravention fine being set at "20.000 lei for each identified person and the cessation of the activity of the organized work place subjected to the control activity (...), with the possibility of resuming the activity only following the payment of the fine and remediation of the deficiencies ..." (Romanian Government, 2017a).

On the other hand, the act of employing more than 5 people without an individual work contract is no longer a criminal offence, but the maximum limit of the fine of 100.000 lei has been eliminated, so that if previously there was a possibility for the guilty part, against which criminal prosecution started to obtain a resolution not to commence the criminal prosecution or of acquittal or, often, an administrative fine (500-1.000 lei), it is now extremely difficult to avoid the payment of the fine (20.000 for each identified person).

In addition, in order to encourage the offender to comply with the voluntary payment of the contravention fine, it has also been established the possibility of paying half of the fine within 48 hours from the date of the conclusion of the report or its communication.

### 3. Conclusions

The utter most negative consequences of the phenomenon of non-declaration to the public authorities of the paid activities led us to bring into question the social danger that arises. The vulnerabilities generated within the state budget by the lack of payment of the contributions corresponding to the wages, but especially the effects it has upon the workers, who are deprived of the protection which is provided by the labour legislation and generally of the social protection, have attracted the legislator's concern to create a more efficient normative framework.

If the Western states adopted the establishment of a line of incentives to formalize undeclared activities (underground/black) - administrative streamlining, direct tax benefits for shopping/value coupons for services, measures to promote a commitment culture, Romania appealed to the establishment of a deterrent system of sanctions.

It operates - through the Labour Inspectorate as a state labour relations authority - for any employer tempted to avoid the payment of the social contributions and taxes on the wages of the workers, by using undeclared work in his own interest.

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## ESP Teaching and Needs Analysis. Case Study

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### Abstract

*This paper explores the characteristics of the English language for Specific Purposes (ESP), the difficulties and challenges faced when teaching English as a foreign language, and the importance of Needs Analysis in learning a foreign language. For this purpose, we applied a questionnaire to a group of intermediate level (B1) students, majoring in Tourism. The needs analysis revealed the approaches and activities that should be applied in different types of lessons, thus giving the students the opportunity to improve their English skills and find out what they lack and need when studying English for their future professional careers. The results outlined the need for concrete activities and strategies, with the focus on communicative skills, based on learner-centered approaches and activities, real-life situations by using authentic materials that are efficient for the students' better integration into the Tourism labor market.*

**Key words:** ESP, Needs Analysis, tourism, skills

**J.E.L. classification:** K00

### 1. Introduction

Nowadays, English is being spoken all over the world almost on a daily basis, thus, being considered a universal, international language or a *lingua franca*. People need it for various purposes, hence its consolidated dominance as the language of the Internet, with huge amounts of data electronically stored in English. English and globalization have spread hand in hand through the world and this process started with the dominance of two successive English-speaking empires, British and American, and continues today with the new virtual empire of the Internet. Most of our society has become computer addicted for different reasons ranging from data bases to entertainment, job-related subjects, the media, i.e. television channels, radio, movies. English has invaded the workplace along with the global economy. Exchanges and interactions among people and peoples are increasing the need for both general English, and an extensive English vocabulary in various scientific, technological, medical, judicial, political, social fields (some of these issues related to the internationalization of the English language and ESP teaching are debated by many scholars such as Day and Krzanowski, 2012; Ananyeva, 2014; Díaz-Rico 2013; House 2012).

This worldwide demand has led to the emergence of the so-called English for Specific Purposes (ESP). In order to understand the features and prerequisites of various professions, and to adapt to these special requirements, some people use distinct learning styles, methods and strategies when they study general English and ESP. Thus, the ESP approach provides opportunities to the learners to acquire English in a more natural, informal way, which means working with language in a context that they comprehend and find interesting, motivating and rewarding (Basturkmen, 2006; Basturkmen, 2010).

## 2. ESP – concept and features

A great deal of definitions of ESP has been provided so far. For instance, scholars Mackay and Mountford, in their work *English for Specific Purposes: A case Study Approach* (1978: 2), state that ESP involves the process of English teaching for a “clearly utilitarian purpose”, shaped by the learners’ needs (such as academic, occupational, or scientific). In their turn, the learners’ needs underlie the contents of the ESP curriculum. Furthermore, these above-mentioned authors see ESP as a special language used by certain speakers (usually adults) in particular/ specialized settings and contexts. Therefore, in their study, they dealt with adult learners because the latter are generally highly conscious of the purposes and reasons to acquire English skills and proficiency in a certain field of specialization; moreover, these adult learners often use ESP in the specific contexts provided by their work.

In their turn, Hutchinson and Waters (1987) consider that ESP is a special approach that is underlain by the reasons wherefore a learner needs to study a foreign language. Similarly, Strevens (1988) defines ESP as including “absolute and variable characteristics”, since English language teaching should be designed so as to fulfill the learner’s specific needs. In addition, these needs should be connected in terms of content to specific subjects, professions and activities and should also be focused on the type of language that is relevant and well-suited to those activities in terms of syntax, vocabulary, discourse, semantics etc. (usually in contrast with those involved by General English). In what concerns Robinson (1991), his definition of ESP is underlain by two key criteria and a number of features generally found to be true of ESP. The two criteria refer to the fact that ESP is normally goal-oriented and ESP courses are designed based on needs analysis. The general features represent the key concepts, as follows: ESP courses are taught to adult learners who are in homogeneous classes organized with respect to professional background or field of specialization. Moreover, although there is a limited time frame, the objectives of these classes should be met.

Scholars Dudley-Evans and St. John (1998: 4-5) state that ESP is characterized by both absolute and variable features. In their perspective, such absolute features refer to the fact that ESP should meet the learner’s specific needs and that it employs “the underlying methodology and activities of the disciplines it serves”. Furthermore, ESP is focused “on the language (grammar, lexis, and register), skills, discourse and genres appropriate to these activities”. Regarding the variable features, the above-mentioned scholars (Dudley-Evans and St. John, 1998: 4-5) profess the following: “ESP may be related to or designed for specific disciplines; ESP may use in specific teaching situations, a different methodology [...] from that of General English; ESP is likely to be designed for adult learners, either at a tertiary level institution or in professional work situation. It could, however, be used for learners at secondary school level; ESP is generally, designed for intermediate or advanced students. Most ESP courses assume basic knowledge of the language system, but it can be used with beginners”.

These features are closely interrelated, revealing that ESP involves the teaching of specific English to certain learners who will employ it in a special context in order to achieve certain goals, which meet, in their turn, additional personal purposes. ESP is normally correlated to adult learners because it is tightly connected to their specialization in different areas of concern. Moreover, ESP analyzes the learners’ needs and integrates motivation, subject matter and content with the help of relevant language skills. Thus, in ESP teaching, the teacher should choose and introduce those specialized vocabulary items that are relevant and useful in the students’ future professions interactions (Leonte and Istrate-Macarov, 2016: 226). It can be concluded that general English language content, grammatical functions and acquisition skills are important and even dominant in curriculum development and course design.

## 3. Research approaches and methodology

Any pedagogical research involves several stages: asking the question, defining the theme, formulating the hypothesis, collecting and measuring the information, data processing and drawing the conclusions. Among many methods used in the pedagogical research, the experimental-ameliorative research was considered to give the teacher the chance to propose, apply and then to assess the hypothesis suggested as a means in optimizing education. This type of research offers the



possibility of knowing significant phenomena in the teaching practice and finding ameliorative solutions to real problems, their assessment in different contexts. Moreover, we can apply the outcome of fundamental research to real situations.

The functions that are worth being mentioned for this type of research would be: ascertaining, describing, acting, ameliorating, developing. In accordance with the objectives, the experimental-ameliorative research brings about the improvement of the content of the methods and deepens the study of teaching activity enriching the educational methodology. These methods are meant to gather enough information whose further analysis and interpretation leads to scientific answers and solutions to viable conclusions.

Among many research methods in conducting needs analysis (the questionnaire, the psychological observation, the experimental and the case study approach, the investigation, the psychometric method and analyzing the products of the learners' activity), we have used a questionnaire and the observation method for the purpose of our paper in order to achieve the research aims and to provide answers to research questions.

For the purpose of our research, 54 students (aged between 19 and 21) majoring in tourism answered a questionnaire which included 14 closed questions, asking them what they feel they lack, want and need in the process of English learning. The questionnaire included 14 questions (the students had the opportunity to choose more than one answer for each question) aiming at identifying learners' present needs, strengths, weaknesses and wants. This method was chosen because it allows the researcher to collect information from a large number of respondents in relatively short time. When this method is combined with observation, we believe that enough information will be gained to provide clear answers to research questions and to fulfill the tasks of our research.

The questionnaire was anonymous in order to allow students to express their opinions freely without fear of being punished for their answers. The time for completing the questionnaire was 10 minutes, and all students managed to complete it on time. The acquired data were used as a basis for assessing the fulfillment degree of the research aims and questions.

#### **4. Discussion of results**

The questionnaire proved extremely useful in order to determine the students' needs in terms of goals and objectives, serving as the basis for developing tests, materials, teaching strategies and activities, and their willingness for taking part in different types of activities. Therefore, we have applied a needs analysis questionnaire.

Question 1 dealt with the importance of English for the students. 100% of the respondents considered that the English language is very important for their studies and therefore they are highly motivated to study English.

Question 2 focused on the students' perception of learning needs related to the period of time which is allotted to English. Thus, in the question, four options have been proposed in order to obtain a valuable appreciation concerning this main point. Their answers indicate a slightly tight proportion, that is a large number of students (44.4%) think that the number of hours allocated to English learning is fairly reasonable, while a rather high percentage (37.03%) shows that the number of English hours is not sufficient. Only 18.5% considered that the numbers of hours allocated to English learning is reasonable.

Question 3 is seen as a means to assess the students' level in English at present, with regard to the language learning that has been achieved during their studies in a successful or an unsuccessful way. Through this question, the students have been asked to make an evaluation of their own level because their personal opinion is worth considering. The aspect of the level that is questioned here involves the linguistic skills and abilities acquired by the students in agreement with their needs of the language in their specific field. As option "C" has reached the highest score (44.4%), it is clear that almost all students have an average level in English. It is also noteworthy that almost a quarter (22.2%) assessed their skills as "poor" and only 7.4% as "excellent". 14.81% said that their English skills were below average and 11.1% assessed them as "good".

Question 4 summarizes the students' main problems concerning their knowledge of English; the students had the possibility to choose more than one problem. The result revealed that students' main problem is *speaking English*, as more than two thirds (62.9%) said that they had difficulty in speaking fluently and more than half (55.5%) said that they uttered incorrect grammatical sentences. 22.2% complained about their difficulty in pronunciation and lack of confidence. 7.4% said that they had difficulties in understanding English and spelling; 18.5% admitted that reading was their weakness while 11.1% confessed that they had difficulties in writing and in learning new words (vocabulary). Only 3.7% of the students have difficulties in asking and giving opinions.

Question 5, which tries to highlight students' main concerns regarding listening abilities throughout the process of English learning, also provided students the possibility to choose more than one option. Regarding listening skills, most of the students need listening to understand daily conversations and job-related themes (88.8%) almost the same way as for the speech of a native speaker (85.2%). 66.66% also said that they need to effectively and attentively listen to the information sent by the speaker. Students are less interested in recognizing words in the context by means of the speech sounds (7.4%).

Question 6 emphasized the importance that speaking has in students' process of learning English. Speaking the language correctly (92.6%), appropriately (85.2%), fluently (66.66%), being able to ask and answer questions (88%) in different socio-cultural contexts and thus being able to participate in discussions (70.4%) represent students' major objectives. They also need to be confident while interacting in different situations (40.7%). They are less interested in pronouncing words clearly and correctly (26%).

Question 7 refers to students' reading needs and to some issues they want to improve. The results indicate that students are interested mostly in reading a range of general authentic texts on daily social and routine job-related themes (88.8%). They also want to be good skimmers to get quickly the main idea they are looking for (81.5%). The students need also reading for making summaries and guessing the meaning of the new words (51.8%). 33.33% are interested in scanning (reading quickly for a specific piece of information).

Question 8 outlines some of the most relevant needs for writing. Thus, concerning the writing skills, students paid a great importance to the writing skill in order to get a good job (92.6%) but also for using a specialized vocabulary in the writing process (81.5%). They seem to be less concerned with writing articles or reports (26%) or with writing formal and informal correspondence and documents on practical, social and professional topics (7.4%).

Question 9 tries to reveal the students' learning goals throughout the English classes. The results indicate that the students' main learning goals refer mostly to their future professional career (92.6%) and to the need for using English. For achieving this, they need to use correct sentences (77.8%), to discuss in English and speak fluently (85.2%); they also want to enrich their vocabulary with specialized words necessary for their future jobs (70.4%).

Question 10 concerns the usefulness of English for the students. The table shows clearly that most of the students consider English as being important and useful both for their career (92.6%) and for travelling (77.8%). Fewer students are interested in using English for other reasons (22.3%) and nobody wants to study abroad.

Question 11 outlines students' potential of using English so that their possible lack of knowledge could be improved in the future. The results show the students' English level and their possibility of self-assessment, the frequency of their answers indicating relatively sufficient knowledge of English necessary in different socio-cultural contexts, also when referring to entertainment shows (89% can say who they are and where they come from; 74% understand entertainment programmes and films; 18.5% can read magazines and newspapers and only 7.4% can read novels in English.)

Question 12 summarizes students' needs for different skills when using English. Thus, students' answers highlight once again the importance of speaking (92.6%) and reading skills (81.5%) and the need for understanding the language (77.8%) and writing on their own (59.2%).

Question 13 checks students' preference regarding the English classroom activities as a guiding point for the teacher: speaking with a partner (85.2%), listening to people speaking in English (85.2%), reading on their own or with a partner (74%), writing on their own (29.6%).

Question 14 provides useful learning activities to the students so that they can choose which appeal ones to them. Pair-work was chosen as useful by 66.66% of the students, while role-plays and watching videos were chosen by 44.44% of the students. Individual work was considered useful by 29.6% of the students while on-line spoken practice was thought as useful by 37% of the students. Group-work was perceived as useful by 33.33% of the students whereas whole-class work was checked by only 29.6% of the students. Only 7.4% considered that out-of-school projects were useful. The results clearly show that most of the students pay a lot of attention to the speaking, listening and reading skills during the classroom activities and seem to be less interested in writing activities.

## 5. Conclusions

This paper, based on the analysis of a questionnaire that aims at highlighting the students' needs concerning their English knowledge, but also the skills they would like to improve, is focused on the benefits of Needs Analysis. The activities and approaches based on the needs analysis should be designed in order to fit the purposes of an ESP class and adapted by the teacher to the students' needs. The results of this needs analysis questionnaire indicate the need for more real-life activities and strategies, focused on developing the speaking, listening and reading skills. The English classroom activities should include oral presentations, specialized vocabulary, grammar activities and topics relevant to students' field of study, namely Tourism. Moreover, students are aware of the necessity to develop their language skills in order to better integrate on the labor market. The analysis of the questionnaire revealed the students' needs as perceived by themselves. The survey reveals that students feel that they lack knowledge of English grammar and also communicative abilities. They mostly want to learn how to communicate in English for their future jobs rather than use it in everyday life. The students think that having English communicative abilities is more important than the professional knowledge for getting a job and English is the most important language in workplaces.

Real-life interactions in the target language develop the students' ESP skills. Therefore, a very careful strategy should be planned, focusing it on the learners' interaction (student-centered strategies), their engagement in concrete activities, by using authentic materials. Thus, more and more opportunities should be created for students in order to improve their communication skills in the ESP classroom for their better integration into the Tourism labor market.

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# Honey Market in Romania

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## Abstract

*In Romania, beekeeping is an important traditional occupation. Honey and other bee products produced in our country are appreciated both in Europe and around the world. Honey is a complex food, one of the healthiest: it contains vitamins, organic acids, minerals and enzymes from bees, thanks to which honey is considered a superfood. The main objectives of the research are to analyze: the evolution of the number of bee families; the evolution of honey production and consumption in Romania; the value of exports and imports of honey from Romania. Estimates will also be made on honey production and consumption. The data used in the research will be taken from national and international databases.*

**Key words:** supply, production, consumption, foreign trade, honey.

**J.E.L. classification:** Q11, Q13, Q17.

## 1. Introduction

In Romania, the beekeeping was favored by a mild climate and a generous nature, a true apicultural paradise that ranges from March to October: bee plants varied, linden and acacia vast forests, many areas of fruit trees, oilseed rape and sunflower. Bees play an important role in our lives, and their services are free. On the other hand, due to the socio-economic and scientific role, apiculture is an activity contributing to the development of rural areas. Bees are pollinators and are essential for biodiversity conservation and for agricultural crops. (Moritz, 2010, pg. 227). Bee products are known and used, being appreciated throughout the world as a source of food but also for their therapeutic properties, honey being considered as a component of traditional medicine. (Gomez-Caravaca, 2006, pg.1221). The honey market is defined by two distinct products: table honey and industrial honey, used in the food, pharmaceutical and cosmetic industries. (MADR, 2015, pg. 2015).

## 2. Honey production in Romania

The honey supply is provided by the bee family in our country. The offer is extremely varied, starting with honey known and appreciated by acacia, rape, lime or polyphlora, to lesser known and used honey, such as wild cherry, blues or raspberry honey, and coriander or thyme honey, but and honeycombs with honey, pollen and royal jelly.

*Table no.1 Evolution of bee families in Romania*

Years	Number of families	%
2016	1437394	-
2015	1392846	3,19
2014	1350998	6,39
2013	1354218	6,14
2012	1254039	14,62
2011	1249610	15,02

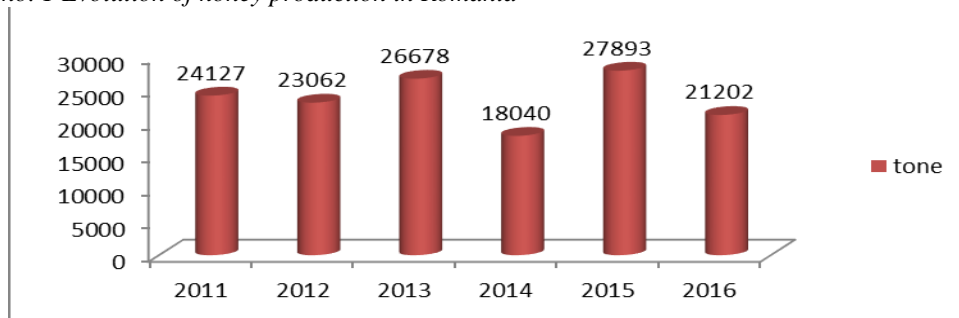
Source: Own contribution; <http://statistici.insse.ro/shop/>

The evolution of the number of bee families has been steadily increasing from 2011 to 2013, in 2012 the number of bee families increased by about 35% in the previous year, in 2013 the number of bee families increased by approximately 7.98 %, but in 2014 the number of bee families decreased by about 0.24% because many bee families did not survive in winter, in 2015 increased by about 3.09% and in 2016 increased by about 3.19%.

Compared to 2016, the evolution of bee numbers decreased in 2011 by approximately 15.02%, in 2012 it decreased by approximately 14.62%, in 2013 it decreased by approximately 6.14%, in 2014 by approximately 6.39%, and in 2015 the evolution of the number of bees decreased by about 3.19%.

The reference to honey production in 2012 decreased by about 4.42% compared to the previous year, although in 2012 the evolution of the bee family increased, but in 2012 the production of honey was affected by the bad weather conditions.

Figure no. 1 Evolution of honey production in Romania

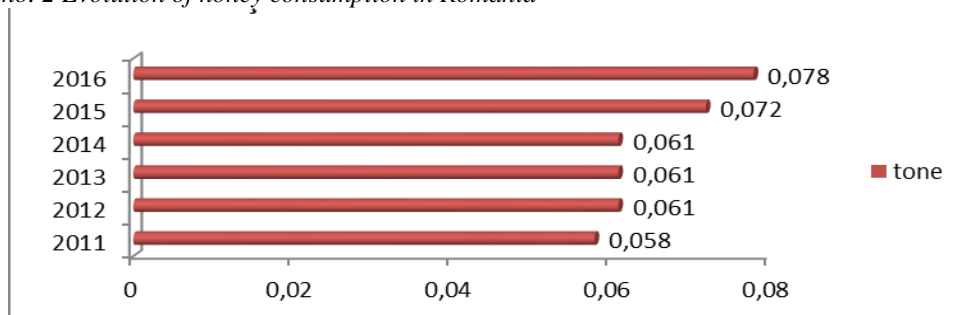


Source: Own processing on <http://statistici.insse.ro/shop/>

In 2013, the evolution of honey production increased by about 15.67%, but in 2014 it fell sharply by about 32.38% as it rained during the flowering of acacia and lime, in 2015 the evolution of the production of honey in Romania increased by approximately 54.61% thanks to melliferous potential and air and soil quality, and in 2016 honey production declined by about 23.99% due to honey production conditions.

### 3. Honey consumption in Romania

Figure no. 2 Evolution of honey consumption in Romania



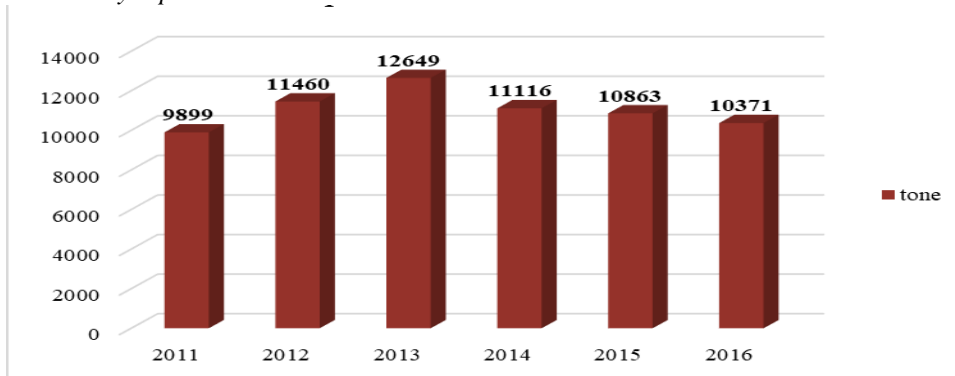
Source: Own processing on <http://statistici.insse.ro/shop/>

Honey consumption has steadily increased in Romania during 2011-2016 compared to 2011, in 2012 the consumption increased by about 5.1%, in the period 2012-2014 the honey consumption was constant, in 2015 it increased about 18.03%, and in 2016 honey consumption increased by about 8.33%. Consumption is increasing over a decade ago, but compared to the two kilograms consumed in Germany or 1.5 kilograms in the Netherlands and Belgium, in terms of honey consumption Romania is still on the last place.

#### 4. Romania's honey trade with honey

In our research, we have introduced both the European Union and non-EU countries into the export category. Compared to other food products, honey is one of the most exported Romanian products.

Figure no. 3 Honey export



Source: <http://www.trademap.org/>

In the period 2011-2013, honey exports have steadily increased, in 2012 it has grown by about 15.15%, as honey is the only animal product that has been exported in substantial quantities to the European Union, in 2013 honey exports increased by about 10.37% because our honey is natural and quality and in the period 2014-2016 honey exports dropped steadily by about 12.12% in 2014, with about 2.28% in 2015 and about 4.53% in 2016 due to drought and depopulation of bee families.

With reference to the value of exports and imports, in order to determine average prices, both for export and import, we analyzed the main countries with the most significant contribution to Romania's honey trade.

Table no. 2 The value of honey exports (thousands of dollars)

Export	2011	2012	2013	2014	2015	2016
TOTAL	41230	44593	54572	53919	46020	41492
Germany	21522	21363	29537	26037	20911	14793
Italy	4319	4919	6769	9351	8877	4705
France	1691	2557	4560	5204	3448	3814
Japan	2243	2539	1571	2387	1240	3457
Poland	1950	1639	1904	1546	2281	3004
Spain	1156	2584	1867	1732	2615	2828
Denmark	0	124	0	0	3	1862
United Kingdom	3674	3212	3243	2236	1835	1547
Austria	2143	271	2689	2289	2087	1152
Israel	362	721	551	653	595	948
Belgium	623	0	41	6	682	876
Netherlands	1063	583	646	102	117	735
China	44	185	80	112	486	543

Source: <http://www.trademap.org/>

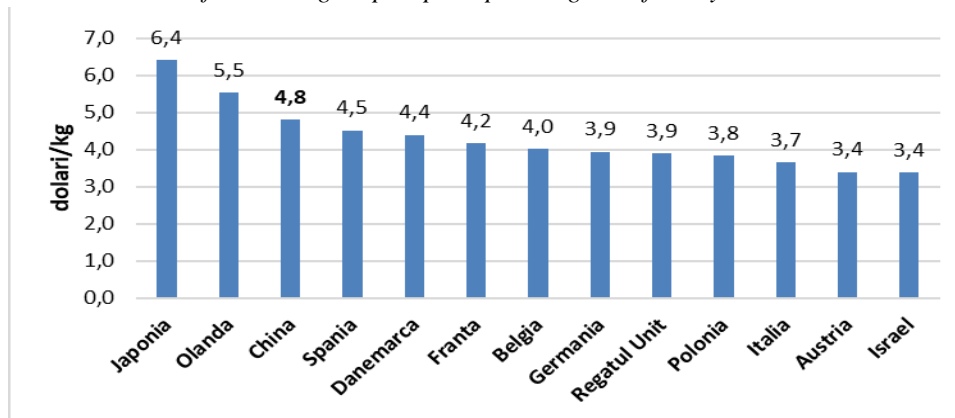
In 2016, the total amount of honey exports in Romania was about 41.5 million dollars. Depending on the value exported to each country, a ranking of 2016 was made.

The first country to import most from Romania's point of view is Germany, its import has fallen over the past 6 years, reaching 20.8 million dollars in 14.8 million dollars. The second place, according to the value of honey imported from Romania, is Italy with 4.7 million dollars in the last analyzed year. This is followed by France, which imported from Romania 3.8 million dollars of honey. Towards the end of the ranking is Belgium (876 thousand dollars), the Netherlands (735 thousand dollars), and in 2016, with a significant increase from the beginning of the analyzed period (more than 12 times), the last place taken the analysis is China, which imported honey from

Romania worth about half a million dollars.

Depending on the value and quantity of honey exported from Romania, it was possible to establish the average export price for each of the above mentioned countries.

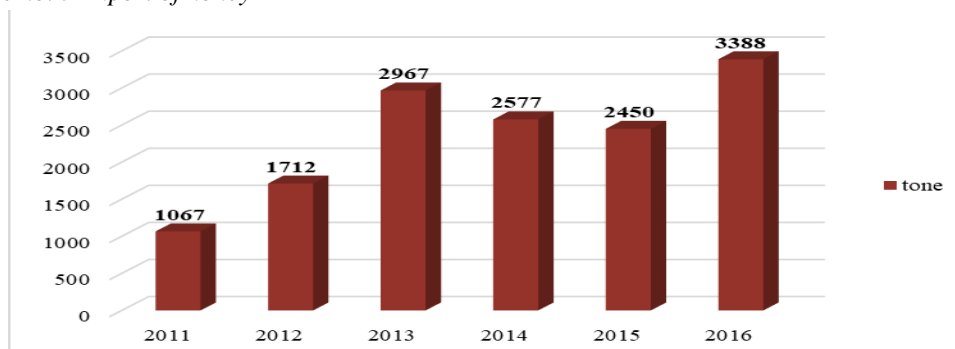
Figure no. 4 Evolution of the average export price per kilogram of honey



Source: <http://www.trademap.org/>

From the analysis of the data presented in Figure 4, Romania obtains the best price on the Japanese market, an average price per kilogram (in 2016) of \$ 6.4. n the second place, according to the price of honey, the Netherlands ranked, it imported in 2016 honey from Romania at the price of \$ 5.5 per kilogram. Surprisingly or not, China is ranked third in terms of honey (high) price, this country buys honey at an average price of \$ 4.8 per kilo, which implies a superior quality of Romanian honey.

Figure no. 5 Import of honey



Source: <http://www.trademap.org/>

In 2011-2013, honey imports have steadily grown, increasing by about 16.04% in 2012 compared to the previous year, in 2013 increased by about 26.7% as it was a capricious period in terms of climate and the massive import of low-quality honey was at prices well below the market average, which disadvantaged the Romanian beekeeper, during the period 2014-2015 honey imports dropped constantly by about 13.15% in 2014 and by about 4.89% in 2015 because the production of honey in our country was higher than in previous years and in 2016 the import of honey increased by about 38.28% because the production of domestic honey decreased this year because of the weather conditions unfavorable to the production.

On the other hand, referring to the value of honey imports in Romania, the situation changes completely and this is presented in the following table:



Table no. 3 Value of honey imports (thousands of dollars)

Import	2011	2012	2013	2014	2015	2016
TOTAL	3656	5144	5546	8302	6183	8992
Poland	297	522	841	2559	2345	2553
Republic of Moldova	0	0	421	1303	697	2354
China	518	1066	648	1125	1114	1072
Ukraine	0	0	0	135	199	366
Spain	119	526	9	647	202	515
Hungary	105	1036	50	8	31	583
United Kingdom	369	18	47	1011	156	386

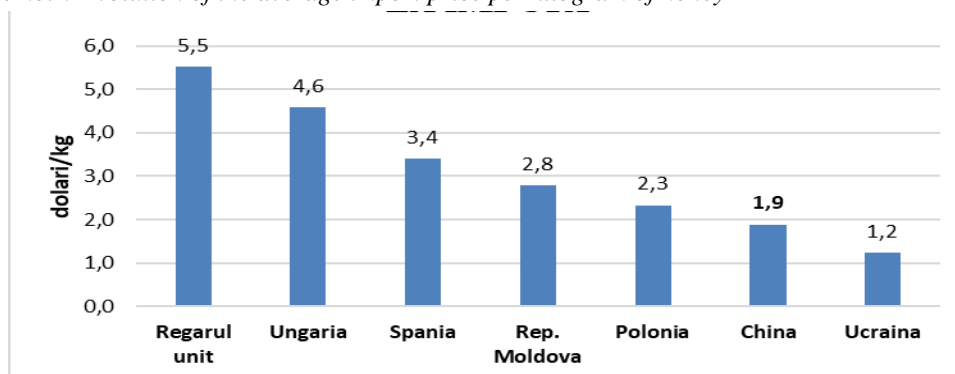
Source: <http://www.trademap.org/>

Romania being a large producer of honey (among the first in Europe), registered an import value less than about 4.5 times the value of exports, but the value of imports increased in the analyzed period, on average by 23.6%.

Poland is a country that exports honey, in terms of value, in Romania, it exported honey worth 2.55 million dollars in 2016, the value increased considerably during the analyzed period. On the second place, the country exporting honey worth 2.35 million dollars is the Republic of Moldova, which is coming to us on the recent market, but in the years 2011 and 2012 it did not export honey to Romania, and the increase was sudden. The third place, with exports of honey brought to Romania, is China with \$ 1.07 million, with a slight decrease compared to 2013 and 2014. Countries that export honey to Romania are: Hungary (\$ 583 thousand), Spain (\$ 515 thousand) and Ukraine (\$ 366 thousand).

Regarding the average import prices, these were calculated by reporting the value of honey imports from Romania to their volume, the price classification with which imported products are imported is shown in Figure 6:

Figure no. 6 Evolution of the average import price per kilogram of honey



Source: <http://www.trademap.org/>

With regard to honey purchased from other countries, it can be seen that the most expensive honey is in the United Kingdom, in 2016, it recorded a price of \$ 5.5 per kilogram. From Hungary it is bought at the price of \$ 4.6 per kilo, being the second price in the ranking, and from Spain is bought at the average price of \$ 3.4 / kg. As you can see, towards the end of the ranking is Ukraine with \$ 1.2 per kilogram and China with \$ 1.9 per kilogram of honey, this price may be a reason why there is public discussion about the honey brought from this area, being of doubtful quality.

## 5. Forecasting production and consumption

Using the average dynamic index method (Vatui, 2009, p. 247), the value of production and consumption will be calculated for the following years, respectively 2017-2019. This method of estimating the trend has the following formula:

Average Dynamic Index:

$$\bar{I} = \sqrt[n-1]{\frac{y_n}{y_1}}$$

Adjustment formula:

$$\hat{y}_t = y_1 \cdot \bar{I}^{t-1}, \quad t = \overline{1, n}$$

Where, I = the average dynamic index; n = time period (number of years); yn = current year value; y1 = base year value; yt = predicted value.

By applying the above-mentioned formulas have been predictions for the next period of the honey production and its use.

Regarding production, the average dynamics index was set at 0.974484.

$$\bar{I}_q = \sqrt[5]{\frac{21202}{24127}} = 0,974484$$

In terms of consumption, the average dynamic index was set at 1,061.

$$\bar{I}_c = \sqrt[5]{\frac{78}{58}} = 1,061$$

Table no. 4 Forecasts on honey production and consumption

Years	2011	2012	2013	2014	2015	2016	2017	2018	2019
Production (t)	24127	23062	26678	18040	27893	21202	20661,01	20133,83	19620,09
Consumption (kg/an/loc)	58	61	61	61	72	78	82,76	87,81	93,16

Source: Own calculations

As can be seen from the calculation of the two indices of dynamics, the one related to the production is subunit, thus the estimated production tends to decrease, from 21.2 thousand tons in the year 2016 to 19.6 thousand tons, this being production estimated in 2019. With regard to the consumption index, it is overtaking, so consumption will continue to increase from 78 kilograms per year per capita registered in 2016 to over 90 kilograms estimated in 2019.

## 6. Conclusions

Although the bee population has increased year on year except for 2014, honey production has not followed the same trend, oscillating from year to year in a downward trend due to honey production hazards, and Consumption has steadily increased, but it is low compared to other countries.

Romanian honey is one of the most exported products, obtaining the best price on the market in Japan in 2016, and the highest import took place in the same year because domestic honey production has decreased due to drought and depopulation of bee families , the highest import price being in the United Kingdom, which is \$ 5.5 per kilogram.

With the help of the average dynamics index, it was possible to predict the level of production and consumption for the next period, the production will show a decreasing trend, and consumption will increase.

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## **The Efficiency of Ambulatory Medical Services. Case Study - The Integrated Ambulatory Units of the Psychiatric Hospital "Dr. Gheorghe Preda" Sibiu**

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### **Abstract**

*Healthcare costs are an important issue for developed countries, focusing on accessibility, the quality of service and financial efficiency. The global direction of health insurance systems is to resolve the case through primary care, ambulatory and day hospital care. Hospitalizations need to be reduced. In psychiatry, however, there is a particular situation due to the increased incidence of new cases that cannot be treated by ambulatory care units. Efforts have been made to develop ambulances and service accessibility, to capitalize on benefits and to provide quality to patients. Although the number of services rendered significantly increased, in psychiatry there is an increase in the number of hospitalizations.*

*For the psychiatric field a distinct national strategy is needed, for efficiency and adaptation to the concrete needs of the population. The development of the community service network in the medical-social field may be the solution for reducing the costs of long-term hospitalization.*

**Key words:** efficiency, mental health, ambulatory care, inpatient

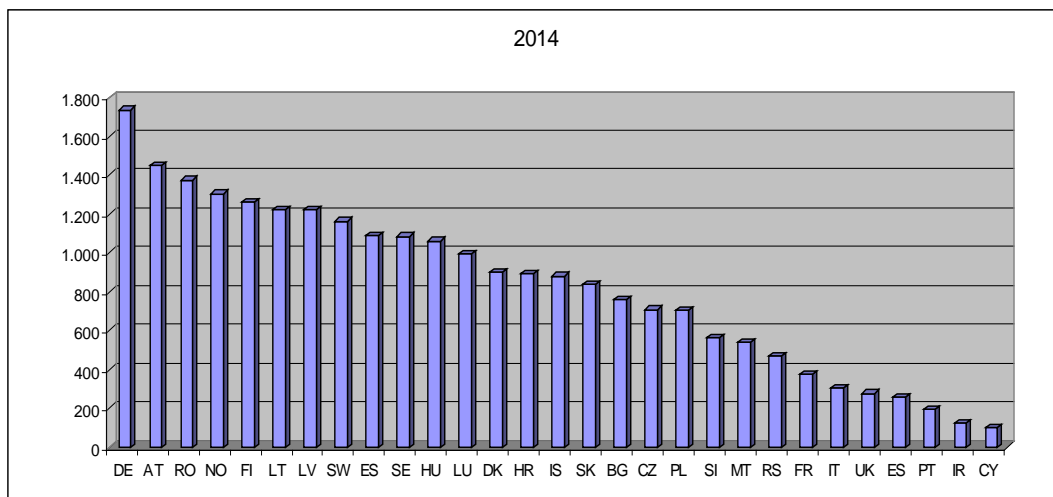
**J.E.L. classification:** D61, I18, O52

### **1. Introduction**

The issue of mental health is extremely common in modern society, mental and behavioral disorders are broad categories of illnesses, nearly 1/3 of the total burden of illnesses, and depression prevails as the main disease in Europe. In the European Union were recorded approximately 3.5 million patients who suffered from mental and behavioral disorders who were displaced from hospitals, the number of hospitalization days exceeding 82 million, occupying the second place after circulatory system's diseases. Patients diagnosed with Alzheimer's disease have had over 2 million days of hospitalization (in 2014).

Average hospitalization time (AHT) for mental and behavioral disorders has generally decreased between 2009 and 2014, with only 9 member states of EU registering an increase in AHT: Germany, Estonia, Croatia, Latvia, Luxembourg, Hungary, Austria and Romania which reported increases of less than 4 days, and Malta which reported a very high increase from 27.0 days to 44.5 days. The discharging of patients diagnosed with mental and behavioral disorders- per 100,000 inhabitants in 2014- places Romania on the third place, after Germany and Austria, with 1,376 discharges per 100,000 inhabitants, 14 times more than Cyprus, which reported 98 discharges per 100,000 inhabitants (Figure 1).

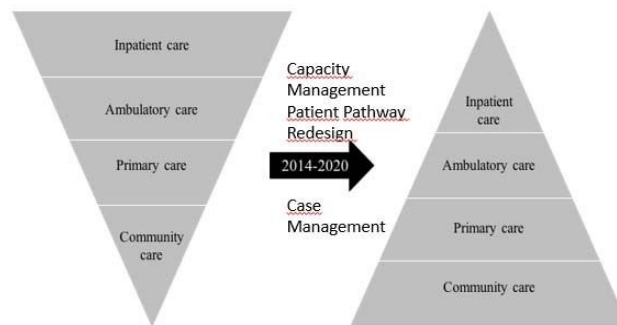
Figure no. 1. Discharges per 100 000 inhabitants



Source: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Mental\\_health\\_and\\_related\\_issues\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Mental_health_and_related_issues_statistics)

The tendency of EU countries and most countries in the world is to focus on providing healthcare in primary care, ambulatory units and day-care systems, so that continued hospitalization and related costs decrease, a direction in which Romania has been heading. It is enlightening in this aspect the takeover of the concept of the "reversed pyramid" from the National Health Strategy, which states that the basis of the healthcare system are the community care and primary care whereas the treatment through hospitalization has a lower share.

Figure no. 2. The vision of the National Health Strategy



Source: Order no. 1.376 for the approval of Regional Health Service Plans

## 2. National Health Strategy

Currently, in Romania, many of the health services are provided directly in the hospital. The ambulatory units should have a much greater weight in providing specialist medical services and to be an effective filter in reducing avoidable hospitalizations. Ambulatory care is a better option in terms of patient safety and operability, replacing the expensive medical treatments with cost-effective ones.

The performance of a healthcare system can be judged by its direct dimensions, namely the capacity to respond to the needs of the beneficiary (responsiveness), equity and financial protection, efficiency and sustainability.

The vision of the Ministry of Health for the period 2014-2020 is to ensure gradual coverage of the health needs of the population through system-based services (community assistance services,

family medicine and ambulatory care services). The patients will need more expensive hospital services only when the situations require the provision of services of a higher level of complexity.

The Strategic Area for interventions 2: "Health Services" provides for strategic objectives:

- S.O.4.3. The strengthening of specialty ambulatory services to increase the number of the diseases treated in ambulatory care units and reducing the burden of continuous hospitalization
- S.O. 7.2. The improvement of the healthcare infrastructure through the offering of community medical assistance, family medicine and specialized ambulatory units.

Explicating the strategic goal 4.3 includes the development of a specialized ambulatory network (special ambulatory care, Paraclinical specialties, imaging services, laboratory, functional explorations) as alternatives of improving the accessibility to specialized services and to make efficient use of the hospitals' capacity and it is an essential directive for the development of healthcare-services.

Result indicators for assessing and monitoring the implementation of measures to achieve the objective refer both to the National Health Insurance Fund share of ambulatory care costs for clinical and Paraclinical specialties and to the percentage of ambulatory cases contracted annually. The implementation of the measures aims to save a percentage applied to the whole health fund, which is the source of financing for new investments, including the construction of sanitary units.

### 3. The evolution of the discount of the medical services in ambulatory care units

With the introduction of the Framework Contract on the conditions for the provision of medical assistance in the health insurance system, a methodology for the payment of these services to the healthcare providers was established.

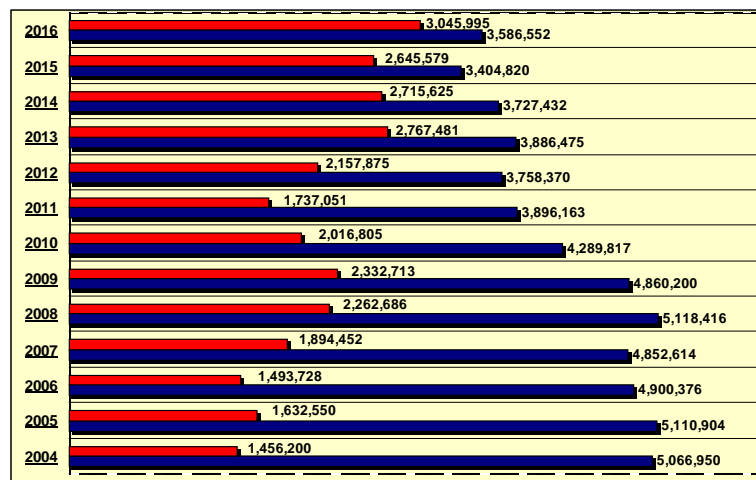
Annually, according to the methodological norms issued by the Ministry of Health and the National Health Insurance House, the guaranteed minimum value of the point in primary medicine and the specialized clinical ambulatory is established. The point represents the payment by medical service tariff, for the medical services provided in the basic services package, the minimum package of medical services and the package of medical services for the persons who are voluntarily insured. There is a differentiation of the tariff in relation to the professional degree of the doctor, so the reference value of the medical tariff is that of the specialist doctor and for the performance of the primary physician the total number of points for the medical services granted is increased by 20% and for a doctor who did not pass a specialty exam, the points decrease by 10%.

From the data analysis at a national level of the minimum guaranteed value of the point and the regularized point between 2004 and 2016 a significant increase of the average value of the cost can be seen, from 9,15 lei in 2008, to 31,68 lei in 2016. In the same time, a decrease in the number of consultations and services rendered between 2008-2016.

Table no. 1 Evolution of the long term hospitalization/day care average cost per service

Year	Budget execution (millions lei)	No of consultations and services (millions)	Average cost lei/ service
2004	197,40	21,58	9,15
2005	247,10	23,17	10,66
2006	261,50	23,09	11,33
2007	330,20	25,17	13,12
2008	390,65	26,04	15,00
2009	321,94	25,86	12,45
2010	289,42	20,88	13,86
2011	309,96	20,94	14,80
2012	387,42	21,94	17,66
2013	549,58	22,31	24,64
2014	623,34	22,24	28,03
2015	661,91	23,06	28,70
2016	777,96	24,56	<b>31,68</b>

Figure no.3 The evolution of long term hospitalization/day care average cost per service



Source: www.cnas.ro

At a national level there was a significant decrease in the number of cases resolved by continuous hospitalization, from 5,066,950 hospitalizations in 2004 to 3,586,552 in 2016, with the increase in the number of cases solved in day hospitalization, which doubled in the same period of time, from 1,456,200 cases in 2004 to 3,045,995 cases in 2016. The survey indicates a clear direction followed by the health care system, in accordance with the action plans and strategies adopted, with the reduction of cases resolved by continuous hospitalization and the provision of ambulatory care and day-care services.

#### 4. Case Study - The integrated ambulatory units of the Psychiatric Hospital Sibiu

The hospital provides preventive medical services, curative services, neuropsychotic recovery, expert services, counseling, social assistance. The hospital ensures continuity of care through two guard lines organized in the clinical specialties of adult / pediatric psychiatry and pediatric neurology and covering the diversity of needs for evaluation, treatment, rehabilitation and reintegration of people with mental disorders. needs of assessment, treatment, rehabilitation and reintegration of people with mental disorders.

The structure of the hospital includes 7 sections with adult beds for the psychiatry specialty – for acute and chronic illnesses- and 3 children's departments for each of the three specialties: psychiatry, neurology and neuro-psychomotor recovery, two mental health centers (adults and children), two day care centers, integrated ambulatory units with cabinets in adult and children's psychiatry and neurology specialties, and recovery, children's physiotherapy and balneology, pharmacy, ergo therapy, occupational therapy and social assistance.

The admission capacity is 453 beds for continuous hospitalization, of which 255 beds are for people suffering from acute illnesses and 198 are for those with chronic illnesses, 90 beds are for children, 30 beds are for those who accompany the children who are hospitalized, 50 seats are in the daycare for CSM Adults and 25 places in NPM recovery day care and pediatric psychiatry centers.

In 2010, through the Operational Regio - Priority Axis 3, DMI 3.1 - "Rehabilitation, modernization and equipping of health services infrastructure" was implemented a project whose total budget was 2,618,384 lei through which the three integrated hospital ambulatory units: adult psychiatry, neurology and pediatric psychiatry and neuro-psychomotor recovery for children were upgraded and equipped. The buildings were rehabilitated, equipped with furniture and medical equipment for investigation and treatment.

The evolution of the provision of medical services in the serviced specialties was monitored for a period of 4 years, with the definite tendency to considerably increase the number of services provided by integrated ambulatory units.

The medical services in ambulatory medical care for clinical specialties are: curative medical services - consultations for acute, subacute and aggravating chronic illnesses and chronic diseases.

Diagnostic and therapeutic services are composed of individual and family non-specific psychiatric counseling, group psychotherapy (psychoses, obsessive compulsive disorder, phobic disorders, anxiety disorders, dysthymia, addictions), individual psychotherapy (psychosis, obsessive-compulsive disorder, phobic disorder, Anxiety, dysthymia, addictions, autistic spectrum disorders) and cognitive-behavioral therapy.

The medical-related services, clinical psychological evaluation, psych-diagnostic and clinical psychological counseling, are provided by psychologists in the field of clinical psychology, psychological counseling and psychotherapy.

The adult psychiatric counseling is evaluated at 21.60 points, the value of a point is 2.2 lei, the disbursement being 47.52 lei for the specialist doctor's performance, and for the primary physician it increases by 20%, respectively 57.02 lei (Reference year 2017).

Table no 2. Psychiatric consultation and pediatric psychiatric consultation for children over the age of 4

Year	Number of points	Value of one point (RON/point)	Consultation tariff (RON) specialist doctor	Primary physician
2007	15,0	0,64	9,60	11,52
2008	15,0	0,75	11,25	13,50
2009	15,0	0,70	10,50	12,60
2010	21,6	0,90	19,44	23,33
2011	21,6	0,90	19,44	23,33
2012	21,6	1,20	25,92	31,10
2013	21,6	1,70	36,72	44,06
2014	21,6	1,70	36,72	44,06
2015	21,6	1,80	38,88	46,66
2016	21,6	1,80	38,88	46,66
<b>2017</b>	<b>21,6</b>	<b>2,20</b>	<b>47,52</b>	<b>57,02</b>

Source: www.cnas.ro <http://www.cnas.ro/page/valoarea-minim-garantata-a-punctului.html>

Note: The ambulatory care unit for the neuro-psychomotor recovery was not included due to the fact that the services and disbursement differs.

Table no.3 No. of consultations/ integrated ambulatory care unit, doctors, hours per day and incomes between 2013-2016

Year	Ambulatory Care Unit- adults	Ambulatory Care Unit – children	Total	No. doctors	Hours / Day	Income (lei)
<b>2013</b>	6.037	3.169	<b>9.206</b>	17	22,80	493.106,42
<b>2014</b>	8.284	3.204	11.488	19	33,00	691.931,85
<b>2015</b>	9.911	3.684	13.595	18	52,00	937.706,07
<b>2016</b>	10.420	4.373	<b>14.793</b>	18	47,40	801.471,23

Source: hospital statistics

Despite the fact that after the modernization of the ambulatory care units and the increasing of the accessibility to the specialized medical services, their activity having an ascendant evolution, the number of cases discharged (solved by continuous hospitalization) has increased slightly but visible in recent years.

Starting from a total of 7,124 patients discharged in 2013, a total of 7,410 patients were discharged in 2016. This increase - especially in the 45-64 age segment - reveals the reality of the rise of the mental health problems of the adult population in Romania today. The particular case of psychiatric specialization seems to fall short of achieving the objective of decreasing continuous hospitalization, with the obvious contribution of medical services offered by integrated ambulatories.



Hospital statistics show an increase in the number of new patients, and the evolution of the main diagnoses treated over the last 4 years indicates an increase in depression (from 1,156 depressive episodes in 2013 to 2,817 cases in 2016), Alzheimer's disease (from 975 cases in 2013 to 1,821 cases in 2016) and schizophrenia (from 491 cases in 2013 to 881 cases in 2016).

Table no. 4 Hospital statistics no cases discharged in continuous hospitalization

Year/ No. discharged	2013	2014	2015	2016
No. discharged adults	4,907	4,973	4,880	5,281
No. discharged children	2,217	2,244	2,297	2,129
Total discharges	7,124	7,217	7,177	7,410

Source: hospital statistics

From the financial perspective, ambulatory services have become attractive for both providers and patients. The CJAS settlement from the health fund indicates (at national level - see table 1) a 3.95 times multiplication of the amounts allocated to the ambulatory care unit services.

Considering, however, the average rate per case solved in continuous hospitalization, of 2.179,37 lei at the national level and of 1,916.47 lei for the "Dr. Gheorghe Preda ", studied in context, it is more advantageous to treat a case in the continuous hospitalization system, from the angle of hospital financing. By making calculations based on the tariffs by the type of the case solved, we notice that the value of a single hospitalized continuous episode equals 68,8 ambulatory consultations see table no. 5.

Table no. 5 The analysis of the ratio cost/type of medical service

Year	2008		2016		
	Ambulatory assistance	CH beds sanitary units	Ambulatory assistance	CH beds sanitary units	DC beds sanitary units
Execuție bugetară (milioane lei)	390,65	7.522,04	777,96	7.816,43	782,07
No. services: consultations, respectively discharges (millions)	26,04	5,12	24,56	3,59	3,05
Average cost lei/ service	15,00	1.469,60	31,68	2.179,37	256,75
CH/Amb – Cost ratio	-	97,95	2,11	<b>68,80</b>	8,49

Source: www.cnas.ro; CH = Continuously hospitalization; DC= Day care

## 5. Conclusions

In order to propose viable, long-term solutions that improve both the financial performance of medical services but cover the concrete needs of psychiatric patients, a systematic analysis of the psychiatric sector is needed at national level. The health insurance system is inadequate for certain categories of beneficiaries, for which the community-based medical-social services are adequate. Although there was a significant increase in the number of outpatient services and day hospitalization in the country, there were decreases in the continuous hospitalization, and the tariff for these services, including in psychiatry, was increased, it is observed from the studied case that the illness dynamics (new patients, prevalent diagnoses) is a factor that was not considered in the strategic approach.

In order to achieve financial efficiency indicators, while ensuring the quality of care, the entire psychiatric sector needs to be rethought in the health strategy and the solutions adopted to be based on current statistical data. Otherwise, the financial burden of mental health will be higher in the long run.

Two main solutions, with immediate applicability, are mentioned:

- the inclusion of as many health units in national mental health prevention programs - the initiation of new preventive programs in sensitive segments as triggering factors of psychiatric disorders (stress, anxiety, depression)

- providing better conditions for service providers - doctors, stimulating them to offer consultations and medical services in integrated ambulatory care units, equal treatment with doctors in the private system in contract with CNAS and eliminating discrepancies based on professional criteria.

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# Over-Tourism and Anti-Tourist Sentiment: An Exploratory Analysis and Discussion

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## Abstract

*The externalities of tourism have become increasingly visible over the last decade, manifesting themselves in anti-tourism demonstrations in popular destinations such as: Venice, Dubrovnik, Santorini, Barcelona and Amsterdam. These reactions, in conjunction with the corresponding press attention, have led to a variety of proposed measures by tourism stakeholders and decision-makers, aimed at controlling tourism development and restricting incoming tourism. This paper aims at: exploring the root causes of the over-tourism phenomenon, critically assessing the mainstream theories behind it, and questioning the effectiveness of the current measures proposed.*

**Key words:** tourism, antagonism, destination, sustainability, externalities

**J.E.L. classification:** L83, D73

## 1. Introduction: 'Tourists Go Home'

In the side-streets of Barcelona, one comes across paint-sprayed messages such as: "If it is tourist season, why can't we shoot them?" or "Tourists go home" with the follow-up comment: "Refugees welcome". Anti-cruise protests in Venice and polemical statements by mayors in Dubrovnik and Santorini, proposing draconian measures to control tourist-inflow and regulate visitor behaviour, come in stark contract with the banners of hospitality and tourism-induced economic prosperity. For several years now, tourism academics and researchers have repeatedly highlighted the externalities and infrastructural challenges posed by (cruise-) tourism, adding a critical note to the optimistic outlook of the tourism-business and public sector's stakeholders. Yet, it is only over the last couple of years that this issue has received public attention - following the anti-tourism demonstrations in some popular tourism destinations, rendering it – rather quickly – a central topic and priority in tourism research. In this paper, the notion of 'over-tourism' is explored and critically discussed, in an attempt to clear potential misconceptions and provide a basis for effective counter-measures.

## 2. Inevitability of the Tourist Area Life Cycle? Tourist Development and the Tourist Density Indicators

The generic product life-cycle concept (abbr. PLC) predicts a decline phase after the maturity of a particular market and / or sector. The decline phase is characterised by intensified competition and low profit margins within a product-sector. Since, Butler (1980) adapted the PLC concept for tourist areas (abbr. TALC), it has been frequently-applied to explain the evolution and implications of tourism in destinations and has served as a management guideline for the different phases:

1. Exploration: Small number of adventure-seeking visitors, limited information and infrastructure. In this stage, some locals may feel uncomfortable with tourists.
2. Involvement: The local community discovers its potential and participates in the development of tourism by developing basic infrastructure (i.e. small accommodation and catering facilities).
3. Development: Local authorities and investors notice the development of visitor numbers and initiate larger-scale and more sophisticated infrastructure projects. At this stage, some locals

may feel excluded from the developments whilst others may feel alienated from the involvement of external entities in their locality.

4. Consolidation: At this stage, big players (i.e. Holiday-conglomerates) enter the competition and larger units replace small facilities. This is the start of mass-tourism. Locals feel overwhelmed with the increasing tourist numbers and the impact of developments in their daily lives.
5. Stagnation: Here the destination has lost its novelty status, the tourist numbers are stabilised and the area has reached its carrying capacity. Locals are negatively predisposed and antagonistic towards the tourists.
6. Decline / Rejuvenation: The environmental and socio-cultural externalities of tourism development begin to show and degradation of the destination's resources and infrastructure drives visitors away. The irritation of locals becomes even more evident.

In a similar manner, Doxey (1975) associates tourism development with the sentiment of locals evolving from euphoria and apathy during the initiation of the life cycle, to annoyance and antagonism in the latter phases. Setting aside the criticisms and extensions of such models, their key assumption is that tourism development, measured by increasing tourism numbers is associated with locals' deteriorating sentiment and corresponding reactions to tourism. On this premise, it logically follows that 'over-tourism' and its presence in the media is the expected result of certain destinations reaching the last two stages of their Tourist Area Life-Cycle' (TALC). Tourist numbers exceed the carrying capacity of the destination and its infrastructure, while the locals feel overrun and displaced. As obvious as this hypothesis may seem, an examination of the corresponding tourism-density metrics casts doubt on its validity; or at least its completeness.

According to Eurostat's (2017) GIS, during 2015 the average indicator for European countries was approximately 5,200 bed-nights per 1,000 inhabitants. As a comparison, for mainstream tourism regions (table below), this indicator is eight- to ten-fold the European average. With regard to geographical density, the European average is approximately 592 bed nights per square kilometre (KM2).

Table no. 1: Top 10 European Tourism Regions - Bed-Nights per Inhabitant and KM2

	<b>Region (Bed nights per 1,000 Inhabitants)*</b>	<b>Country (Bed nights per 1,000 Inhabitants)*</b>	<b>Region (Bed Nights per KM2)**</b>	<b>Country (Bed Nights per KM2)**</b>
South Aegean Islands (Greece)	69,776	9,082	4,463	771
Balearic Islands (Spain)	57,992	9,090	14,007	899
Bolzano (Italy)	56,777	6,460	4,233	1,333
Adriatic Croatia (Croatia)	48,578	16,883	N/A	887
Tirol (Austria)	48,536	13,218	3,165	1,406
Canary Islands (Spain)	44,219	9,090	13,791	899
Algarve (Portugal)	42,731	5,727	4,189	715
Crete (Greece)	36,826	9,082	3,013	771
Trentino (Italy)	29,903	6,460	2,727	1,333
Corsica (France)	29,837	(6,174)	1,649	(639)

\*Source: Eurostat data for 2015

\*\* Source: Eurostat data for 2016

Examining tourist-ratio for the regions, where the anti-tourist sentiment has peaked over the last years, the hypothesis of imbalance between tourist and local population becomes questionable. When looking at the Venice (13,837 Bed nights / 1,000 Inhabitants) and Catalonia (10,209 Bed nights / 1,000 Inhabitants) regional indicators, one cannot help but to observe that in terms of bed nights per 1,000 inhabitants, they are significantly lower than other popular tourist regions (see Table 1). With regard to bed nights per KM2, both Venice (3,437 Bed nights / KM2) and Catalonia (2,253) are comparable to other tourist regions.

It seems that increasing tourist numbers and crowding do not adequately account for the increasingly loud anti-tourism sentiments in some popular tourism destinations. Perhaps the key variable here is the management effectiveness of a destination's carrying capacity and of its seasonality. Indeed, the proportion of organised tourism in the southern Aegean Islands, the

Canaries and the Balearic islands is larger than in city destinations such as Barcelona or Venice. Organised tourism entails packaged holidays assembled, priced and sold by large, vertically-integrated tourism groups such as TUI and Thomas Cook. Such tourism multinationals control capacities during the entire value-chain from flight seats and hotel beds to transfer buses and have a strong interest to maximise yield in their destination capacities. Hence, they have the capability (i.e. control over the entire value-chain) and motivation (i.e. maximisation of yield and profit) to effectively regulate and redirect tourism flows. This raises the question of tourism privatisation and its economic impact on the local communities; but it may also reflect the risks of tourism communisation. Barcelona and Venice may not be dependent on large tourism conglomerates, but their local tourism authorities have limited control over the tourism value-chain (esp. at the source-markets) and the direction of independent traveller flows (e.g. hotel tax may render accommodation more expensive, but low-cost flights absorb the extra cost for the individual tourist).

### **3. The Broken Promise of Tourism? Economic Impact and Expectations**

The UNWTO (2017) (abbr. World Tourism Organisation) reports that tourism, corresponds to 9% of the worldwide GDP, reflects 1 in every 11 jobs and amounts to 1,3 Trillion Dollars in exports. The WTTC (2017) (abbr. World Travel and Tourism) reports that tourism outperformed the global economy with a GDP growth of 3,3% and contributed 1,96 trillion dollars to European economies. In a similar manner, the CLIA (2016) (abbr. Cruise Lines International Association) reports 40.2 billion Euro in total business output for the economies of Europe. From this output, 16.6 billion euro reflect direct spending by cruise lines, their passengers and crew.

Over the last years, the tourism (and cruise) sector and its representatives have been very effective in raising public awareness for the tourism sector, its growth, economic significance and developmental potential. Whilst this may have positively contributed to the image and professionalization of tourism, it may have also generated rather simplistic expectations; particularly for those not familiar with the intrinsic systemic complexities and dependencies of this business domain.

A number of tourism academics (e.g. Klein, 2009; Larsen et al, 2013; Papathanassis, 2011; 2014; 2016) have consistently expressed scepticism regarding the conceptual rigour, methodological limitations and motives behind such studies, while expressing doubts regarding their results and their misinterpretation by public authorities, political stakeholders and public opinion leaders (Papathanassis, 2017). Yet, critical voices and 'academic Cassandras', are overshadowed by the promise of tourism-led prosperity and its political appeal. At the end of the day, the delivery failure of such a promise leads to expectation failure and disappointment in the local communities; who experience the downsides of tourism, without perceiving the propagated benefits.

The question here is: "To what extent do the benefits of increasing tourism-generated income reach the local economies and communities?" Assuming the growth and considerable contribution of tourism in the economies of Europe (and elsewhere), how is it that established and popular destinations such as Barcelona and Venice exhibit such high-levels of anti-tourism sentiment? According to Eurostat's (2017) GIS, during 2015 and when compared to other popular holiday regions, the inhabitants of Barcelona, Venice and Amsterdam have a relatively high and stable purchasing power. For example, in Barcelona the GDP per inhabitant in Purchasing Power Standards (abbr. PPS) is 106% of the European average and in Venice it is 109%. Comparatively, in popular tourist regions such as the Eastern Mediterranean (Corfu, Rhodes, Crete, and Cyprus) the GDP per inhabitant PPS ranges between 81-58% of the European average. In Portugal (Porto) it is 64% and in Southern France it was 98%; both below the European average.

Examining the change of purchasing power (measure as GDP per inhabitant in PPS) between 2007 and 2015 a similar picture emerges; The regions where the anti-tourism sentiment is peaking are not the ones with the highest loss of purchasing power (-10 to -15%, compared to -16% to -27% in other popular tourist regions). From what it seems, the inhabitants of the 'tourist-overrun' regions are neither the poorest, nor the most disenchanting. In fact, one could argue that, tourism development counterbalanced for them the negative impacts of recent economic crisis, acting as a

buffer. Therefore, it would erroneous to attribute anti-tourism sentiments solely to an economic overpromise.

Yet, tourism-led economic development and prosperity, under corrupt systems and/or ineffective governance (Papathanassis, 2016; 2017) may result to more social inequality and public disillusionment. In turn, this may create fertile ground for protest movements and populism (Heinrich, 2017). In such a context, tourism in general and foreign tourists in particular represent ideal 'scape goats' for wider socio-economic issues due to their visibility and lack of political representation. Harrill mentions (2004) geographical- as well as cultural-proximity as relevant factors affecting the perceptions and reactions of local populations to tourists. Faulkner & Tideswell (1997) as well as Ap & Crompton (1993) point towards the nature of the social exchange between locals and tourists and underline the aspect of seasonality. In this respect, the presence of in-group vs. out-group dynamics (e.g. Riek et al, 2006; Semyonov et al. 2004) and their impact on perceptions, potential stereotyping and prejudice, render tourism a convenient conflict arena for socio-economical issues. Stating it simply, tourists are visible, different, not politically represented and therefore, a convenient projection surface for disenchantment and populist/demagogic motives.

#### 4. Bad-behaving Tourists? Media Sensationalism

This is where the mass media, amplified by the inherent sensationalism and multiplication effect of social media, comes into play. On the one side, the hedonistic-nature and ubiquity of tourism provides ample incidents, capable of catching attention and triggering emotionality. On the other side, the coinciding between the so-called 'cucumber (media) time' or 'silly (press) season' and the holiday high seasons (i.e. summer holidays, Christmas / Easter holidays), possibly encourage an exaggeration of media coverage on frivolous incidents and news; turning them into medial events and coining terms such as 'over-tourism'. Although, this is arguably a rather presumptuous hypothesis, headlines such as the following suggest its relevance:

- "Auschwitz museum hit by thefts as visitors remove 'souvenirs' from Nazi death camp" (Telegraph)<sup>1</sup>
- "Chapel on Greek island Rhodes bans foreign weddings after British couple's 'sex' photo goes viral: 'We cannot allow this disgusting behaviour to prevail'" (Independent)<sup>2</sup>
- "Ding Jihao was here': Chinese tourist, 15, defaces 3,500-year-old Egyptian temple and his family issue national apology" (Daily Mail)<sup>3</sup>
- "Easter Island fines ear chipper" (BBC)<sup>4</sup>

This type press coverage utilises sensationalism and emotional headlines, describing isolated incidents of tourist misbehaviour, and generalising them. This is not to assert that such misbehaviour is an exception, as tourists are more likely to engage in questionable behaviour during their holidays than at home (Tolkah et al 2017); but generalising and isolating such incidents in the context of tourism is perhaps misplaced.

Nonetheless, it may well trigger local discontent, feeding anti-tourist sentiments and stereotypes and creating a bandwagon for political opportunism. Tourism stakeholders, private (e.g. tour operators or cruise operators) and public (e.g. tourism trade associations), with their corresponding public-relations departments, tend to focus on a one-sided promotion of tourism, whilst superficially handling externalities and critical aspects. By incorporating a more transparent, balanced and critical approach to the promotion of (cruise-) tourism, and a more active support of sustainability initiatives (beyond the acclaimed 'Green-washing'), the tourism sector could increase its credibility and reputation in the wider public, while 'educating' political decision-makers on the

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<sup>1</sup> <http://www.telegraph.co.uk/news/worldnews/europe/poland/10808868/Auschwitz-museum-hit-by-thefts-as-visitors-remove-souvenirs-from-Nazi-death-camp.html>

<sup>2</sup> <http://www.independent.co.uk/news/world/europe/rhodes-chapel-foreign-wedding-ban-sex-act-photo-british-couple-greek-island-a7998226.html>

<sup>3</sup> <http://www.dailymail.co.uk/news/article-2331613/China-disgraced-tourist-vandal-engraved-Ding-Jihao-hieroglyphics-Egyptian-temple.html>

<sup>4</sup> <http://news.bbc.co.uk/2/hi/americas/7337927.stm>

potential and complexity of tourism development. Such a change of public-relations strategy is diametrically different from the traditional defensive stance and 'stone-wall' strategy of the (cruise) tourism sector.

## 5. Conclusions: Synthesising 'Over-tourism' and the Way Forward

In this paper, the reported issue of 'over-tourism' and the resulting anti-tourism sentiments, have been critically examined and discussed with the purpose of setting a frame for a more constructive discussion and effective measures. Neither of the theses presented here are sufficient to illuminate the full spectrum of tourism externalities, nor are they applicable to all case studies. While tourism-density may be more relevant for explaining the locals' reactions in Dubrovnik, it may not be as applicable in Barcelona, where the socio-economic aspects appear more pertinent. In a similar line of argumentation, the reactions in Amsterdam could be primarily associated to tourist misbehaviour and political calculation. Differentiating between the different destination cases and taking into account the complexity and specifics of each case, could presumably lead to the development of effective counter-measures and a more sustainable tourism development in those regions.

Proposed measures such as behavioural guidelines/regulation for tourists, or limiting licences for tourism accommodation and other service providers, to counteract over-tourism, can be at best described as simplistic. Addressing a growth of demand and capacity strain, with capacity limitation measures is somewhat paradoxical.

Ultimately, the failures of a tourism-system does not necessarily lie in its elements (i.e. tourists, transport carriers, accommodation providers) but on the governance of the interactions between them. Who is accountable for the management of a destination's carrying capacity? Is it merely a question of tourism inflows or is it an issue of seasonality, logistics and crowd-control in heritage sights? Are tourists responsible for tourism-income leakages and socio-economic divide in local societies? What have tourism-sector associations done to address anti-tourism sentiments?

As provocative as such questions may be, they address the key challenges facing tourism development and the sustainable evolution of the sector. An institutionalised involvement of tourism academia in policy-making and the corresponding exploitation of an underutilised body of knowledge in this interdisciplinary scientific domain, could be a first step towards the right direction. Extending tourism education programs, beyond hospitality-training and vocational training would further contribute to its professionalization; not just for service-levels, but also for their management. As the tourism sector is reaching maturity in many parts of the world, adaptations in educational infrastructure, political institutions and communication structures are becoming vital for a sustainable and socially responsible development.

The term 'over-tourism' entails a number of tourism-related developmental externalities and is therefore a complex and multi-faceted topic, which is neither novel nor under-researched. Oversimplifying the arguments presented in this paper, 'over-tourism' is mainly about 'under-management' of tourism and the subsequent plea to tourism policy-makers is:

*'Manage destinations and educate tourists; not vice versa!'*

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## Cultural Infrastructure in Arges County

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### Abstract

*Cultural infrastructure is the ensemble of institutions offering cultural services and products (museums, theaters, cinemas, etc.).*

*The purpose of this article is to find out what is the equipment of the cultural institutions, the resources made available and the cultural services they offer.*

*The result of this research demonstrates that cultural institutions in cities and municipalities, although they do not have special headquarters or extraordinary facilities, manage to carry out a multitude of activities: literary circles, choruses, fanfare, folk ensembles, folk music performers, folk musicians and instrumentalists valuable, diverse and quality festivals.*

**Key words:** infrastructure, cultural activity, resources.

**J.E.L. classification:** H54, Z10

### 1. Introduction

The resources made available by the classical infrastructure network of the local cultural sector have a high degree of availability, being open to the general public

This category is the most extensive reflecting the degree of development of the classical cultural network of cultural public local infrastructure, referring to public cultural institutions such as: libraries, museums, theater and opera institutions, artistic ensembles and orchestras popular, cultural centers. The number of cinemas is added (these are rather a type of resource that does not belong to the classical cultural infrastructure by the appearance of cinemas within the shopping malls). The indicators of this category are divided into the indicators expressing the existence of cultural resources number of units) and their capacity to provide public access to their services (the number of seats in these units).

This article will start by establishing the place of Arges county in terms of cultural infrastructure, then we will list the cultural institutions in the county as well as their activities. We will conclude with the conclusions.

### 2. Classification of Arges County from the point of view of the cultural infrastructure

The National Institute for Research and Cultural Training conducted a study in 2010 on vitality and cultural infrastructure. In this classification of cities Pitesti is ranked five in terms of infrastructure, after Targu Mures, Timisoara, Iasi and Cluj Napoca. In Pitesti there are the great majority of the institutions of high culture (theater, puppet theater, etc.), as well as of specific institutions of mass culture (folk ensembles). At the same time, however, the presence of philharmonic, libraries and museums provides diverse resources for cultural enthusiasts.

Table no. 1: Ranking of cities analyzed by the cultural infrastructure index / Table 1: Ranking of cities analyzed by the cultural infrastructure index

Poziție/ Position	Oraș/City	Populație/Population	Regiunea de dezvoltare/ Development region	Infrastructură/ Infrastructure	Poziția după IVC/ Position based on CVI
<b>1</b>	Cluj Napoca	310.243	Nord-Vest	1,08	<b>1</b>
<b>2</b>	Iași	315.214	Nord-Est	0,69	<b>6</b>
<b>3</b>	Timișoara	307.347	Vest	0,61	<b>4</b>
<b>4</b>	Târgu Mureș	145.943	Centru	0,59	<b>10</b>
<b>5</b>	Pitești	168.958	Sud Muntenia	0,51	<b>17</b>
<b>6</b>	Sibiu	154.458	Centru	0,5	<b>2</b>
<b>7</b>	Miercurea Ciuc	41.971	Centru	0,47	<b>9</b>
<b>8</b>	Târgoviște	89.773	Sud Muntenia	0,4	<b>8</b>
<b>9</b>	Bacău	178.203	Nord-Est	0,39	<b>24</b>
<b>10</b>	Botoșani	115.739	Nord-Est	0,38	<b>23</b>
<b>11</b>	Oradea	205.077	Nord-Vest	0,34	<b>12</b>
<b>12</b>	Craiova	299.429	Sud Vest	0,27	<b>13</b>
<b>13</b>	Râmnicu Vâlcea	111.342	Sud Vest	0,25	<b>25</b>
<b>14</b>	Arad	167.238	Vest	0,18	<b>19</b>
<b>15</b>	Sf. Gheorghe	61.704	Centru	0,16	<b>3</b>
<b>16</b>	Ploiești	230.240	Sud Muntenia	0,16	<b>18</b>
<b>17</b>	Brașov	277.945	Centru	0,13	<b>15</b>
<b>18</b>	Galați	293.523	Sud-Est	0,1	<b>21</b>
<b>19</b>	Alba Iulia	66.842	Centru	0,08	<b>5</b>
<b>20</b>	Constanța	304.279	Sud-Est	0,07	<b>11</b>
<b>21</b>	Baia Mare	139.870	Nord-Vest	0,06	<b>20</b>
<b>22</b>	Satu Mare	113.688	Nord-Vest	0	<b>32</b>
<b>23</b>	Reșița	84.678	Vest	-0,01	<b>38</b>

Poziție/ Position	Oraș/City	Populație/Population	Regiunea de dezvoltare/ Development region	Infrastructură/ Infrastructure	Poziția după IVC/ Position based on CVI
24	Zalău	63.642	Nord-Vest	-0,06	42
25	Tulcea	92.379	Sud-Est	-0,09	33
26	Deva	67.508	Vest	-0,11	40
27	Turda	57.381	Nord-Vest	-0,18	26
28	Onești	50.820	Nord-Est	-0,22	31
29	Suceava	106.397	Nord-Est	-0,24	16
30	Târgu Jiu	96.081	Sud Vest	-0,27	35
31	Piatra Neamț	108.085	Nord-Est	-0,29	14
32	Roman	69.058	Nord-Est	-0,29	45
33	Brăila	215.316	Sud-Est	-0,31	41
34	Giurgiu	68.923	Sud Muntenia	-0,33	27
35	Slobozia	52.313	Sud Muntenia	-0,33	29
36	Bistrița	83.039	Nord-Vest	-0,37	7
37	Bârlad	70.064	Nord-Est	-0,38	43
38	Buzău	134.619	Sud-Est	-0,39	28
39	Mediaș	53.564	Centru	-0,4	34
40	Vaslui	70.302	Nord-Est	-0,4	39
41	Focșani	99.907	Sud-Est	-0,41	44
42	Alexandria	50.847	Sud Muntenia	-0,43	30
43	Hunedoara	71.207	Vest	-0,45	46
44	Slatina	78.570	Sud Vest	-0,49	36
45	Drobeta Turnu Severin	107.882	Sud Vest	-0,51	22
46	Călărași	73.823	Sud Muntenia	-0,58	37

Source: [http://www.culturadata.ro/wpcontent/uploads/2014/05/3\\_Vitalitatea\\_Culturala\\_a\\_Orașelor\\_2010.pdf](http://www.culturadata.ro/wpcontent/uploads/2014/05/3_Vitalitatea_Culturala_a_Orașelor_2010.pdf)

## 2. Cultural institutions in Arges County

In Arges County there are more than 300 cultural establishments. Below we listed the most important of them, plus the cultural homes and communal libraries.

- Al. Davila - Pitesti;
- Aschiuta - Pitesti Children and Youth Theater;
- Dinicu Golescu Arges County Library, Public Library of Curtea de Arges, Ion Barbu Municipal Library in Campulung, Town Library of Topoloveni, Mioveni City Library, Costesti Town Library, Luca Paul Communal Library in Domnesti, School Libraries and university;
- Arges County Museum;
- The County Cultural Center;
- People's School of Arts and Crafts in Pitesti;
- Museum of Viticulture and Pomiculture from Golesti;
- The Municipal Museum in Curtea de Arges;
- Campulung Municipal Museum, Campulung History Museum, Musceleana Margareta Ethnography and Folk Art, Lily and Gica Stefanescu, Mausoleum of the Heroes of Mateias;
- Bratianu Culture Center at Vila Florica in Stefanesti;
- Philharmonic in Pitesti;
- Cultural Center of Pitesti;
- The Cultural House of the Trade Unions in Pitesti;
- Student House in Pitesti;
- The Military Circle in Pitesti;

- Tudor Musatescu Municipal House of Culture in Campulung Muscel;
- The Cultural House of the Trade Unions C.D. Aricescu from Campulung Muscel;
- The Military Circle in Campulung Muscel;
- George Toparceanu Center for Culture and Arts from Curtea de Arges Municipality;
- The Military Circle in Curtea de Arges;
- The Cultural Center of Mioveni Town;
- The Union House of Culture of Mioveni;
- The Cultural House of Costesti;
- The Town House of Topoloveni;
- The Cultural House of Stefanesti;

To this is added 102 public libraries and over 200 cultural homes.

The libraries belonged and still belong to local communities, entering into the cultural tradition of the peoples over time. Since its inception, the public library has been permanently reported to the collectivity whose information and information interests it serves and for which it was, moreover, created. Being a cultural institution with traditional valences, its role grows, although the possibilities of permanent education of people have diversified through the emergence of institutions that use multiple modern means of communication.

At the end of 2012 there were 102 public libraries in Arges County: three municipalities, four towns, 95 communes.

The cultural home plays a very important role in preserving the ancestral customs, the song, the game and the beautiful costume. He also organized cultural and artistic activity in the Arges and Muscel villages. Until the cultural home was established, the school pursued cultural and artistic activities among the inhabitants, with the help of teachers. Since the end of the nineteenth century, the beginnings of cultural activities have been recorded. On the occasion of teachers' circles and on holidays, they held various conferences on raising, caring and educating children, the work of the earth, the care of trees, animals, birds, bees, and others attended by many villagers. Periodically, particularly at the end of the school year and on national holidays, successful artistic programs were presented.

### **3. Cultural and artistic activities**

Cultural and artistic activity intensified in the years after the First World War, when both the concerns and the number of pupils, students, as well as the young villagers attracted to this work increased.

After the Great Union of 1918 the cultural homes in the villages of Arges started to take place at the initiative of intellectuals, students and pupils. The beginning period was years of intense and almost permanent cultural activity.

In the years 1920-1935, many cultural homes, associations and cultural societies were founded, the initiators being the village intellectuals, teachers and priests who trained older students from school, graduates, and especially young people interested in culture and art, at organizing and the performance of choral, theater and dance activity to the creation of museum collections. The first beautiful enterprises are found in Mănățești, Domnești, Stroești, Costești, Topoloveni, Brăduleț, Arefu, Rucăr, Dragoslavele, Stoenesti, Boteni, Vulturești, Dobrești, Priboieni, Leordeni, Bogați, Călinești, Căteascăasca, Mozăceni, Slobozia, Vedea, Poiana Lacului , and the enumeration could continue. Cultural and artistic events were organized in which were presented conferences, several voices, recitations and unmistakable plays, written especially by the classics of Romanian dramaturgy. Such achievements are to be remembered at Godeni, Berevoești, Budișteni, Corbeni, Coșești, etc.

After the Second World War, the cultural and artistic activity of the masses was once again a true revival. At the beginning of the 1950s there was the problem of building places of culture in all the villages of Arges.

Today, Arges County has more than two hundred cultural homes, most of them built between 1955 and 1980, but also after 1990 (Albești de Argeș, Ciomăgești, Căpățâneni, Țițești, Negrești, but only a quarter of them have permanent cultural activity, the other being occasioned by certain

events in the life of the community. In these localities the mayoralty appointed an employee as the "opening / closing" of the doors of the cultural home.

In most localities, the librarian is responsible for the cultural home, by the decision of the local councils, only in 25 localities there is a full-time home director, and in less than half have a half-time director. In the last 15 years, 80% of the cultural homes, through the mayoralties and local councils, have been endowed with objects of cultural practice, capital repairs, which look very good inside and outside. exterior.

We must mention the cultural activity of several representative hostels in Argeş County, which have remarked over the years at domestic and international events.

In the north of Arges County, Arefu has been and is a point of reference. Professors Angela and Cezar Bădescu were, through the ensembles they created, pioneers.

In Mioarele, the young people and the children, grouped around the animator Prof. Cezar Neacsu, formed an ensemble of traditional winter customs, "Colinda" (50 people), who became known not only on the scenes of Argeş, but also represented the county and at most of the winter customs festivals in the country, being the messenger of our ancestral customs in the Republic of Moldova, Bulgaria, the Council of Europe in Brussels and London.

The commune of Corbi, through the "Pasture Rhapsody", managed to gather all the twin villages in Sibiu, Gorj, Vâlcea, to a manifestation that has lasted for more than four decades.

In Berevoeşti, "Serbian from Berevoeşti" and the feast "Haz of trouble" have been a symbol for many years. A heartbreaking director who went on to the eternal, Ion Baboi, was the one who enlivened those holidays.

In Vlădeşti, the teachers Ion and Steluţa Stroe succeeded, through the ensemble of the locality "Bratia", and through the rich editorial effort, to make known the village and the beautiful traditions of the locality.

Boteni commune has been established over the years on the Argeian and national cultural scene through the famous festival "Bâteul de la Boteni". The director of the cultural home, Mihai Magureanu, today the longest, kept the flame uninterrupted for decades, thousands of young people crossing the threshold of the hostel to participate in the activities they organize.

The South of Argeş County has brought two neighboring communities to the ramp: Stolnici through "The Intercession of the Cowmen from Arges County", manifested at the "Ascension of the Lord"; and Barla, who, through some stupid people under the choreography of Voicu Dumitrescu, placed on the map of the county the feast "Hora ca la Bârla".

There were also other localities such as: Rucar (Expopastoralis), Coşesti (Țuică Festival), Brăduleţ (Cheese Festival), Retevoieşti (The Feast of the Spring in Podişor), Negraşi (The Daffodils Feast), Bascov, Mălureni, Şuici, Slobozia, Bradu, Oarja, Albota, Harsseşti (celebrations of communes). The intellectuals and managers of the cultural homes have found decisive support from the local administrative bodies in their approach. It is also encouraging that in many localities the traditional "meetings of village sons" have been taken over and become permanent, which are becoming more attractive and beneficial for the community.

A significant fact for the spiritual life of the villages in the last 20 years is the appearance of the monographs, the identity card of the localities. More than 30 such works, some of undeniable scientific value, made either by local forces or with the support of the Argeş County Museum or the Center for the Creation of People, have diminished the black spots of this desideratum. Today there are still few communes who, from indolence and passivity, do not want to identify themselves with local communities and especially with foreigners.

#### **4. Conclusions**

The Argesan population has developed a culture of its own, unimaginable originality, but also cared for the maintenance of a spiritual life, raising places of worship in each village, as well as the residences in Campulung and Curtea de Argeş where worshipers and rulers of Wallachia worshiped.

Over the years, the amateur artistic movement in the villages has been highlighted by remarkable results in national confrontations, with prizes and distinctions that legitimate us among the top five counties in the country.

In conclusion, in order to facilitate the transition of young people into a changing society and to achieve a balance between the generations, it is necessary to correlate and harmonize the programs by applying public policies with social and educational impact among young people. The investments will be distributed, in the next period, to the rehabilitation, modernization and consolidation of the cultural infrastructure; the realization, rehabilitation and modernization of the sports infrastructure; realization, rehabilitation and modernization of recreational infrastructure; making green areas in residential neighborhoods.

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## **Ensuring and Maintaining the Quality Standards in the Tourism Enterprises' Activity**

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### **Abstract**

*The systematic analysis of the quality of tourism services and adoption of the necessary measures are priorities of utmost importance in the current period. In order to improve the quality of products and services, a tourism enterprise needs to know how consumers perceive the quality and what quality they expect to receive from the service provider.*

*In this article, the author describes: the issue of quality management in the tourism industry, the stages of implementation of a quality assurance system in tourism enterprises, the opportunity to use the PRCA process model aimed at implementing the change, the aspects of identification of the quality characteristics, the principles of quality improvement, managerial errors that can occur in quality promotion.*

**Key words:** quality management, quality control, tourism services, tourism products, tourism-consumer.

**J.E.L. classification:** M 1

### **1. Introduction**

Quality management is a special subject of management, which is increasingly studied as a stimulating factor in the development of the tourism enterprise.

The interest in quality is explained by the fact that, with the liberalization of the visa regime for Moldovan citizens on April 28, 2014, the tourism offer of the country for outgoing tourism has become much more diversified and the tourism-consumer has become more demanding in organizing the holiday.

In this context, the tourism market in the Republic of Moldova, which tends to have a higher economic performance, needs to adjust its visions in order to ensure and maintain the quality standards, removing those deficiencies that delay this process.

In order to achieve the quality, not only compliance with standards is used, but collective performance that serves to meet the needs, requirements and expectations of tourism-consumer is used.

In our opinion, the main factors determining the tourism destination are the quality of tourism, environment and innovation. Those who administer the tourism objectives at the national or local level must clearly ensure the quality of services, protection of the environment and, last but not least, the implementation of innovative processes. This will help them to better characterize and monitor their tourism products, to define their desired quality level for tourism products, to be properly prepared for the market segments preferred by visitors and to attract tourism-consumers as many as possible.

### **2. Actuality of the topic proposed for investigation**

Currently, more and more employers in the tourism industry have begun to show an increased interest in the subject of ensuring quality standards in the activity of the tourism company. Interest in this theme is major, largely due to the decrease in the number of tourism-consumers who prefer

to organize their holidays through travel agencies or tour operators. The information technology era has put a hard mark on this subject. Tourists, based on on-line platforms, began on their own to organize their holidays, thus avoiding tourism businesses. Under these circumstances, in order to protect their business, tourism companies try to remedy the situation by increasing the quality of tourism products and services.

It is recognized the fact that the effectiveness of the work that was done and implicitly the economic and financial results of a tourism enterprise depend on the qualities and professionalism of employees and managers. But these results also depend on the enterprise's desire and tendency to modernize. In order to understand this specific problem-solving mode, it is necessary to go beyond certain figures, endowments, etc. in what is known as quality management.

Every enterprise has its own institutional management that reflects its history, ways to approach issues, practices of managing activities, managerial style, attitude to risk, to competition, to consumers and, of course, to employees. Thus, through this institutional management, the quality standards that the enterprise needs to meet competitive competition can be implemented.

*Arguments* for research of this theme are:

- study of theoretical and methodological fundamentals regarding the quality of products and services in tourism enterprises;
- clarification of quality criteria defined by the World Tourism Organization;
- determination of the role of services quality in the performance of the tourism enterprise;
- reasoning on the need to implement quality standards in the tourism enterprise;
- the role of the quality over the perception of tourism product by the tourism-consumer.

*The aim of the research* is to study and analyze the issue of quality management in the activity of tourism enterprises in the Republic of Moldova, the trends that are attested in this field, as well as the formulation of some proposals that would contribute to the improvement of the performances of the tourism enterprises, together with the implementation of the quality standards. The theoretical and methodological support of the investigated topic will be provided by the work of scientists who have made research in this field.

*Relevance of the article.* The investigation and development of this theme will enable the author to generalize certain conclusions on this subject and as a result it will be possible to offer the tourism business environment certain proposals and recommendations capable to accelerate the processes of implementing the quality standards in the activity of the tourism enterprise.

### 3. Applied methods

When developing this article, the author has used 3 research methods as follows:

*Fundamental research* has allowed elucidating the current trends in the field of ensuring and maintaining quality standards in the activity of tourism enterprises, while reflecting the prerequisites for the change in the researched field. Fundamental research included investigations in the form of theoretical studies that led to the formulation of reasoned scientific conclusions.

*Research for development* aimed at using those processes and devices that can directly influence the practical work in the field of implementing quality standards in tourism. Thanks to the use of this method, it was possible to demonstrate in practice the need to use quality standards in the activity of tourism enterprises.

*Applied research* was tasked with providing data for directing practical work, in order to increase the methodical work. The result of the applied research has led to the conclusions on the role of quality in the provision of tourism services. Also, applied research has helped to find solutions and direction that can solve various problems.

### 4. Results and discussion

All the companies are facing today increasingly complex, complicated and difficult problems that have to be tackled and solved. The great changes in the current society, strong competition and globalization require managers to sustainably mobilize all the available resources in order to adapt to this new context in which they run their business (Vagu, Stegăroiu, Croitoru, Duică, 2014, p.29).



Thus, nowadays, if it wants to survive and thrive, a tourism enterprise needs to improve its practice and managerial conception in the field of quality.

Reforming an enterprise can be done through technological innovations, through the emergence of consumer needs or other changes that raise a new product to the viable and potential opportunity for a business.

The notion of "quality assurance" is largely similar to quality management. This concept is defined as the totality of activities undertaken to achieve quality, activities that are found in all stages of the development of tourism products and services.

The most widely accepted definition of quality management is currently, the one provided by the ISO standard. Thus, *"quality management represents all the activities of the general management function that determine quality policy, objectives and responsibilities and implement them within the quality system by means such as planning, controlling, assuring and improving quality"* (Deac, 2014, p.400).

American Professor J.M. Juran, considered a true protagonist of quality management, defines quality management through its functions. In his opinion, quality management comprises three main categories of management processes: (Juran, 1980, p.28).

- quality planning;
- keeping quality under control;
- improving quality.

In our opinion, these three categories of processes are also relevant to the tourism industry.

Quality assurance of tourism products and services must be provided by the tourism enterprise at the early stage of planning its activities. This category of processes should include:

- establishing the quality objectives;
- identification of potential consumers of tourism products and services;
- studying the needs of tourism-consumers;
- developing the characteristics of tourism products and services;
- developing the characteristics of the process through which the product or tourism service will be obtained.

Quality control in the tourism enterprise should provide for the application of the management control function at the level of quality management. This category of processes requires:

- establishing and approving the characteristics of the tourism products and services to be provided;
- tracking the processes to be respected in quality assurance;
- setting the expected levels of controlled features;
- designation of a person or group of persons to exercise control;
- verification of process performance to the established characteristics;
- interpreting deficiencies;
- taking actions when finding out deviations from the established rules.

Improving the quality of tourism products and services must be a priority in the work of travel agencies and tour operators and should provide for the following processes:

- finding the need for improvement;
- finding weak places in the management of the tourism enterprise;
- diagnosis of the causes that have led to the diminution of the quality of tourism products and services;
- fighting with resistance to change;
- organization of working teams;
- fixing the problems;
- maintaining the made improvements.

Although quality management represents the responsibility of all levels of management, the coordinating role belongs to the top management, and the implementation of quality management can only be achieved with the participation of all employees of the tourism enterprise.

A quality assurance system within a tourism enterprise must include a set of organizational structures that contain responsibilities and procedures, processes and resources, aiming to implement the quality management (Platon, 2014, p.51).

The implementation of a quality assurance system in a tourism enterprise requires some stages, as follows:

1. Choosing and development of an appropriate standard system of the quality management.
2. Training staff in order to use the implemented standard;
3. Staged implementation of the quality standard.
4. Undertaking the internal audit of the enterprise in monitoring the implementation process of the quality standard.
5. Performing managerial analysis of implementation processes.
6. Continuous improvement of the internal organization of the tourism enterprise.

For the successful implementation of the quality standard in the tourism enterprise, in our opinion, it is appropriate to use the **PRCA** process model, thought by W. Edwards Deming, a great expert in the field of quality management. The model provides for a four-step cycle, aimed at implementing the change: (Deming, 1993, p. 132)

Stage I: **Planning** – recognizing an opportunity to start a change.

Stage II: **Achievement** – the process of testing the change takes place. A small-scale study is carried out by designing an experiment.

Stage III: **Control** – the results of the experiment are analyzed and problems are identified.

Stage IV: **Action** – acts according to the obtained result. If the change did not produce the desired results, the cycle resumes with another improvement plan. If the change has produced some improvement effects, it is implemented within the large-scale tourism enterprise.

After completing the PRCA cycle, it is necessary to ensure that the level of quality achieved is maintained. For this, a so-called maintenance level is applied, which implies compliance with the rule system by standardizing the achieved level, verifying if the standard is effective and produces positive effects on the business of the tourism enterprise. Also, it is possible to introduce some corrections to reach the set goal.

In its work program, the World Tourism Organization operates with the concept of quality in tourism, the definition of which is as follows: "*quality is the result of a process that involves satisfying the legitimate needs of products and services, consumer requirements and expectations at an acceptable price in accordance with the quality standards related to ensuring the safety and security of tourists, hygiene, accessibility, transparency, authenticity and harmony of tourism activity with the human and natural environment*".

Quality in tourism is quite difficult to achieve on the grounds that the service does not always depend on the tourism agency or tour operator. It depends to a large extent on the service providers: the tourism accommodation structures with the functions of accommodation, the tourism accommodation structures with food functions, transport companies, leisure entities, etc. Therefore, in order to ensure the qualitative performance of the service, it is necessary to consider the following quality-determining concepts:

Table no. 1 Concepts that determine the quality of services in the tourism branch

N/o	Instruments	Description
1.	Service features	Consumption service that meets certain preset qualities. Example may be the accommodation unit. The accommodation unit must meet the requirements set out in the classification rules and ensure the level of comfort set out in the classification certificate. In order to avoid complaints from tourists, the possibility of deviating from the norms established by the legislation is excluded.
2.	Economic advantages	It is a financial effort that is made for the purchase of the requested service. This will greatly influence the consumer's satisfaction degree, as he will not be pleased with the fact that the purchased service generates large expenses.
3.	Recognition and identification	A well-known trademark can be a guarantor of the qualitative service delivery.
4.	Ecological aspects	An ecologically protected area will increase demand from potential consumers. The latest trend in tourism is the visit of pure organic areas, unaffected by industry.

5.	Ergonomic properties	There are appreciated from the perspective of the product-man relationship, these properties contributing to the maximum satisfaction for the consumer through the offered control, creation of good mood, etc.
6.	Informational platforms	Use of IT applications to launch, promote, distribute and market the service.

Source: Developed by author

Establishing quality standards for tourism companies is one of the key issues of a top-manager, who has an obligation to set realistic standards while motivating employees to meet and implement them (Rondelli, Cojocariu, 2004, p.81). Ideally, these standards can be perceived by those who will have to translate them into life as:

- significant in achieving important objectives;
- clear, except for doubts about the expected result;
- fair, in relation to all employees;
- adaptable, through the possibility of their rapid implementation, taking into account the objectives of the tourism enterprise;
- honored by obliging employees to respect them.

In establishing the quality standards within the tourism company, the top-manager must ensure their compatibility with those imposed externally and their relevance to its activity. Thus, in the process of deciding on the implementation of certain standards, there may be 3 problems that need to be addressed from the start.

Table no. 2 Ways of establishing quality standards in the tourism companies

N/o	Issue	Reasoning
1.	Is it reasonable to introduce this standard if it increases the amount of work done by employees under the conditions of maintaining the previous salary?	A top-manager may impose an excessive workload that cannot simply be achieved. Or, on the contrary, staff may not be used to its full capacity, in order not to generate fluctuation of staff, which is quite high in tourism.
2.	Do the objectives have to be maximized in order to go out among the leaders of the tourism market, or to be minimized, to keep the company afloat?	A team can be set a goal to give members a challenge and motivate them to achieve performance. Even if such an objective cannot be achieved, the achievements are better than if a more modest but a safer one was proposed. Sometimes, however, standards are used to define the minimum acceptable performance level. Both approaches are important, although each of them can lead to specific problems. On the other hand, goals that cannot be reached can create a sense of failure. Under these circumstances, the most important thing is to clarify how a particular standard or objective is used.
3.	Do standards have to be measurable?	It is assumed that a standard to be useful, it must be measured in one way or another. A qualitative approach does not require the objectives to be defined in numerical terms, but in statements that can be verifiable from a descriptive point of view. Whatever the goals, the best standards are those that allow the employee to easily spot the effects of performance.

Source: Developed by author

## 5. Conclusions

Having a quality system in the tourism enterprise is a proof of an efficient management, a management oriented to cultural values that specifies the quality as a fundamental factor of continuous progress. The cultural values promoted together with the implementation of the quality system are a consequence of the changes in the organizational culture.

All quality systems lead us to the conclusion that the quality issue must be systematically treated, constantly and fairly approached and thus may lead to the success of any tourism business.

In other words, a methodical approach is required not only to meet the accepted quality standards, but also to improve them.

The ultimate goal of implementing quality standards is certification of services, which should define a modern tourism enterprise. Standardization of services must be popularized so that it can be used as a criterion in the choice of the company by tourist-consumers.

As a *generalization*, we can say the following: if a tourism enterprise wants to achieve only quality products and services, it is necessary for the enterprise itself to be "qualitative", that is, to be able to satisfy as much as possible the requirements of the customers.

#### ***Proposals and recommendations***

In order to manage the quality tracking system, we need to rely on a specialized organization in the context of demand developments and the adaptation of standards.

Therefore, certain aspects need to be taken into account in setting quality standards, such as:

- ✓ what the consumer really wants;
- ✓ staff skills;
- ✓ training staff to improve standards;
- ✓ eliminating certain constraints;
- ✓ equipment availability;
- ✓ availability of time for tasks accomplishment;
- ✓ linking the activity to legal parameters.

Considering the common features for all the quality systems presented, it is pointed out that:

- systems are established in writing;
- systems ensure the fulfillment of the client's requirements;
- systems ensure the fulfillment of the requirements of the tourism enterprise;
- systems are applied in all activities of the tourism enterprise, so as to interact with them.

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# Tourism Multiplier Effect for the National Economy of the Country

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*Motto:*

*Tourism must become a money harvest of the Republic of Moldova  
(Formulated by author)*

## Abstract

*As tourism development is on the rise and the complex functions of the tourism industry are better known, the tourism market is becoming increasingly important for national economies of the countries, while its sphere is continually expanding in relation to world economies.*

*Under these circumstances, tourism is characterized by a wide range of activities and tasks such as: contributing to increasing economic and social efficiency, contributing to the formation of the Gross Domestic Product, ensuring the equilibrium of balance of payments, creating jobs, attracting foreign currency by exporting services, creating the optimum conditions for rest and recreation of domestic and foreign tourists.*

*This article addresses a rather complex theme, chosen from the desire to analyze and interpret the current dimensions of the tourism industry of the Republic of Moldova as a branch of interference, motivating the necessity of its estimation, as a multiplier for the national economy of the country.*

**Key words:** sustainable tourism, tourism industry, tourism services, tourism multiplier, economic effect, tourism satellite account.

**J.E.L. classification:** M 1

## 1. Introduction

The wide appreciation of the economic effects produced by the tourism industry involves a variety of research, dynamic and differentiated research, correlated with a number of factors and aiming to establish the possible consequences in the general context of economic and social efficiency of tourism.

In addition to the direct effects that it generates in economic and social terms and which have already been analyzed and quantified, tourism also has a number of favorable influences (indirect and stimulated effects) on other sectors of the economy. Indirect effects refer to the results of successive business transactions caused by direct travel expenses. To be more explicit, this implies that economic agents in tourism are buying goods and services from local suppliers, and these, in turn, from raw material producers, materials, etc. The stimulated effects are expressed by the influences of the increase in consumer spending on goods and services, the increase due to the augmentation of the individual incomes, caused by the intensification of the tourist traffic. In other words, it is an amplification of activity, both in the branches that are directly related to tourism and in the other ones, by attracting labor and stimulating the production of goods and services.

If at micro-economic level, the cost/benefit analyzes can be used to measure the efficiency of business decisions of tourism enterprises, at macroeconomic level, the economic impact analysis is used to gain an overview of the entire economy of a country, aiming to determine the effects of tourists' travel expenses.

## 2. The actuality of the topic

The specialists in the domain of tourism, in the desire to define as deeply as possible the tourism phenomenon, as an activity with profound economic impact, attributed to this field the appropriate terminology, designated the tourist traffic indicators, elaborated econometric calculation models, capable of estimating the effect tourism multiplier for the national economy of the country.

Certainly, in the literature, many concerns and contributions to the definition of tourism are highlighted, but in our opinion tourism is a particularly complex economic activity, because the content of the tourist service incorporates besides the specific transport, accommodation, food and leisure services and some corresponding to other economic areas, thus giving tourism the character of a branch of interference and synthesis.

Under these conditions, the subject of the research is particularly recent because tourism acts as a catalyst for the national economic system, it has a great importance in the structure of the mechanism.

As **arguments** for the research on this theme are:

- the development of tourism activity in all its complexity can only start in connection with other areas of the national economy, thus creating a multiplier effect that needs to be studied;
- tourism as a complex economic activity integrates a variety of statistical indicators, which need to be studied;
- elucidating factors that have a decisive role in the multiplier effect of tourism;
- the characterization of tourism as an activity that benefits the national and local economy.

**The aim of the research** is to study and analyze the problems related to the impact of tourism on the national economy as a branch of interference and as a multiplier effect on other industries.

## 3. Applied methods

When writing this article, the author used 3 research methods as follows:

**Fundamental research** has made it possible to elucidate the current trends in tourism statistics, reflecting the prerequisites for proven change in the field of research, due to the implementation and use of the Tourism Satellite Account. Fundamental research included investigations in the form of theoretical studies that led to the formulation of scientifically grounded practical conclusions.

**Development research** aimed at using those processes and devices that can directly influence practical work in the field of tourism economy. In order to tackle the diversity of issues that tourism is involved, a rich literature of general interest and a wide range of statistical and mathematical research tools, comparative analyzes, highlighting the complexity of tourism as a generator of economic and social benefits on national scale.

**Applicative research** was tasked with providing data for directing practical work to increase methodical work. It provides practical support in knowing the mechanisms of tourism functioning as a complex socio-economic activity, in the conceptual clarifications and acquiring the main economic categories in the field, as well as in highlighting the determinants, tendencies and forms of manifestation of programs and policies in tourism.

**Relevance of the article.** The research and development of this theme gave the author the opportunity to generalize certain conclusions on the subject, and as a result to propose to the National Tourism Agency of the Republic of Moldova and the National Bureau of Statistics a new way of estimating tourism as a multiplier effect on the national economy and argues the need to change the calculation methodology by introducing the Tourism Satellite Account.

## 4. Results and discussions

The considerable increase in receipts from international tourism and, respectively, payments for international tourism issuing tourist flows, implicitly leads to an increase in international tourism within the external payments' balances. From an economic point of view, receipts from foreign visitors are exports to the recipient countries of tourist flows.

It is known that money coming from outside circulate in the economy of places visited by tourists and is spent for various consumption of goods and services. The well known economist John Keynes called exports made from tourist services, associated with consumption of goods and services, with the term "injections into the economy of recipient countries" on the grounds that they generate internal expenses.

The growing volume and complexity of tourism services has generated the development of a true travel and tourism industry, which justifies treating the tourism phenomenon as a distinct branch of the developing nation.

International tourism statistics based on World Tourism Organization data are as follows: (*Annex 1*).

If we are to analyze the statistical indicators of the development of the tourism industry in the Republic of Moldova without taking into account its multiplier effect, this data is as follows: (*Annex 2*).

By its nature, the tourist phenomenon is particularly complex, with profound economic, social, cultural and political implications.

Analyzes to measure the global spending of foreign tourists in a country of tourism destination and their impact on the national economy is being called the "multiplier effect of tourism".

The multiplier, according to the acceptance of the statistical analysts, "reflects and expresses the direct link between the inputs into the economic system, materialized in investments and its output in the form of the income of the participants in economic activities" (Minciu, 2004, p. 304).

Under these conditions, coupled with tourism and addressed in a broader perspective, the multiplier measures the changes in income, employment and balance of payments levels caused by changes in tourism spending.

The tourist multiplier makes it clear that an initial expense made by a tourist in an area or country turns successively into incomes for other areas of the economy (agriculture, the consumer goods industry, construction industry and building materials, trade, services) directly or indirectly linked to tourism.

Considering the complexity of tourism activity, the multitude of its interdependence with the other branches of the economy and the diversity of the action plans, on the one hand, and the general significance of the indicator, on the other hand, one can speak of a multiplier effect of the expenditures made by tourists and a multiplier effect of the investments.

The touristic multiplier of expenses / incomes is considered more relevant and in our view presents several types:

*Table no. 1. Types of tourist multiplier*

N/o	Multiplier of	Characteristics
1.	Results	Quantifies the total revenue earned at the expense of a tourist expense unit
2.	Transactions sales	Measures the turnover achieved by a unit of expenditure. The indicator is similar to the result, but eliminates the increase in inventory value due to the change in the initial cost
3.	Revenues	Expresses additional domestic revenue by an additional unit of travel expenses
4.	Employment	Highlights the increase in the number of jobs, equivalent to total time, determined by an additional unit of travel expenses
5.	National Public Budget	Measures the gross income created by an additional unit of travel expenses. All forms of taxes and duties are included
6.	Export of services	Expresses the value of goods and services exported, caused by a unit of travel expenses. Amounts spent by tourists in the country or area visited cover goods and services from domestic and imported production

*Source:* Elaborated by author

Regarding the mechanism of action of the tourism expenditure multiplier/income, regardless of its type, the situation is as follows:

1. The sums of money spent by tourists on the package of tourist services are considered to be revenues of tour operators and travel agencies and are used to pay the obligations to tour operators: transport companies, accommodation units, food facilities, leisure facilities, guides, while paying the obligations to the National Public Budget.

2. Tourism service providers in their turn, turn off their debts to suppliers by spending on: the purchase of food, non-food, energy, communal services, etc., the payment of works, the making of new investments, paying at the same time the obligations towards National Public Budget.

3. In turn, the suppliers will use the money they receive for the realization and development of their own activities, respectively they will honor their financial obligations towards employees, shareholders, state, will make new investments, and the process will continue.

4. At the same time, workers will meet their needs, allocating money for purchases of goods and services, paying their obligations to society (taxes, taxes) while making savings.

5. Further, the money earned by the state will be directed towards fulfilling its own social and other commitments.

It follows that money originally spent by the tourist participates in an economic circuit, resulting in the rotation of money in time and space. The faster the circulation of financial means is, the higher the volume of services rendered is, and accordingly the net income increases.

The interdependence between the development of international and domestic tourism and economic growth is evident as it trains the demand for a range of goods and services that would otherwise not have been produced or delivered.

The economic effects of tourism consumption must also be assessed in terms of income generated by the work force directly or indirectly engaged in the tourism industry.

Statistical analysts may consider three elements that contribute to measuring the overall economic impact of a certain amount of travel expenditure: (Neacșu, Baron, Glăvan, 2011, p.358)

- **The direct impact** measures the effects of the first round of monetary circuit from a tourist. As an example, the proportion of the cost of a restaurant for the procurement of raw and auxiliary materials needed for the preparation of the customer-ordered preparations and for the salaries of the staff, and the monetary unit spent by the consumer-tourist in the respective restaurant, can be used;

- **The indirect impact** measures the derived effects of additional rounds caused by the recirculation of the tourist's initial monetary unit, for example for the purchase of goods and services by firms in other sectors that contributed to the supply of raw materials to the restaurant needed to provide the requested food services by the visitor;

- **The stimulated impact** measures the derived effects caused by employees of a tourism enterprise who spend some of their salaries in other business sectors. As an example, hotel employees spend some of their pay for purchasing clothing, food, etc. From the local commercial network, and the owners and employees of the respective commercial units, in their turn, also spend some of their income for the purchase of other goods and services in the area where they live and work.

It follows that the multiplier effect of tourism (K) is expressed by summing up the three impacts: direct plus indirect, plus stimulated, relative to direct impact: (Snak, Baron, Neacșu, 2001, p.73)

$$K = \frac{\text{Direct impact} + \text{indirect impact} + \text{stimulated impact}}{\text{Direct impact}}$$

It should be noted, however, that the multiplier effect is not an exclusive attribute of the tourism industry. Similar relations are found in the various branches and sectors of the national economy.

#### **Satellite tourism account**

As mentioned above, statistical analysts measure the magnitude of the economic consequences of the tourism industry through direct, indirect, or stimulated assessments, depending on the available sources of statistical information.

However, at present, for the assessment of the real dimensions of tourist traffic and the overall impact of travel expenses incurred by a tourist during his travel and stay, tourism statistics are not yet sufficiently comprehensive.

*For example, in order to travel on own account at a designated tourist destination, the tourist buys his ticket for travel either on land, air or sea. Thus, these expenditures will be found only in the total receipts of the respective transport company, without the possibility of measuring the impact of these expenditures on the achievements of the tourism industry.*



*Similarly, the cost of the fuel consumed on a holiday trip with the passenger's own car will not be seen as a distinct position in the Peco station's account, where the fuelling has taken place, not to mention the various expenses generated by travel preparation and actual travel.*

Drawing from this example, in statistical methodology, statistician analysts unanimously agree that tourism has a strong impact on recipient countries.

In the development and implementation of tourism management strategies, we must keep in mind the complexity of tourism (Botezat, 2003, p.162).

According to the World Tourism Organization, "Sustainable Tourism Guidelines and Practice Management" are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche segments of tourism. The principles of sustainable development address the economic, socio-cultural and environmental aspects of tourism, and an appropriate balance needs to be struck between these three dimensions to ensure long-term sustainable development (<http://www2.unwto.org>).

Thus, sustainable tourism should:

1). Achieve optimal use of environmental resources, which is a key element in tourism development, maintaining ecological balance and helping to preserve natural heritage and biodiversity.

2). Respect the socio-cultural authenticity of host communities, preserve cultural heritage, traditional values and contribute to intercultural understanding and tolerance.

3). Provide viable and long-term economic operations delivering fairly distributed socio-economic benefits to participants, including a stable employment base, earnings opportunities and social services for host communities, helping to reduce poverty.

Sustainable tourism development calls for informed participation of all decision-makers to ensure broad participation in establishing a true consensus. In this context, sustainable tourism must be a continuous process involving constant monitoring of its impact on the national economy, the social and political environment, and in case of deviations, the possibility of introducing corrective measures (Stănciulescu, 2004, p. 121).

As the economic effects of tourists' spending outweigh the scope of revenue reported statistically by service providers, the World Tourism Organization, in conjunction with the World Travel and Tourism Council, the European Union Statistical Office and other regional tourism bodies, proposed implementation for member countries OMT, the tourism satellite account system. The recommendations of the World Tourism Organization for the adoption by the member countries of the tourism satellite account were the subject of one of the main points of the agenda of the International Conference on Statistics and Measuring the Economic Importance of Tourism, held in Nice, the French Republic.

The Tourism Satellite Account System, the aggregation and concepts of which derive from the United Nations National Accounting System, extends its scope not only to the direct costs of international and domestic visitors but also to the indirect effects of those expenditures.

Under these circumstances, the Tourism Satellite Account system is the main means of better understanding, at national, regional and local level, the economic benefits provided by all the activities of the travel and tourism industry.

Therefore, the World Tourism Organization recommends and encourages member countries to develop their own tourism satellite systems.

## **5. Conclusions**

The economic advantage of international tourism has prompted many developing countries to increase their efforts to develop their tourism industry as an activity capable of balancing the balance of payments, to ensure the attraction of foreign currency in the country, to invest, to create places for work. The Republic of Moldova is not an exception. With the approval of the 2020 Tourism Development Strategy, (Platon, 2014, p.39), the state reiterated its position on this branch, establishing that tourism should become a competitive and well-developed economic sector that effectively exploits the country's natural and entropic tourist heritage by promoting at the same time the Moldovan hospitality at high standards.

The travel and tourism industry is making a major circulation of money, materialized in the tourists' personal expenses, in the receipts of economic agents, salaries, taxes, fees, etc., but so far there has not been a tool to measure the real economic benefits of tourism.

The Tourism Satellite Account can help remedy this situation by allowing the assessment of the share of tourism in the national economy of the country through its multiplier effect in terms of value and scale, comparable on international scale.

In our opinion, the Tourism Satellite Account of the Republic of Moldova will be able to provide reliable assessments regarding:

- the part of the tourism activity in the country's Gross Domestic Product;
- the size of tourism activities compared to the dimensions of other sectors of the national economy;
- the number of jobs directly and indirectly engaged in tourism;
- the volume of public and private investments related to tourism activity;
- the value of public revenues generated by tourism.

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Appendix no. 1

**International tourism statistics. Main indicators  
international Tourism receptor 2010-2016**

Region Year	Tourism proceeds					Total
	Africa	America	Asia	Europe	Middle East	
2010	32 billion \$	182 billion \$	249 billion \$	406 billion \$	50 billion \$	<b>919 billion \$</b>
2011	33 billion \$	199 billion \$	289 billion \$	463 billion \$	46 billion \$	<b>1030 billion \$</b>
2012	34 billion \$	215 billion \$	323 billion \$	457 billion \$	47 billion \$	<b>1076 billion \$</b>
2013	35 billion \$	229 billion \$	361 billion \$	489 billion \$	48 billion \$	<b>1162 billion \$</b>
2014	36 billion \$	274 billion \$	377 billion \$	509 billion \$	51 billion \$	<b>1247 billion \$</b>
2015	33 billion \$	304 billion \$	418 billion \$	451 billion \$	54 billion \$	<b>1260 billion \$</b>
2016	35 billion \$	313 billion \$	367 billion \$	447 billion \$	58 billion \$	<b>1220 billion \$</b>

**Weight of tourism in world economy (GDP) 2010-2016**

Year	GDP
2010	5,0%
2011	6,8%
2012	7,0%
2013	7,2%
2014	7,5%
2015	9,8%
2016	13,8%

Source: Elaborated by author basing on data from Tourism World Organization <http://www2.unwto.org>

Appendix no. 2

**Weight of organized tourism in Gross Domestic Product. Period 2010-2016**

N/o	Years	Total volume of sales National tourism, (thousand lei)	Sales volume Tourism receptor, (thousand lei)	Sales volume Internal tourism, (thousand lei)	Gross Domestic Product, (thousand lei)	Weight of tourism in GDP (%)
1.	2010	212488,2 lei	128610,5 lei	83877,7 lei	71849000,0 lei	0,30%
2.	2011	278195,2 lei	184950,0 lei	93245,2 lei	82174000, 0 lei	0,34 %
3.	2012	329243,9 lei	206262,3 lei	122981,6 lei	87847000, 0 lei	0,37 %
4.	2013	348024,6 lei	252640,7 lei	95383,9 lei	99879000, 0 lei	0,35 %
5.	2014	281945,1 lei	171624,9 lei	110320,2 lei	112050000, 0 lei	0,25%
6.	2015	427117,7 lei	311395,6 lei	115722,1 lei	121851000, 0 lei	0,35 %
7.	2016	504897,9 lei	385861,2 lei	119036,7 lei	134470000, 0 lei	0,38 %

Source: Elaborated by author in base of date from National Bureau of Statistics of Republic of Moldova <http://www.statistica.md>

# Elements on the Efficiency and Effectiveness of the Public Sector

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## Abstract

*The policy orientation towards sustainable economic development focuses on increasing the efficiency of the public sector in equitable supply of goods and services needed by citizens.*

*Efficiency, an important element of development, is more easily to be highlighted in the private sector than in the public sector, whose activities are directed, firstly, towards covering the needs of citizens, to a greater degree, as much as possible, the allocation of resources being related to supply of goods and services. According to authors, the interpretation of efficiency and effectiveness refers to the relationship between inputs and outputs, between the obtained results and the expected ones, increasing productivity.*

*The study attempts a review of the main theories related to efficiency and effectiveness, the relationship between the two concepts, forms of efficiency encountered in the professional literature, and its characteristics in the public sector parallel to the private sector, finalizing through conclusions and proposals towards increasing efficiency in the public sector.*

**Key words:** efficiency, effectiveness, public sector, private sector, responsibility

**J.E.L. classification:** D61; H21; H44

## 1. Introduction

For all sectors of the economy, the *efficiency* is an imperative requirement for development, with public administration being responsible for providing efficiently and equitably the public goods and services needed for citizens, policies targeting, in the last years, focusing on increasing the efficiency of public sector, for sustainable economic development.

The efficiency and effectiveness terms, often, relate to private sector activity, where it can be more easily emphasized than in the public sector, which is primarily concerned with meeting the needs of citizens, the way of resources allocation being subordinated to the objective of supplying public goods and services. Concretizing the presence of the private sector as a provider of goods and services of public interest, in time, has led to a reduction in the monopoly situation of the public sector, in the field, favouring the competition and its orientation towards efficiency (Florișteanu, 2004).

## 2. Approaches about the concept of efficiency, effectiveness

Studying efficiency and effectiveness pursues the relationship between inputs, outputs and outcomes. The issue of measuring efficiency has been addressed by Farrell since 1957, (Farrell, 1957, pp. 11, cited by Mandl, Dierx, Ilzkovitz, 2008, p.2) which has noticed its importance to politicians, the ways to encompass the efficiency, improving, in time, and becoming frequent, especially in industry.

The considerations relating to *efficiency* have been reported, over the years, to:

- increasing productivity, production;
- activities in the business environment;
- society's expectations regarding the degree of citizens' needs coverage.

The economists studies aimed at the concept definition in relation to inputs, outputs, benefits and costs to which are related the efficiency types shaping.

A general definition, given to efficiency, refers to the report between the outputs and the inputs made to achieve them (Mihaiu, Opreana & Cristescu, 2010, p.133).

The Merriam Webster Dictionary (cited by Afonso, Schuknecht & Tanzi, 2003, p. 8) considers the efficiency from the perspective of a comparison between inputs and outputs or between costs and benefits. The higher is the result (output) obtained in terms of prescribed resources (inputs), the greater is the efficiency of an activity (Afonso, Schuknecht & Tanzi, 2003, p. 8)

In another form, the definition is in terms of comparisons between countries concerning the relationship between benefits and costs, used in the case of total governmental spending, or of specific categories (such as health, education, social protection expenditure, infrastructure), the assessment of the benefits acquired from these expenditures, being quite difficult (Afonso, Schuknecht & Tanzi, 2006).

Other approaches of different authors, to define the concept, are presented by the authors Mark R. Rutgers, Hendriekje van der Meer (Mark R. Rutgers, Hendriekje van der Meer 2010, p. 758 cited by Manzoor, 2014, p. 2), respectively:

- ✓ "[...] a ratio between input and output, efforts and results, expenditure and income, costs and the resulting pleasure" (Slichter, 1950, p. 437);
- ✓ „[...] to take the shortest path, the cheapest means toward the attainment of the desired goals”; „the attainment of maximum values with limited means”; “the ratio between input and output” (Simon, 1976, pp. 14, 65, 180);
- ✓ „[...] producing a good or service at the lowest cost possible, while maintaining, a constant level of quality” (Rainey, 1997, p. 92);
- ✓ „Obtaining the greatest output for a given level of resources” (J. Q. Wilson, 1989, p. 316);
- ✓ "[...] that resources or inputs should be used so as to produce an output, in the cheapest possible way". (Johansson & Lofgren, 1996, p. 217)

Efficiency analysis is in relation to the notion of effectiveness (Manzoor, 2014, p. 4).

**Effectiveness** is expressed by the ratio between the result *achieved* and the *programmed* one and shows the success acquired by using the resources to accomplish the proposed objectives. (Mandl, Dierx, Ilzkovitz, 2008, p. 3).

According to Nikola Kjurchiski (2014), in the paper “Public Administration Efficiency in Resource Economies”, *the effectiveness* refers to the “achievement of *the final aim*” while *efficiency* “measures *the quality*”. (Kjurchiski, 2014, p.8). It is an element of influence of efficiency because it depends on the knowledge and qualifications of the personnel, the quality of the public sector being directly influenced by that of the human resources, from its composition. Measuring effectiveness in the public sector means comparing the objectives *that can be achieved* with those *actually achieved*, or in other words (Veiss, 2012, p. 375) comparing input or output with the final objectives to be achieved, ie "outcome". Between the terms "output" and "outcome" there is an important distinction. For example, in the educational system, "output" is considered and analyzed in the form of performance or the percentage of pupils of a certain age who have gained education. "Outcome" (the final result) can be considered in the form of working age population qualifications acquired through education. (Mandl, Dierx, Ilzkovitz, 2008, p.3).

## 2.1. Forms of efficiency

Specialty literature observes different, *forms of efficiency* distinguishable by forms of consideration:

*Productive efficiency* – “[...] producing goods and services for the lowest cost”– it can be found on the Production Possibilities Frontier where obtaining a larger quantity of a good involves diminishing the quantity of another. (Pettinger, 2017)

*Technical efficiency* concerns the use of a set of factors of production to produce an output. „A firm is said to be technically efficient if a firm is producing the maximum output from the minimum quantity of inputs, such as labour, capital and technology” (Pettinger, 2017). It is manifested in terms of a system of quantification of inputs and outputs. (Rutgers & Van der Meer, 2010). It is a relationship between inputs and outputs, taking into account the Production Possibilities Frontier, respectively, the effectiveness of using a set of factors to produce a result.

*Technical efficiency* gains economic expression through *allocative efficiency* which „reflects the link between the optimal combination of inputs taking into account costs and benefits and the output achieved” (Mandl, Dierx, Ilzkovitz, 2008, p. 4)

*Allocative efficiency* consists of a cost/benefit ratio and occurs when there is an optimal distribution of goods and services, having the most efficient allocation of resources, in relation to consumer preferences (Pettinger, 2017).

## 2.2. Efficiency - effectiveness relationship

In their studies, some authors note *the link between efficiency and effectiveness*, as can be seen in the following:

- ⇒ Peter Drucker highlights the efficiency-effectiveness interaction, the latter being a prerequisite for obtaining the first (Drucker, 2001, p. 147).
- ⇒ Hatry (1978) defined *efficiency* „extent to which the government produces a given output, with a least possible use of resources” (Hatry, 1978, p.28 cited by Manzoor, 2014, p. 4) and *the effectiveness* "the amount of end product, the real service to the public that the government is providing" (Hatry, 1978, p.28 cited by Manzoor, 2014, p. 4);
- ⇒ Mandl et al. (2008), in their studies, considers the two categories, in relation to inputs, outputs and outcome (results). Results means final goals (for example, for government, political objectives) that depend on the effective use of resources as input or output. They consider the link between efficiency and effectiveness, by the vulnerability to environmental factors that can influence the production or outcome (Afonso et.al. 2005).
- ⇒ Mandl U., Dierx A. and Ilzkovitz F. (2008), analyze the link between efficiency and effectiveness, through the relationship among inputs, outputs and outcomes, in the paper "*The effectiveness and efficiency of public spending*".

*Effectiveness* which illustrates to what extent, the desired objectives have been achieved through the use of resources, is more difficult to measure than efficiency, because the final goals (related to welfare or growth) are influenced by a number of exogenous factors (Mandl, Dierx, Ilzkovitz, 2008).

## 3. Aspects of efficiency in public administration

The constitution of the public administration system relates to the arrangement of social collectivities on the territorial principle and represents a criterion for the society layout. These collectivities make up the population of a country, a determinant element for a state.

In the context of the rarity of resources and pressure of growing and diversified needs of a growing population, studying efficiency in public administration has gained importance, by capturing its perception over time.

An efficient public administration is a base for strengthening democracy and of a good governance, which implies the responsibility of elected leaders in protecting citizens' rights, mobilizing resources towards deliver quality goods and services to community.

Efficiency and effectiveness in the public sector means considering an assembly of conditions concerning the competence, organization, assuming responsibilities, governmental transparency, citizen participation in decision-making on certain common issues, of public interest, efficient allocation of public resources, democratic governance. This depends on the quality and efficiency of civil servants, on the quality of administrative act, conditioned in turn, by the qualification of the staff in the administration.

The state monopoly in the production of public goods/services means eliminating competition, to the detriment of the quality of public goods and services offered to citizens, but also, of the use of resources, efficiently. The situation knows another orientation pursuant to the involvement of the private sector through the provision of goods and services of public interest leading to the emergence of competition and, implicitly, of performance in public administration.

Wilson (1989) (cited by Rutgers & Van der Meer (2010), Manzoor, 2014, p. 2) shows the difficulty that the government faces in being effective in activities development, given the multiple goals pursued by governmental organizations (legality, integrity and democracy), parallel with the

private sector whose primary goal is to obtain profits. For the public sector, the efficiency is given by the level of satisfaction, equitably, of the citizens' needs, while for the private sector, it is an indicator of profit maximization.

### 3.1. Comparative elements between the public and private sectors, on the approach about the efficiency

The distinction between the objectives pursued by the two sectors (public and private) is relevant to approach efficiency in public administration, as seen in the table below (Table no. 1):

Table no. 1 Distinctive elements concerning efficiency in public and private sector

Public sector	Private sector
It pursues multiple objectives (Raadschelders, 2003, p. 202, J. Q. Wilson, 1989, p. 318, cited by Rutgers & Van der Meer 2010, p. 759) focusing, primarily, on meeting the needs of individuals. (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133)	It pursues profit maximization. (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133)
Public organizations, generally, have a monopoly character.	Operates on competitive markets.
Provides public goods and services; their market value cannot be identified.	Produces private goods and services which have market value, easily to evaluate.
The production develops based on public decisions, having a democratic character.	Production is based on the manufacturer's decision depending on the market demand and supply, respectively, on the consumer's payment.
Allocation of goods is achieved according to the needs of consumers (public interest), aims meeting the needs of the citizens.	Allocation of goods depends on the achievement and level of profit, on the requirements of consumers.
Political leaders are responsible for citizens. (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133)	Leaders of companies take responsibility for shareholders, boards. (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133)
It manifests a high rigidity as a result of the decision-making and implementation process. (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133)	Flexibility in decision making (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133); taking free initiative.
Sharing and redistributing resources. (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133)	Producing and sharing resources. Financing comes from their productivity, if the investment decision proves feasibility. (Kotler P., Lee Nancy R. (2008) p.18, cited by Mihaiu, Opreana & Cristescu, 2010, p.133)
There is the risk of a bias to non-economic spending of public money.	It pursues diminishing costs.
Low transparency in citizens information.	High transparency regarding the investors and shareholders information.
It allocates large sums of money geared to social responsibility, research and development.	It is profit-aimed, sometimes to the detriment of to the quality of goods and services.
It is difficult to estimate total costs due to the fact that the data are presented differentially on multiple targets.	Activity data are available at a very detailed level.

Source: adaptation from Kotler P., Lee Nancy R. (2008) p.18, (cited by Mihaiu, Opreana & Cristescu, 2010, p.133), Profiroiu A., Hogye M., Moldovan Bogdan A. (2011), Rutgers Mark R.; Hendriekje van der Meer (2010); Mandl U., Dierx A., Ilzkovitz F. (2008); Raadschelders, J. C. N. (2003); Wilson, J. Q. (1989); Mihaiu, Diana M.; Opreana, A.; Cristescu, Marian, P. (2010)

Comparing the efficiency of the public sector with that of the private sector is difficult because the public sector's objectives take into account, in addition to the economic benefits, the social issues, also (Stoian M., Ene N. C., 2003, cited by Mihaiu, Opreana & Cristescu, 2010, p. 135 ). The existence of social pressure requires the presence of the public sector through the services provided to society wherefore the private sector is not interested in providing them in the absence of economic benefits (Scutaru, 2009 cited by Mihaiu, Opreana & Cristescu, 2010, p. 135).

#### 4. Conclusions

The efficiency and effectiveness are key features of a good governance, with the public sector being responsible for finding ways to make the best use of resources (human, material, financial, etc.) to ensure the population needs coverage, in the best conditions.

From the studies mentioned in the paper, finally, should reveal that *efficiency* refers to the relationship between the effects obtained and the efforts made for them, and the *effectiveness* expresses a relationship between the achieved result and the programmed one. While efficiency is in relation to quality, effectiveness is about the achievement of the ultimate result.

A number of actions can encompass efficiency increase in the public sector:

- legislative simplification of administrative rules and procedures;
- diminishing bureaucracy;
- increasing budgetary and fiscal transparency and accountability at governmental level;
- extending the use of electronic means of information in the development of the processes, in the administration-citizen relationship in order to make the activity performance more efficient;
- implementation of training and improvement programs, in relation to existent needs at local public administration level;
- targeting the efficiency of the public sector towards a level of satisfaction of social needs, as high as possible, through: social protection systems for vulnerable groups, increasing the quality of provided goods and services; heritage and environment preservation etc. .

Increasing efficiency in the public sector has to meet the growing and more diversified requirements of citizens, as an essential objective of public administration actions, to this end, determining the efficiency of the public sector, in different fields, making a contribution to the formulation of strategies of public funds management, aimed at the objectives fulfilment.

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## Quality and Social Responsibility

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### Abstract

*Quality and social responsibility (SR) are perceived as different activities , both working to sustain economic development in a competitive environment. The satisfaction for customer and employees represent the main goal for both of them. Known at the beginning as corporate social responsibility (CSR), the concept is actually accepted more than SR, after the appearance of ISO 26000 international standard. The aim of this paper is to highlight that quality and social responsibility are in a strong relationship and how quality management can be a foundation and engine for developing SR within organizations.*

**Key words:** quality, social, responsibility, development

**J.E.L. classification:** L15, L23, M20, O13, O44.

### 1. Introduction

The social responsibility of the company is " a fairly broad concept and has become a specialists has attributed to social responsibility of the company many approaches".

For example, the European Commission defined the social responsibility of companies as being "a concept by which companies integrate social and environmental concerns into their business activities and interactions with other stakeholders on a voluntary basis." ([www.europarl.europa.eu/meetdocs/.../com\(2001\)366\\_en.pdf](http://www.europarl.europa.eu/meetdocs/.../com(2001)366_en.pdf))

The concept of " social responsibility" of the company appeared in the specialty literature since the early 50's and has developed over time. If initially "social responsibility" (SR) focused at the company 's expectations from the business environment and the company' s ethical obligations towards this one, in the 1970s, "the direction of scientific research shifted to capacity companies to respond to the requirements of the environment in which they operate and later, in 1980-1990, stakeholder theory made an important contribution to the corporate social responsibility (CSR) speech". Then, in 2000, Kotler made the transition from long-term welfare consumer to the welfare of society. (Stancu and all, 2007)

If so far companies have developed accountability programs social organizations have been multinational companies (CSR), that come with a strong organizational culture, more and more small companies adopted a responsible attitude (SR).

Looking at the different definitions of social responsibility of the company, one can observe a common element, namely that this activity is voluntary, over the legislative duties imposed by each country. As during time competition increased within the business environment, companies became more aware of the social and economic potential that SR activities have in the process of image consolidation and reputation. In this respect, quality and social responsibility are in a strong relationship. The growing social concerns have led organizations to think evolutionarily in quality. SR and quality share an interest in several common issues a have a strong link in core values and

concepts. Comparatively, SR is a young field, while quality is a three times older concept. Today, both are part of the business and widely understood.

## 2. The social responsibility in the present

At the beginning, corporate social responsibility (CSR) produced a significant change in the business management behavior. The old classical approach of companies emphasized their economic performance. The current socio-economic and ecological approach emphasizes the importance that must be attached to the quality of life, the preservation of natural resources, the interests of the community and society. It is important to understand that social responsibility offers opportunities without imposing rules or obligations.

Thus, "the goal of corporate social responsibility is to define, understand and improve the balance between entrepreneurship and ethical practices". Managers must profitably drive business activities, but they must be responsible for the impact of these activities. (Toma et al, 2006)

In fact, is "a concept that offers to the companies the opportunity to treat the environmental and social problems as a part of them business, being a sustainable development manner, which enable companies to respond in a positive way to the present needs without compromising the ability of future generations to meet their own needs .The approach turn the environmental protection that was considered a costs and vulnerabilities source for the companies, into a new competitiveness growth opportunity". (Sima and all, 2007)

Regarding the international framework created to include" the concept of social responsibility in the life of companies, Social Accountability International (SAI) issued the SA8000:2008 (Social Accountability 8000), with the fundamental goal of improving working conditions around the world". This intention has directed organizations to "improve and demonstrate Corporate Social Responsibility (CSR) in terms of core human rights at work". In June 2014 SAI published the fourth edition of the SA8000 - SA8000 International Standard: 2014 Social Responsibility 8000. According to this this standard, any organization can demonstrate commitment to socially responsible business practices by implementing and certifying a social responsibility management system. (<http://www.srac.ro/ro/responsabilitate-sociala-sa8000> )

The ISO 26000 Social Responsibility Standard was developed, after 10 years of study and a broad international , innovative process by a working group of about 500 experts. It opened the gate for a new category of standards, based on the participative and consensual approach, in order to draw up "recommendations" in the form of "Guidelines" and not the requirement of compliance with a certain management system, such as the "certifications" proposed by other standards. (<http://www.societal.ro/ro/comunitate/articole/standardul-de-responsabilitate-sociala-iso-26000-433.html>)

In the international standard ISO 26000, SR is shown as a complex approach that at the same way like quality, must be integrated into the business management of each company.

([http://corporateresponsibilityassociation.org/files/MP\\_WP\\_ISO26000\\_Final\\_020811\\_0.pdf](http://corporateresponsibilityassociation.org/files/MP_WP_ISO26000_Final_020811_0.pdf))

The mentioned standard offers an explanation concerning the socially responsible organization and the reason to adopt this way of doing business. In this respect, quality professionals can help in implementing a corporate strategy looking for both social aspects and benefits.

There are several advantages of applying a social responsibility attitude promoted by the standard, among which being : better decision; improved risk management; public trust; reputation; competitiveness; good stakeholder relationships; improved innovation; employee safety and loyalty; improved employee recruitment & retention ; increased efficiency of resource utilization; reliability of transactions; reduced corruption, etc.

([http://corporateresponsibilityassociation.org/files/MP\\_WP\\_ISO26000\\_Final\\_020811\\_0.pdf](http://corporateresponsibilityassociation.org/files/MP_WP_ISO26000_Final_020811_0.pdf))

ISO 26000 stipulate 7 principles to be applied in the organizational activities, as follows: accountability; transparency; ethical behavior; respect for stakeholder interests; respect for the rule of law; respect for international norms of behavior and respect for human rights. (<http://www.societal.ro/ro/comunitate/articole/standardul-de-responsabilitate-sociala-iso-26000-433.html>)

Even SR is not a new concept , it represents a relatively recent acquisition of the Romanian economic environment. Practices of motivating responsibility entered at the beginning within the

Romanian corporate environment as an import of values and principles in the European context, but now local companies began to perform SR procedures and implement them in the local organizational culture. One of the main problems that Romanian firms raise is the link between SR actions, involving some costs and the level of profitability.

(Obrad and all, 2011)

Following the interpretation of the studies on "the involvement of Romanian companies in social responsibility activities, it can be noticed that the field of corporate social responsibility in Romania is yet an area without maturity, with few well-defined results and objectives". ([centras.tree.ro/assets/upload/File/Raport%20RSC.doc](http://centras.tree.ro/assets/upload/File/Raport%20RSC.doc))

### 3. Quality and social responsibility-the relationship

Quality , in a close association with social responsibility, is a concept widely applied, targeting both products and / or services and also the environment, life in general.(Toma and all, 2006)

The consumer, the stakeholders and their satisfaction are the main preoccupation for both total quality and CSR. Even industry used quality tools for a long time in order to ensure lean operations, reduce waste, and improve efficiency, they have not been yet really recognized in the social responsibility space. ([https://www.bsr.org/reports/BSR\\_ASQ\\_CSR\\_and\\_Quality.final.pdf](https://www.bsr.org/reports/BSR_ASQ_CSR_and_Quality.final.pdf))

This is the reason that ISO 26000 encourages voluntary commitment to SR and provide definition, guidance, and methods of evaluating SR activities. In this context, it is expected that ISO 26000 will attract those interested in other ISO standard series , such as ISO 9000.For example, in USA, the Malcolm Baldrige National Quality Award, the highest level for organizational performance excellence, at the present moment incorporates "societal responsibilities" for assessing strategic challenges, governance, and leadership.

([https://www.bsr.org/reports/BSR\\_ASQ\\_CSR\\_and\\_Quality.final.pdf](https://www.bsr.org/reports/BSR_ASQ_CSR_and_Quality.final.pdf))

The common elements between CSR and quality can be observed in the majority of core values (visible costs, empowerment, reactivity, internal alignment) and issues (waste reduction, worker empowerment, safety, accountability, transparency, etc.)

In addition there are several areas where SR could sustain quality, as :

- reducing "quality problems" due to the relationship of stakeholders and alignment;
- the link to perceived and designed hypostasis of quality.

ASQ CEO Paul Borawski stipulated that : "Quality is the methodology to advance the application of social responsibility." (Sitnikov and all, 2015)

"After the acceptance and the widespread application of the ISO 9000 quality series, the standards authority issued standards for other areas including the standard for CSR (ISO 26000) , the latest set of standards introduced by ISO". (<http://www.corporatecitizen.at>.)

The Total Quality Management ( TQM ) and SR share philosophical root and values that they promote. There are models ( e.g. the European Quality Award and European Foundation for Quality Management) that incorporate elements of SR and TQM. Otherwise, both quality and social responsibility are involved in the firm`s strategies. (Noguero and all, 2011)

The standards concerning the social responsibility issues are not very easy to be considered as advantage in comparison to quality and environment standards. It is not easy to translate the benefits of SR in money because the returns of the definite costs associated with SR initiatives are difficult to be delimited.

The quality management is at present more and more close to Social Responsibility, the models of quality management based on the principles of quality becoming the key for an effective implementation of CSR/SR in organizations.

Consequently, it become necessary to investigate the extent to which quality management provide frameworks and guidelines in order to implement SR , with impact also in the management of the organization. (Sitnikov and all, 2015)

### 4. Conclusions

The relationship between quality, environment, health and safety and social responsibility is increasingly a concern of everyone. TQM and CSR result from the organization to act properly.

TQM can be used as an accelerator for the diffusion of CSR. It is important that coexistence of both integrated in the organization.

Quality remains a key issue in today's business, being in close association with corporate social responsibility.

In this environmental context, companies that provide good quality products and services and at the same time are involved in CSR activities have a competitive advantage. CSR touch numerous approaches concerning profits, business performance and activities based on the quality of management, having deep roots in sustainable development, protection of the environment, social justness and economic growth.

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## Attainment of K-Means Algorithm using Hellinger distance

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### Abstract

In this article in the first part I will begin with an introduction to unsupervised learning methods, focusing on the K-Means clustering algorithm, which is achieved with the help of the Euclidian distance. In the second part we modified the K-Means algorithm, that is, it was achieved with the help of the Hellinger distance, after which the clustering time was compared and a parallel was made between the two algorithms (the K-Means algorithm achieved with the Euclidean distance and the K-Means algorithm achieved with Hellinger distance). As a result of the two algorithms I found that the number of groups is the same, and the number of iterations is different.

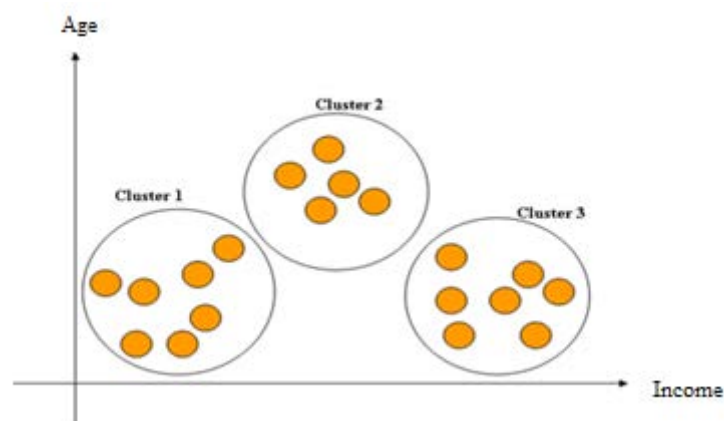
**Key words:** algorithm, cluster, distance, iteration, group

**J.E.L. classification:** O31, O32

### 1. Introduction

Clustering is a statistical method used to group multidimensional data. That is, it is useful to summarize large amounts of information, and each group contains several points with similar features. (Stancu Ana-Maria Ramona, Mocanu Mihaela, "Metode utilizate în Data Mining", Conferința Internațională 2017, Revista Knowledge Horizons–Economics, pp. 43-47, ISSN: 2066-1061)

Figure no. 1 Clusters of people by age and income



For example, if we have the attributes: age and revenue, then the segmentation algorithm groups into data sets as follows:

- Cluster 1: includes the young population with low income;
- Cluster 2: includes middle-aged population with income;
- Cluster 3: includes the old-aged population with low-income;

Segmentation is an undirected data mining operation in which there is no attribute to conduct the training process, and all input parameters are treated equally. Most clustering algorithms build their model by iterations that stop when the pattern is fully covered, that is, when the limits of these segments are stabilized.

It is known that clustering of a time series applied to financial-banking data is valid only if the fluctuations in the group are correlated and the fluctuations between the groups are slightly correlated or not correlated at all. Financial-banking data may comply with GnetXP, otherwise they can be reprocessed. Clustering is the process of grouping a set of physical or abstract objects into classes of similar objects, groups called clusters. Unlike classification, clustering does not require the establishment of a variable to be studied as a form of grouping by observation and not by learning. Clustering algorithms verify groups in data sets and try to obtain an optimal boundary between elements based on these clusters.

Clustering algorithms operate with two types of data:

- 1) the data matrix (or object-variable structure) that represents m objects with n variables (also called measures or attributes). The structure has the form of a relational table or a matrix of size m \* n

$$\begin{bmatrix} x_{11} & \dots & x_{1d} & \dots & x_{1n} \\ \dots & \dots & \dots & \dots & \dots \\ x_{i1} & \dots & x_{id} & \dots & x_{in} \\ \dots & \dots & \dots & \dots & \dots \\ x_{m1} & \dots & x_{md} & \dots & x_{mn} \end{bmatrix}$$

- 2) the difference matrix (object-object structure) contains a collection of proximities of all pairs of objects and is represented as a n \* n matrix:

$$\begin{bmatrix} 0 & 0 & 0 & 0 \\ d(2,1) & 0 & 0 & 0 \\ d(3,1) & d(3,2) & 0 & 0 \\ \vdots & \vdots & \vdots & 0 \\ d(n,1) & d(n,2) & \dots & 0 \end{bmatrix}$$

where d (i, j) represents the difference between objects i and j.

a. Quality of clusters

The quality of clusters is measured by differences and similarities. Generally, the difference  $d(i, j)$  is a non-negative number close to 0 if it is very similar to j and gets bigger as objects differ.

Differences can be obtained by subjective measurements or correlation coefficients used in statistics: Pearson and Spearman.

b. Classification of clustering methods:

b1. Partition methods

Given a database of n objects or data tuples, a partitioning method will make k partitions in which each partition represents a cluster with k n and satisfies the following conditions:

- 1) each cluster contains at least one object;
- 2) each object must belong to a single cluster.

Given k representing the number of partitions to build. Such a method creates an initial partition using an iterative reallocation technique that attempts to improve partition by moving objects from one group to another.

The general criterion of a good partition is that objects in the same cluster must be "close" or similar, while objects belonging to two different clusters must be as "distant" as possible or very different.

Most applications use one of the following two heuristic methods:



- i. The k-medoids algorithm (proposed by Kaufman and Rousseeuw in 1987) where each cluster is represented by one of the objects closest to the center of the cluster (medoid);
- ii. The average k-algorithm (proposed by McQueen in 1967) where each cluster is the average value of its objects.

These heuristic clustering methods work well for finding spherical clusters in small and medium databases.

Variants of the k algorithm:

- k-Mode algorithm or k prototype algorithm (proposed by Huang, 1998);
- Expectation Maximization algorithm EM (Expectation Maximization, Lauritzen, 1995).

Variants of the kernel algorithm k:

- PAM (Partition around medoids) used in small and medium databases;
- CLARA (Clustering large applications) used in large databases.

## 2. The K-Means algorithm

The K-Means algorithm was first proposed in 1957 by Stuart Lloyd, developed in 1967 by Mac Queen, following a more efficient version in 1975/1979 proposed and published by Fortran, Hartigan and Wong, an algorithm used in the analysis of clusters using partitioning methods. (JuanyingXie, Shuai Jiang 2010 - "A simple and fast algorithm for global K-means clustering", 2010 Second International Workshop on Education Technology and Computer Science, 978-0-7695-3987-4/10 \$26.00 © 2010 IEEE DOI 10.1109/ETCS.2010.347)

The K-Means algorithm - cluster initiator, is a method of partitioning formed of spherical-shaped groups. This algorithm uses statistical methods used in the grouping of attributes. The K-Means algorithm is a numerical algorithm designed to find all the cluster positions by minimizing the distance between them and the data points.

The algorithm divides the n objects into k partitions (clusters), and each partition represents a group that is easy to put into practice and can be applied to large data sets.

To accomplish this algorithm, I followed the following steps:

1. We created k clusters by choosing them from a randomly chosen number of data;
2. We calculated the arithmetic mean for each group formed;
3. We assigned each record to the closest cluster using the simulation formula.

Given two forms x and Y with  $X = \begin{pmatrix} x_1 \\ \vdots \\ x_n \end{pmatrix}$  și  $Y = \begin{pmatrix} y_1 \\ \vdots \\ y_n \end{pmatrix}$  we define the Euclidean distance as follows:

$$d(X, Y) = \sqrt{\sum_{i=1}^n (x_i - y_i)^2}$$

1. We assigned each attribute to a cluster, after which we recalculated the arithmetic mean of all groups in the dataset;
2. This process continues with step 3 until no point can be moved and the procedure is complete.

In 2009, Pakira modified the K-Means algorithm so that it moved the center of each group making sure there were no empty clusters. The comparison between the original and the modified algorithm has shown that the original algorithm has the number of iterations higher than the one that was modified. For numerical examples that produce empty clusters, the method proposed by him could not be compared to any other method because the algorithm avoids empty clusters. (Pakhira, Malay K.: "A Modified k-means Algorithm to Avoid Empty Clusters". *International Journal of Recent Trends in Engineering, Vol.1, No. 1, May 2009*). The methods for clustering algorithm were proposed by Bradley and Fayyad in 1998, Wu in 2008, and in 2004 the algorithm was proposed by Khan and Ahmed, an algorithm that creates complex procedures being rather expensive. (Wu, F. X.: "Genetic weighted k-means algorithm for clustering large-scale gene expression data". *BMC Bioinformatics, vol. 9, 2008*)

### 3. The K-Means algorithm using the Hellinger distance

Based on our research, we found that the algorithm can be implemented in C / C ++ using other distances alongside the Euclidean distance. Among the distances they can implement in the K-Means algorithm are: Baire distance, Bhattacharyya distance, Hamming distance, Hellinger distance, Mahalanobis distance, etc. From the distances outlined above we studied and implemented the K-Means algorithm in C/C ++ using the Hamming and Hellinger distances.

The studied distance is Hellinger. The K-Means algorithm takes the input vectors  $\{v_1, v_2, \dots, v_n\}$ ,  $v_i \geq 0$  and normalizes them to a unit of length, and the vectors are compared according to their cosine similarity. That is, the distance between  $v_i$  and  $v_j$  is given by: (Nathan Stein, Vinay Kashyap, Xiao-Li Meng, David van Dyk, *H-MEANS IMAGE SEGMENTATION TO IDENTIFY SOLAR THERMAL FEATURES*, Department of Statistics, Harvard University, Cambridge MA 02138 USA, Harvard-Smithsonian Center for Astrophysics, Statistics Section, Imperial College London, Conference 2012)

$$d_{\cos}(v_i, v_j) = 1 - \frac{v_i^T * v_j}{\|v_i\| * \|v_j\|}$$

Hellinger distance calculates the deviation between two probabilistic distributions that are easy to calculate and are included in the range [0, 1].

Definition: Let M and N discrete probabilistic distributions with  $M = (m_1, m_2, \dots, m_k)$  and  $N = (n_1, n_2, \dots, n_k)$ . Then Hellinger distance will be:

$$d_H(M, N) = \frac{1}{\sqrt{2}} * \sqrt{\sum_{i=1}^k (\sqrt{m_i} - \sqrt{n_i})^2}$$

So Hellinger distance is directly related to the Euclidian norm, ie: (Quang Vu Bui, Karim Sayadi, Marc Bui, *A Multi-Criteria Document Clustering Method Based on Topic Modeling and Pseudoclosure Function*, Proceedings of the Sixth International Symposium on Information and Communication Technology, pages 38-45, Hue City, Viet Nam — December 03 - 04, 2015)

$$d_H(M, N) = \frac{1}{\sqrt{2}} * \|\sqrt{M} - \sqrt{N}\|_2$$

Figure no. 2 K-Means algorithm implemented in C / C ++ (Hellinger distance)

```

.....
float radical(float r)
{
return sqrt(r);
}
.....
r =2;
cout<< "Radicalul lui " << r << " este: " << radical(r);
t=1/radical(r);
cout<< "\n Valoarea lui t " << " este: " << t;
.....
for(int i = 0; i < k; i++)
{
for(int j = 0; j < nr; j++)
{
dist[i][j] = t*(pow(abs(k_val[i] - num[j]),2));
}
}
.....

```

where t = 1 / sqrt (2)

#### 4. Comparison of clustering time between the two algorithms

In the first part of the research we compared time K-Means clustering algorithm of Euclidean distance achieved with K-Means algorithm developed by Hellinger distance.

For comparison we have chosen 60 times the initial number of cluster centroids as, the other parameter is the number of iterations required. After testing it cares during the running application to obtain the final solution. Thus, we used a number of different K-Means clustering algorithm and will take one of the values: 1, 5, 10. In terms of time required, we implemented and tested algorithm K-Means using two distances (Euclidean distance, distance Hellinger) and noticed that it took on average 20 seconds to obtain the final solution, and the results we have synthesized Table 1.

Table no. 1 Parallel execution time using three distances

	Euclidean distance	Hellinger distance
k = 1	35,498 seconds	19,054 seconds
k = 5	25,484 seconds	19,017 seconds
k = 10	17,507 seconds	16,831 seconds

#### 5. Comparison of the two algorithms

In the second part of the research, we conducted a comparison between the K-Means algorithm and the Euclidean distance using the K-Means algorithm we used the Hellinger distance.

Table no. 2 Parallel algorithms (using two distances)

<b>Algoritmul K-Means (distanțaEuclidiană)</b>	<b>Algoritmul K-Means (distanțaHellinger)</b>
<i>Iteration 1</i> 0 1 4 1 0 1 4 1 0 9 4 1 16 9 4 Group 1: (1 = 1) Group 2: (2 = 2) Gorup 3: (3, 4, 5 = 4)	<i>Iteration 1</i> 0 0 2 0 0 0 2 0 0 6 2 0 11 6 2 Group 1: (1,2 = 1) Group 2: (3 = 3) Group 3: (4, 5 = 4)
<i>Iteration 2</i> 0 1 9 1 0 4 4 1 1 9 4 0 16 9 1 Group 1: (1 = 1) Group 2: (2, 3 = 2) Group 3: (4, 5 = 4)	<i>Iteration 2</i> 0 2 6 0 0 2 2 0 0 6 0 0 11 2 0 Group 1: (1,2 = 1) Group 2: (3, 4 = 3) Group 3: (5 = 5)
	<i>Iteration 3</i> 0 2 11 0 0 6 2 0 2 6 0 0 11 2 0 Group 1: (1,2 = 1) Group 2: (3, 4 = 3) Group 3: (5 = 5)

After applying the K-Means algorithm using Euclidean distance algorithm and K-Means distance achieved using Hellinger found that the number of groups is the same, and the number of iterations is different.

## 6. Conclusion

Clustering is the process of splitting a database into groups of similar records so that members of the same groups are as close to each other as possible, and the groups are as far away from each other. In the first part, I compared the clustering time between the K-means algorithm achieved with the help of the Euclidean distance and the algorithm K-means achieved using the Hellinger distance and I noticed that the execution time for the algorithm achieved using the Hellinger distance is smaller than the algorithm achieved using the Euclidean distance. In the second part I realized a parallel between the two algorithms and noticed that I have the same number of groups and the number of iterations is higher for the algorithm achieved using the Hellinger distance

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## General Points of the Public Administration in Romania

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### Abstract

*The present study presents some points of view about public administration. It also contains my arguments concerning general characteristics of the public administration. It describes the importance of a proper function of the public administration being carried out.*

**Key words:** public administration, central administrative authority, state authority, public administration tasks.

**J.E.L. classification:** H83

### 1. Introduction

The study of the context of emergence and development of the state administration was approached by the human thinking, from the moment that, in the social existence appeared and developed the phenomenon of the administrative state.

Regardless the historical period of the time that our country went through, once the formation of the legal state, appeared the need of administration and implied the recruitment from the population line of the citizens to be concerned with this activity.

Although, in current language to administrate is synonym with to conduct or to organize, when we talk about administration as being a complex process, we refer to the fact of this being a rational and efficient activity that uses human, financial and material resources with the aim of achieving best results with minimal efforts. The activity of a group that work together for carrying out common aims, that is how the administration can be named.

### 2. About public administration

A definition of public administration could be „the totality of administrative authority existing in a state, section or service, that takes care of the administrative problems of an institution or economical agent”.

The public administration is a form in which we realize the executive function of the state through a concrete organization and pursuance of the laws.

An optimal organization can t be the result of an accident, any organization must have a scientific foundation. Therefore the rational and effective working of public administration needs an implementation of the scientific methods of organization of the administrative activities.

The administration of the state is assigned to a state authority, this being the main administration and their territorial units and the local administration that has to administrate the local collectivity interests according to the State Constitution.

From this reasoning we can understand better which are the contradictions from the local public administration authority, and different public services of the special public central administration as ministries, departments that act in a certain territory, but are exterior structures of certain central administrative authority. It is necessary to specify that within the territorial framework of the local and central are administration organs, the relations between them are diverse and they have to cooperate because they have a joint aim- the organization of the public services for the citizens from the territory.

Public administration has as an aim the achievement of the political values that express the general interests of the organized in a state society and that are formulated in laws by the organs of the law, as well as the judicial decisions given in the basis of the law.

By characterizing the public administration as being an activity conducting in principal, we detach its position of mediator between the plan of political management and the plan that political values and decision are realized.

The public administration in the legal state represents the major mean whereby we realize the values established at the level of political landing. It has to be sustained, omnipresent, prompt and dynamic because it represents the state, in common language to administrate means to be in charge, to organize, to conduct public and particular activities.

The doctrine considers that in the complex content of administration it contains the imperatives: to forecast, to organize, to conduct, to coordinate, to control.

The notion of public administration can have two orientations: a material and a formal one. In a material orientation public administration represents an activity of organization of performing and performing the law, realized through actions with disposition character or actions with performing character, by the authorities that compose the system so as to satisfaction of the general interests, aims that organizes and ensures good function of the public services and carries out certain performances towards the population.

Public administration, as activity overgrows the domain of the organs that compiles the respective system of organization, this we can find in the system of the legal and judicial power, as well as in the one of an out of state organization that organizes the performing and performs the law.

In a formal orientation the public administration can be understood as a system of organs that contain various administrative structures that achieve the activity of organizing the performing and performs the law. The public administration orientated in a system of organs of the state is composed from: the President of Romania, the Government, ministries, and other organs of central public administration of specialty, their services decentralized in the counties, the prefect and the public local administration authorities.

The public administration tasks in terms of organization, represents one of the most important side through which administration does the functions within the social system. In this regard the Romanian Constitution states in article 101(1) that the main task of the Government is ensuring the implementation of the internal and external politics of the country and the exercise of general management of the public administration according to his government program accepted by the Parliament. The law on organization and function of the Govern and of the Ministries number 90/2001 and the Law of the local public administration number 2015/2001 also predict important organizational tasks for the central, special public administration authorities and for the local public administration authorities.

Command task is found in the activity of the public administration in two plans: the public administration collaborates in making political decisions by preparing them, and public administration adopts administrative decisions that have as a main objective to create the organizational framework and the concrete conditions for implementation of the political decisions.

Coordination as an attribute of management in the public administration is found almost at all levels of administrative structures and consists in harmonization and synchronization of the actions carried out in order to organize the execution and of execution in concrete of the political decisions that are transposed into law and order normative acts. Without coordination it is not possible the effective action of the different elements of the administrative mechanism, and performing the functions of the administration would be threatened, which would have repercussion on the whole social system. Coordination ensures dynamic integration of the actions of various elements of the public administration, in order to achieve them rhythmically, proportionate and efficient.

The control is also another attribute of administrative activity, it has the purpose to measure the results of the administrative actions in the enforcement of political decisions and of reprogramming the activities making the necessary correlations. The control must determine an increase in achievement of the administrative actions to ensure fulfillment of the public administration functions.

### 3. Conclusions

For A Iorgovan, the public administration represents „the whole activity of the President, the Government the central self-contained administration authorities, the local self-contained administration authorities, and where necessary the subordinated structures, hereby, in a public power procedure, public laws are carried out or in the extent of the laws are performed public services”.

The domain of local public administration is first regulated by the Constitution in the articles 120 and 123 that contain dispositions with basic principle status. The general law of local public administration number 215 from 2001, as well as in the numerous special laws from which we only remind the Law of the Prefect number 34 from 2004, the Law number 393 from 2004 respecting the local elected status, the law number 67 from 2004 respecting the election of the local administration authorities.

A proper function of administration, of the public services became a tranquility factor, as sure as a deficient going of the public services is at the origin of a lot of political crisis and even popular rebellion. The modern state provided with a huge administrative apparatus, must not lose the control of the administration, must not be fainting in spite of its gigantesque or just from this reason.

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## Analysis of the Teaching Staff in the Pre-University Education System

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### Abstract

*In order to realize the activities and achieve the expected results, the pre-university education institutions use several categories of resources, including the human resources that play an important role. Thus, taking into account their importance, I made a presentation of the situation of the teachers in Olt County in the period 2014-2017 and their distribution by degree. On the basis of the conclusions drawn, it was carried out a SWOT analysis of human resources in pre-university education. In parallel, we presented the forecast of the population aged 0-14 on development regions in 2010-2020.*

**Key words:** human resources, SWOT analysis, provision human resources needed

**J.E.L. classification:** A21

### 1. Introduction

In order to carry out the appropriate and qualitative activity in the educational institutions, it is essential to have human resources for all the activities carried out in these institutions. They are represented by teachers, auxiliary staff, non-teaching staff, associate teachers but, also, the students. Teachers can take up a post in pre-university education only on the basis of a competition organized by the school inspectorates according to the legislation in force. Therefore we can find the following: a tenured teacher, a substitute teacher or associate teachers. Throughout the teaching process, teachers in pre-university education need to continually improve, aiming to obtain different qualifications. In this way they are grouped according to the status of the degrees held in: debutant teaching staff, definitive, teaching staff with Ist degree or IInd degree.

The role of teachers cannot be justified without the presence of students in the pre-university education institutions. Together they form the school community of an educational establishment. For this reason I have used the analysis of the teachers in a county (Olt County), their situation by degrees, the SWOT analysis of the teaching staff and the presentation of the evolution trend of the school population.

### 2. Brief presentation of the human resources in pre-university education institutions

As shown above, human resources are an important and an absolutely necessary element in the activity of any institution, including those of pre-university education (Jinga, Istrate, 2008, p. 431). People have growth and development potential being the only resources capable of producing and reproducing the other resources available to educational institutions and beyond.

The forecast of human resources needed in pre-university education institutions must take into account the needs of the institution, its financial and human resources (Cucoş, 2009, p.226). Also, a very important element is the training of the teaching staff that must correspond to the study areas of the institution.



The provision of human resources with teaching staff in pre-university education institutions is carried out by the County School Inspectorate. In the orders of the Ministry of National Education are found the framework educational plans that establish the positions or the teachers in the pre-university education.

The positions available in pre-university education institutions are established by the Mobility Board of the educational institution and communicated to the Administrative Council of the County School Inspectorate. The employment in the pre-university education system is done on the basis of a competition, and after filling in the tenured positions, norms are completed with other teaching staff.

Several bodies are involved in organizing the educational activities: the Ministry of National Education is the center and the County School Inspectorates locally, having a role in filling the teaching positions.

Human resources in pre-university education must demonstrate objectivity, responsibility, motivation, collaboration and, of course, the necessary training in the field (Manolescu, Lefter, Deaconu, 2007, p.440). They consist of the teaching staff, the auxiliary teaching staff and the non-teaching staff.

The qualified teaching staff in pre-university education institutions is deficient in economic, technical, computer or English disciplines. There is also a surplus of staff in mathematics, physics, chemistry, physical education or socio-economic disciplines. Thus, at the level of the pre-university education institutions, besides the teaching staff we can also find the auxiliary didactic staff and the non-teaching staff function. The process of selection for the auxiliary staff is carried out after a procedure that includes several elements such as a Curriculum Vitae (CV) accompanied by a letter of recommendation and a letter of intent. Also, candidates for auxiliary teaching staff and non-teaching staff should provide information about their professional background and their aspirations in relation to the post. The Ministry of National Education may decide to use the interview as a method for the selection of the auxiliary and non-teaching staff, an interview conducted in the presence of two specialists that aims to inform the candidate about the pre-university education institution and the job requirements. As far as the auxiliary teaching staff is concerned, it has registered a significant increase of more than 50% due to the passage of certain categories of staff such as accountants to auxiliary teaching staff, who are considered a non-teaching staff.

These situations are caused by: wages in pre-university education, difficult penetration into the system, increasing demand for these subjects, decreasing number of classes, profiles and specializations. Many graduates of university studies are discouraged when it comes to occupying a post in the pre-university field because the methodology of occupying a post in pre-university education is very laborious and the occupation of the posts can be done only on a school year regardless of the result obtained at the tenure exam.

### 3. Human resources analysis from pre-university education

The present situation of human resources in pre-university education can be synthesized through a SWOT analysis as follows:

*Table no. 1 SWOT analysis of human resources from pre-university education institutions*

<b><i>Strengths</i></b>	<b><i>Weaknesses:</i></b>
<ul style="list-style-type: none"> <li>• The teaching staff is qualified and they attend national training programs as well as doctorates or other post- graduate courses;</li> <li>• Enrollment in teaching, doctoral studies, continuous training courses, etc.</li> <li>• The teaching staff published scientific papers or specialized publications;</li> <li>• Collaboration with committees and profile organizations;</li> <li>• Members in national committees of National Education Ministry.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased fluctuation of the teaching staff.</li> <li>• Presence of teaching staff unskilled at the level of the pre-university education institutions or the staff working in the departments of another specialty as a result of the emergence of new specializations at the level of the pre-university education institutions;</li> <li>• Lack of implication of the teaching staff in activities which are not financially rewarded.</li> </ul>

<i>Opportunities:</i>	<i>Threats:</i>
<ul style="list-style-type: none"> <li>• Offering bonuses or additional payment for teachers who hold extra hours in pre-university education institutions;</li> <li>• Improving the remuneration system;</li> <li>• Awarding prizes or bonuses depending on the results obtained in classes;</li> <li>• The training of the teaching staff should be realized on domains;</li> <li>• Participating in exchanges of experience at a local, national and international level.</li> </ul>	<ul style="list-style-type: none"> <li>• Activities carried out at the level of Pre-university education institutions are not student-centered, on their expectations and needs, or the family and the community in general.</li> <li>• Difficulties in the leadership of the pre-university education institutions as regards to the collaboration with the other organizations in the community, although this obligation ensues from the legal regulations.</li> </ul>

Source: own projection

Teachers must have a bachelor's and master's degrees in order to teach in high school. The norms for the teaching staff are of 18 hours per week and are provided in the framework plans of pre-university education institutions.

In our research we analyzed the situation of the teachers in Olt County, making the following findings:

Table no. 2: The situation of the teaching staff in 2014-2017 in Olt County

School year	2014 - 2015	2015 - 2016	2016 - 2017
Tenured teachers	62,5 %	68,5%	62,16%
Substitute teacher with the work load in the institution	30%	22,8%	32,4%
Associated teachers	7,5%	8,7%	5,44%

Source: own projection

From the information mentioned above, it can be noticed that the tenured didactic staff has the highest share in the pre-university education institutions in Olt County for the period under discussion, which is an aspect indicating a high degree of stability. This rate reached a maximum of 68.5% during the school year 2015-2016. The lowest rate in the pre-university education institutions is held by associate teachers, who have the maximum percentage of 8.7% in the school year 2015 -2016. As for the substitute teachers, they do not exceed 32.4% of the school year 2016 - 2017, the lowest percentage of 22.8% being in 2015-2016.

In conclusion, we can say that in Olt County there is a tendency of stability regarding teachers, which, we believe, contributes to the good functioning of the pre-university education system and it helps obtaining favorable results in this field.

If we take into account the degrees of the teaching staff in pre-university education, it would look like this:

Table no. 3: Distribution of the teaching staff according to the degrees

Personnel category	2014 -2015	2015 -2016	2016 -2017
Unqualified teaching staff	1%	2%	2%
Debutant	7,69%	8,57%	10,81%
Definitive degree	25,64%	17,14%	18,91%
II <sup>nd</sup> degree	38,46%	31,42%	24,32%
I <sup>st</sup> degree	28,2%	42,85%	45,94%

Source: own projection

Graphically, the distribution of the teaching staff by degrees in 2014 - 2017 in Olt County looks as follows:

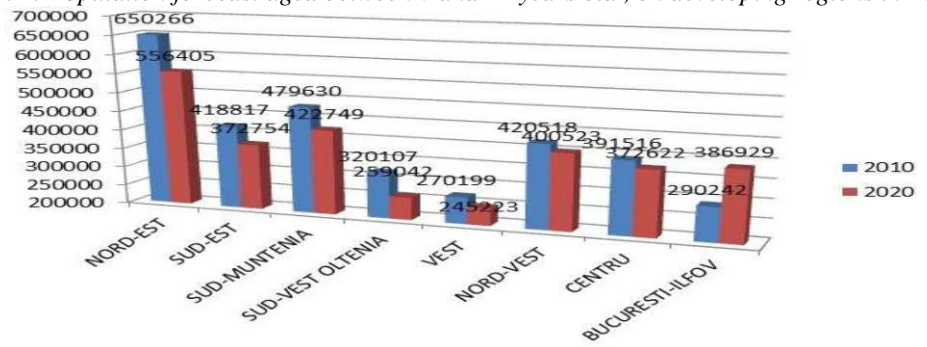
As we can be seen from the graph, the distribution of the teaching staff by degree in the pre-university education institutions in Olt County during 2014-2017 we can say that the highest rate is held by the teaching staff with the first degree who registered the maximum percentage for the analyzed period of 45.94% in the school year 2016 – 2017.

The next rate is held by IInd grade teachers who had a maximum of 38.46% in 2014-2015, followed by the personnel with a definitive degree of a maximum of 25.64%, then by debutants whose rate does not exceed 10.81% registered in 2016 -2017. At the top of the list, the unskilled staff is 1% in 2014-2015 and 2% between 2015 and 2017. These percentages are also a balance indicator contributing to the improvement of the pre-university education process.

In the European Union and implicitly in Romania, the level of investments in training and integration of human staff in pre-university education institutions is low. The fact that only half of European countries encourage debutants through integration, guidance and training is a factor for the low number of human resources in pre-university education institutions.

The school community in the pre-university education institutions is completed by the students. The students are those people who learn in a school. They have recorded a downward trend over the last five years from one year to the next. According to the estimates of the National Institute of Statistics, the natality rate has decreased in recent years (for example, in 2014 the birth rate in Romania was 8.3% compared to the EU average of 10.2%). The only growth tendencies were at the level of post-secondary and primary education and the largest decreases in the number of pupils were registered at a pre-school, gymnasium and lyceum level. According to studies, the students encounter a negative demographic tendency, as follows:

Graph no. 1: Population forecast aged between 0 and 14 years old , on developing regions in 2010-2020



Source: Socio-economic analysis of the education system, formation and learning along the life, a determination of the National Institute of Statistics ([www.insse.ro](http://www.insse.ro))

After analyzing the evolution trend of evolution of the population aged 0-14 years there is a tendency for their decrease for the analyzed period. This downward trend is also manifested in terms of teachers and their work load. According to the studies of the National Institute of Statistics it is expected that in the occupation of a chair will prevail the persons with an indefinite contract and this category will constitute the teaching body until 2050.

The reasons for reducing the number of teaching staff in pre-university education institutions may be: access to information, training and retraining is limited by low wages, residence in the countryside, large distances from university centers, the Teaching Staff House, teacher instability due to the number a large number of positions for substitution, the presence in the pre-university education institutions of people who do not have the necessary methodical and psycho-pedagogical training, the occupation of the positions of headmaster and specialized inspector depending on political affiliation and not on the basis of managerial and specialized training, small wages lead to the loss of valuable young people for pre-university education institutions.

In order to diminish these causes, the human resources needed by the pre-university education institutions should follow a rigorous selection that takes into account the communication skills, the professional trajectory until then, but also the involvement in the instructive-educational process, providing financial and material support for the in-service training of teaching staff, teachers should have stability in order to achieve quality education, the management should be established on the basis of professional skills, and salaries should increase in order to attract teaching staff.

From our point of view, the preparation of pre-university education students, their integration into society and the field of work cannot be achieved without the involvement of teachers so that human resources constitute the vital factor in the existence of pre-university education institutions without which they could not function.

#### **4. Conclusions**

Human resources are the only resources that can produce and reproduce the other resources, being a priority for developing activities. In the pre-university education institutions, these are represented by the teaching staff, the auxiliary teaching staff and the non-teaching staff. Teachers in pre-university education can take up a job in this system only by competitive examination. Considering the important role played by the human resources in the pre-university education institutions, I have realized an analysis of the teaching staff in Olt County and I have found that the tenured staff has the highest share, this share having a maximum level of 68.5 % in the 2015-2016 school year. At the opposite end, we can find the associate teachers with a maximum of 8.7% in the school year 2015-2016, so at the level of Olt County there is a tendency towards stability in terms of teachers. We also conducted an analysis of the distribution of teaching staff by degree in pre-university education institutions in Olt County in 2014 - 2017 and we found that the teaching staff with the 1st degree holds the highest weight having a maximum percentage for the analyzed period of 45.94% in the 2016-2017 school year, the smallest share being held by unqualified staff by 1% in 2014-2015 and by 2% between 2015 and 2017.

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## The Nature of the General Theory of Law

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### Abstract

*The present paper is intended to ascertain the problem of the nature of the general theory of law, is it an emanation of the philosophy of law or is it just one of the legal sciences with the only difference that it does not study a branch of the law, but the law in its entirety? It is our opinion that the general theory of law is a positivist science which has objective law as exclusive object of study and that it is part of the category of legal sciences (in opposition with the auxiliary sciences studied in law school – legal sociology, legal philosophy, criminology, criminalistics, forensic medicine, etc.). Nevertheless, the total elimination of contributions from other sciences (sociology, politology, economy, philosophy, etc.) would only unjustifiably emasculate the explanations of the general theory of law.*

**Key words:** general theory of law; science of law; philosophy of law; positive law

**J.E.L. classification:** K 00; K 10

### 1. Introduction

The object of study and the nature of the general theory of law have long been discussed with the specialised literature. Points of view have oscillated between considering the general theory of law as an emanation of the philosophy of law and considering it a positivist discipline, limiting it strictly to objective law. „The general theory of law, born out of the success of positivist sciences at the end of the 19th century, was known as a way to exceed the simple description of objective law, and free of the theories of natural law at the same time; its fundamental idea lay in the fact that law can be « the object of study of a positive science ». After World War II the general theory of law was considered, as anti-positivist reaction, as a search for non-legal values, norms and ideals under the appearance of the neutrality of the legal rules and theories thus conceived. The notion of the general theory of law is ambivalent, ambiguous as it is for some authors an emanation of philosophy of law and for others a scientific approach, close to « the legal dogmatics », i.e. that part of the science of law dedicated to the interpretation and systematisation of the norms”(Bergel, Jean-Louis, 2003, p.3).

In order to be able to reach an exact as possible explanation of the nature and object of the theory of law we must first examine the two approaches mentioned above.

### 2. Philosophy of law and the general theory of law

Philosophy of law is a branch of practical philosophy which deals with the study of law.

Etymologically, the word philosophy comes from the Greek *phylo* and *sophia*, so love of Sophia, a name that normally stands for wisdom. So, philosophy is not necessarily the possession of wisdom, but love of wisdom. Karl Jaspers in his *Introduction to Philosophy* insists on this idea: philosophy is the search for truth and not the possession of truth (Vergez, André; Huisman, Denis, 1995, p. 8).

The problematics of philosophy is suggestively presented by Immanuel Kant, in “*Logic*”, using four fundamental questions that have preoccupied man philosophically: What can I know? What do I have to do? What am I allowed to hope for? What is man? According to the answers philosophy gives to the four questions, it categorises its themes into several philosophical disciplines.

Philosophical disciplines can be grouped according to the answers to the first two Kantian questions as follows: a) Theoretical philosophy. Answering Kant's first question, it studies the first principles of existence and knowledge and it includes the following branches of philosophy: ontology or metaphysics (this in its turn includes philosophy of religion and philosophy of history), gnoseology or the theory of knowledge, logic, psychology and aesthetics; b) Practical philosophy. It answers Kant's second question and it includes the following branches of philosophy: moral philosophy and philosophy of law.

Political and legal philosophy is one traditional part of all great philosophical systems; since Antiquity (from Plato and Aristotle) to contemporary philosophers, practical philosophy has had its place impossible to overlook by all great thinkers.

Giorgio Del Vecchio, a voice with a lot of authority in the field, defined philosophy as follows: "the discipline that defines law in its logical universality, researches the origins and general characters of its internal development and cherishes the ideal of justice asserted by pure reason". This entails that the philosophy of law channels its research on three levels: a) on the logical level, by investigating law in its logical entirety, i.e. knowing what the essential elements common to all legal systems are, ignoring their particularities and following the universal concept of law; b) on the phenomenological level, by bringing to light that "positive law is not the product of special and exceptional causes, but a phenomenon common to peoples of all times, in other words it is a product of human nature"; c) on the deontological level, by outlining the fact that the practicing legislator is limited to understanding and interpreting positive norms per se and does not wonder whether there could be better norms, the philosophy of law looks for the grounds of legal norms, social values and the justification of the existence of legal norms. Moreover, philosophy of law can afford to look for the ideal legal norm and compare it to the objective legal norm (Del Vecchio, Giorgio, p. 27-31).

The science of law has as object of study the various legal systems considered separate for each peoples at one point in time, such as: Roman law, Byzantine law, Italian law, German, French, etc. Furthermore, branch legal sciences do not cover the entire law system, but follow distinctions and successive specifications by analysing one single part of the respective system (constitutional law, administrative law, penal, procedural penal, civil, commercial, and procedural civil, etc.). What is more, typical to philosophy of law, the third research level as stated by Giorgio Del Vecchio is the deontological level, which is a constructive criticism of objective law. Thus, human spirit has never stood passively in front of the law, as if the law were immutable and unchangeable. Each individual has a sense of justice, an intuition of ideal law (natural law) and from there on the research of the ideal legal law can begin and by comparing it to the objective norm the idea of the improvement and perfection of positive law can start.

From this perspective (the general theory of law as an emanation of legal philosophy) our discipline is a more technical analysis of the law, but analysed through the lens of philosophy.

As a temporary conclusion, we hold that there is no denial that through its abstract character, through the overall image it offers, through the answers to fundamental questions the general theory of law borders the perspective of the philosophy of law.

### **3. General theory of law from positivist perspective**

The second approach to the general theory of law places it in the ranks of positive legal sciences which have as object of exclusive study objective law (the assembly of legal norms ordered or sanctioned by the state). The difference between the general theory of law and the branch legal sciences would thus be only the fact that particular legal sciences would have as object of study one branch of the law each (civil law, commercial, administrative, etc.) while the general theory of law would refer to the whole legal system.

Positivism largely refers to an attitude of trust for the methods and results of experimental science. Strictly speaking, positivism is represented by the philosophy of Auguste Comte and, by extension, any philosophy which favours scientific knowledge and fights metaphysics. Auguste Comte's positivism states that the scientific (or positive) spirit by an invincible law of the progress of the human spirit will replace theological beliefs or metaphysical explanations. To this age of science should correspond a politics founded on a rational organisation of society and also a new

religion without God, the religion of Humanity (Clément, Elisabeth Demonque, Chantal; Hansen – Love, Laurence; Khan, Pierre, 2000, p. 407-408).

Legal positivism rejects any idea of natural law, any transcendental justice and orients legal knowledge to economic, social, political, legal, linguistic, etc. realities. Positivism has several orientations which can be classified as follows: a) utilitarianism; b) sociological positivism; c) pragmatic positivism and d) analytical positivism (Djuvara, Mircea, . 1995. p. 394-398).

From the perspective of legal positivism, Hans Kelsen supports the "purification" of the theory of law of any foreign element, the object of study of theory of law being only the objective legal norm, regardless of whether or not it is still valid and regardless of the state it belongs to. "If it is called «pure» doctrine of the law, this happens only because it intends to save knowledge based on the law and to eliminate from this type of knowledge anything that does not belong to the field exactly determined as being the law, which means that it intends to clear the science of law from all elements foreign to it. This is the basic methodological principle employed. It seems to be something obvious. However, a view of the traditional science of law as it developed during the 19<sup>th</sup> and 20<sup>th</sup> centuries clearly shows how far it really is from the requirements of purity. In a non-critical way, jurisprudence has mingled with psychology and sociology, with ethics and political theory. This mixture could be explained by the fact that these sciences refer to fields which are undoubtedly linked to the law. If the Pure Doctrine of the Law attempts to draw a line between the knowledge of law and these disciplines, it does not do so because it would ignore or deny their interdependency, but because it attempts to avoid a syncretism of methods which clouds the essence of legal science and blurs the borders drawn by the nature of its object." (Kelsen, Hans, 2000, p. 13-14).

#### **4. Critical analysis of the two perspectives**

##### *General theory of law as an emanation of legal philosophy*

First, we show that philosophy most certainly exceeds the strict domain of the science of law, as any science can analyse only the objective exterior reality and cannot analyse and theorise an intangible ideal, it cannot afford rational fantasies. Legal sciences cannot afford to investigate ideal law, but only the law valid at a certain time and possibly old legal norms which have lost their legal force (the latter analysis is mainly done by the history of law). Philosophy can afford this luxury and it is here that the usefulness of this auxiliary discipline lies as the perfection of law can be accomplished only through the natural aspiration of man for evolution, for a better norm. Here is the distinction between the philosophy of law, which remains an auxiliary discipline, and the general theory of law, which is part of the body of positive legal sciences (those that study objective law). Another important distinction lies in the fact that the philosophy of law has a universal dimension, in the sense that it studies the legal phenomenon regardless of the historic period or political borders, while the general theory of law studies law from the perspective of a national law system. There is no general theory of law in its universality, but in its particularity, linked to its positive way of existence. We find a general theory of law anchored in the French positive law, another in the German, Romanian, etc. The general theory of law compiled by the French authors does not contain the categories of "legal report", "configuration factors", "legal consciousness", "and source of judicial precedent". The English theory of law does not contain the categories "law branch" or "proving modalities" (Mihai, Gheorghe C., 2008, p. 13, 24-25).

From a positivist perspective, the general theory of law should study exclusively objective law, and its explanations should not be allowed to break the strict borders of the legal. But how can science wishing to explain what law is achieve its objective by limiting itself exclusively to knowledge produced in the strict frame of legal sciences and by excluding the precious contributions of sociology or philosophy? In our view, such a general theory of law would be profoundly sterile, unable to offer a complete image on the law. Law was born in human society and it is one of the most complex social phenomena. The best demonstration of the failure of such an approach allegedly purified of any element foreign to the positive science of the law is the very work of Hans Kelsen. The value of the work of the Austrian theoretician cannot be contested, but his claim to build a pure theory of law is just a chimera. Theorisation in an attempt to rise from the crude reality to the abstract inevitably leads to philosophy and furthermore, the author himself

shows his vast philosophical culture in his method. Here are some arguments to this end: a) in *The Pure Doctrine of the Law* Hans Kelsen builds an entire system of legal thought of great originality by which the author wishes to explain the law exhaustively, this approach resembles the old dream of philosophers to create theoretical systems which can explain the entire existence, b) positivism itself is a philosophical movement (opposite to metaphysics), c) the method of demonstrations proves a solid humanist culture with special inclination towards philosophy and logic, d) the terminology used most of the times indicates the philosopher hidden behind the legist, so we meet a series of terms used mainly in philosophy: purity, positivism, transcendent sanctions and immanent sanctions liberty, moral virtue, free will, ground norm (grundnorm), etc.; e) it is not seldom there are direct referrals to philosophers (Immanuel Kant or Marx, for example), these being expressly named either in the text of the paper or in the footnotes. After all, any anti-philosophy (as a demonstration of the gratuity/ uselessness of philosophy) does nothing else but add yet another page in the long history of philosophy.

## 5. Conclusions

In our opinion, the general theory of law is a positivist science having objective law as exclusive object of study and it is part of the category of legal sciences (in opposition with the auxiliary sciences studied in law school – legal sociology, legal philosophy, criminology, criminalistics, forensic medicine, etc.). Nevertheless, the total elimination of contributions from other sciences (sociology, politology, economy, philosophy, etc.) would only unjustifiably emasculate the explanations of the general theory of law. Employing philosophy is inescapable in the general theory of law. Even Hans Keller, who virulently excludes any foreign element, as shown above, ends in employing philosophy.

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# Will Romania Overcome Underdevelopment

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## Abstract

*Human Development Index is used to compare the life expectancy, literacy, educational systems and welfare of population from different countries. The instrument offers the possibility for more accurate analyses than GDP, focused especially on financial situation.*

*The paper analyses the situation of Eastern Europe countries, with special focus on Romania, according to the data available in the last report, **Human Development Report 2016: Human Development for Everyone**. Using a comparative approach with the developed countries, the article points out the progresses made in the last century in the field of those economic and social indicators, especially after the accession to EU.*

*In conclusion, Romania is currently occupying a much better position in terms of economic indicators than in terms of the social ones, which makes gradual economic evolution not to affect all social categories, causing a strong social polarization, becoming one of the most uneven countries in the European Union.*

**Key words:** Human Development Index, life expectancy, educational attainment, social inequalities, welfare

**J.E.L. classification:** N300

## 1. Introduction

The Human Development Index is a comparative measure of life expectancy, of literacy, quality of education and of living standards. The index is used to analyze a country's level of development, being more useful than gross domestic product per capita, which measures only material prosperity and does not take into account other important social indicators. The index was invented by Pakistani economist Mahbub ul Haq and is updated for most United Nations (UN) member states each year by the United Nations Development Program (UNDP) and published in the Human Development Report. The latest published report is the one performed in the year 2016, namely *Human Development Report 2016: Human Development for Everyone*, which uses existing data from the year 2015. In 2016, Romania had an HDI of 0.802, meaning that our country encountered, for the first time, a very high degree of human development, being ranked the 50<sup>th</sup> in the world.

The questions the article tries to answer are the following: How has our country managed to get up to this point, how do we stand as compared to other Eastern European countries and what do we need to do in order to overcome the threshold of underdevelopment?

## 2. The economic development in the last 100 years

Development studies have shown that this is not only about economic growth, but also about improving the quality of life of the population. As concerns the longer historical periods, such data are difficult to obtain, holding disparate data regarding indicators, such as education, infant mortality or life expectancy, especially for economically underdeveloped countries where little research on these issues is performed. However, existing data allow us to create a general picture of the economic and social development that Romania has undergone in the last century, starting from the creation of Great Romania and continuing up to these days.

Although a century is too short to draw definitive conclusions for any state we submit to the analysis, studying the existing data regarding this historical period show how great the "divergence" between the West and the East of the continent has increased: over the last half millennium, starting from similar levels of economic development, the states of the western part of the continent and, in particular, those in the northwest, have developed at increasingly alert levels, while those in the East of the continent have advanced far more slowly; it is obvious that these differences occurred especially during certain more distant historical periods and that in recent history the East European states have recovered much of the existing differences, but convergence has not yet been reached.

The existing statistical data (Axenciuc, 2000, p.311) show a lack of sustainable economic development at the time of the Second Industrial Revolution, as in the case of the states that have performed during the mentioned period (USA, Japan, Germany or Switzerland). Although there has been registered an increasing pace in terms of development, from a national wealth of 2 billion \$ in 1860 to 4 billion in 1914 and over 11 billion at the end of the interwar period (the spectacular increase is due largely to the significant increase of territory and population through the adjoining of new territories to the Romanian state, some of these territories being characterised by a high degree of economic and social development).

Moreover, the formation of "Great Romania" implied great initial costs, the economic, social, political advantages, etc. appearing much later. As Bogdan Murgescu (Murgescu, 2010, pp.224-225) highlights, the union of Transylvania with Romania implied, at least in the first phase, a huge cost for the population. His conclusion is one of the most tangible ones: from a political and economic point of view, the union was a success, but regarded from the citizen's perspective, who supported the costs implied by the union, it implied a decrease in the accumulated wealth, as well as a decrease in the living standard (at least in terms of the interwar period). The data presented to support this conclusion are based on the evolution of national wealth comparing the period 1912/1914 and 1920/1922: thus, Romania's gross assets (expressed in million lei gold) amounted to 18,331 in the first period, as compared to 29,701.2 in 1920/1922 (which represents an increase of 62%), while the per capita distribution decreased to 70% (1,889.1 in 1920/1922 compared to 2,459.5 in 1912/1914).

Although we witness significant economic accumulations (determined by an increase in terms of both the territory and the population), they are insufficient to bring about an improvement in the economic efficiency of Romania and of the other Central and Eastern European states (Teichova, 1981, pp.178- 179): although they account for a quarter of Europe's population, a third of the continent's territory, they produce only 7 or 8% of the continent's total industrial output, while the major industrial powers (Great Britain, France, Germany) reached 67%. Also, another issue that hindered the economic development of the states in the area is that their exports depended on one or two products (Aldcroft, 2006, p.13): in the case of Romania, these were cereals, oil and forest products, covering 77% of the exported products.

The average industrial growth rate in the nineteenth century for the western continent was 42% between 1900-12, while the average industrial growth rate of Poland, Hungary and Romania for the period 1925-1937 was of 63%. In view of these positive trends in the case of the three industrialized countries (Poland, Hungary and Romania), to which Czechoslovakia (an already industrialized state) has been added, there has been registered a significant growth and recovery of the existing gaps, as the states could achieve economic convergence with Western Europe if the tragic events of the Second World War had not occurred (Chiro, 1989, p. 385).

The period that has passed since the formation of the Romanian state up to the level of 2000, shows a major evolution in terms of the gross domestic product, calculated based on the purchasing power parity. The data presented in the table represents the averages of the mentioned periods, the blank spaces being marked by changes in terms of the area, population and economic resources of the Romanian state:

Table no. 1 Comparative data on Gross Domestic Product (GDP) from 1860

Averages of the years	The gross domestic product million dollars ppc			Gross domestic product per capita dollars ppc		
	dollars 1990	dollars 2000	indices	dollars 1990	dollars 2000	indices
1	2	3	4	5	6	7
<b>1862-1866</b>	1840	2261	<b>100</b>	451	554	<b>100</b>
<b>1911-1914</b>	7186	8829	390,5	978	1202	217,0
<b>1920-1924</b>	11681	14351	634,7	730	896	161,7
<b>1935-1939</b>	18183	22338	988,0	931	1144	206,5
<b>1940-1944</b>	12106	14873	657,8	897	1103	199,1
<b>1945-1947</b>	8645	10621	469,7	547	672	121,3
<b>1950-1954</b>	23158	28375	<b>100</b>	1387	1700	<b>100</b>
<b>1975-1979</b>	146187	179123	631,3	6744	8264	486,1
<b>1985-1989</b>	191222	234304	<b>853,7</b>	8337	10216	<b>621,4</b>
<b>1990-1994</b>	148889	182433	664,7	6489	7950	483,6
<b>1995-2000</b>	149837	183595	668,9	6647	8145	495,4

Source: Axenciuc, 2012, p.37.

The data presented show a nearly four-fold increase of Romania's gross domestic product in the 50 years that passed between the creation of the Romanian state and the beginning of the First World War, while compared to the inhabitants, there has been registered a much smaller augmentation, that being doubled only once. By the end of the interwar period, the gross domestic product has increased almost tenfold, with no improvement registered in its distribution per capita. Available data related to the communist period start with a slight advantage as compared to the end of the interwar period, with an 8.5 time increase in GDP and more than 6 times in the per capita one. The data indicate a collapse of the two indicators analyzed after 1989, so the data from the 1995-2000 interval are similar to those of the 1975-1979 interval.

Although the presented data do not allow much comparison with the beginning period of modern Romania, we can see that between the value of 2000 indicators and those of the interval there is an increase of more than 80 times (obviously the Romanian state has a totally different population and territory at present) and as compared to a similar territory and population, the end of the interwar period has registered an 8 times augmentation. Economic indicators have improved significantly following Romania's integration into the European Union, as we will see below, but the developments presented reconfirm the conclusions of the comparative study of the historian Bogdan Murgescu (Murgescu, 2010, pp.485-488), who shows that recoveries, "the catching up", though possible, is very rare, both in terms of frequency and number of countries that have succeeded. The successful examples identified by it are Denmark (1885-1914) and Ireland one century later (1987-2007). Successful examples show that time is needed (if the actual recovery took place over several decades, its preparation took a century in the case of Denmark, in this case the process began at the end of the 18<sup>th</sup> century, and at least three decades in the case of Ireland). This observation reconfirms Rostow's theory (Rostow, 1960, p. 4-11), who considers that at least four decades are needed after the launch or six decades after the take-off, in order to achieve economic development.

### 3. Is „the great escape” possible for Romania?

In a recent paper, Nobel Laureate for Economy in 2015, Angus Deaton, claims that, over the last 100 years, we have been the witnesses of an unprecedented progress in raising life expectancy at birth, as well as of the general level of education of the world population. Unfortunately, as demonstrated by all studies, but also by contemporary reality, the progress of some states on the road of modernization was much faster in the case of some states, while others evolved less, or they experienced rebounds after the development periods. The American economist uses even a plastic image of this phenomenon, inspired by the film "The Great Escape," the action of which takes place in a Nazi camp; during an escape, only a small number of those who participated in it

managed to escape, while most were trapped and returned to the original situation.

To what extent did the Eastern part of the continent, including Romania, succeed in escaping the "return camp"? One of the important social indicators to be analyzed refers to life expectancy at birth, because it gives us clues about what is happening in health systems, but also about the level of education of the population, being closely related to its material level.

Our country, like other Southern and Eastern European countries, has started from a relatively low life expectancy (as it was in most of human history), which was situated at 48-50 years old at the level of 1940 (Scurtu, 2001). The causes of this reduced life expectancy were among the most diverse, including: high infant mortality, especially for the category of children under one year; poverty made that the food of the majority of the population at that time to be poor; medical care was totally missing or precarious; living conditions were inadequate, poor hygiene, difficult working conditions, etc. Also, education levels were very low, half of Romania's population being illiterate in the interwar period. The prospect of UNDP data is a major one for all Central and Eastern European countries, including Romania, situated among countries with a very high level of human development (even if Romania ranks 50<sup>th</sup>, the penultimate in this category, and Bulgaria occupies position 56, which places it among states with a high level of human development):

*Table no. 2 HDI and its components. Very high human development countries (except Bulgaria, ranked as high human development)*

	<b>Life expectancy at birth</b>	<b>Expected years of schooling</b>	<b>Mean years of schooling</b>	<b>Gross National Income (GNI) per capita (2011 PPP \$)</b>	<b>HDI Rank</b>
Norway	81.7	17.7	12.7	67,614	1
Switzerland	83.1	16.0	13.4	56,364	2
Germany	81.1	17.1	13.2	45,000	4
Denmark	80,4	19.2	12,7	44,519	5
Netherlands	81.7	18.1	11.9	46,326	7
Ireland	81.1	18.6	12.3	43,789	8
Iceland	82.7	19.0	12.2	37,065	9
.....					
South Korea	82.1	16.6	12.2	34,541	18
.....					
Slovenia	80.6	17.3	12.1	28,664	25
Czech Republic	78.8	16.8	12.3	28,144	28
Estonia	77.0	16.5	12.5	26,362	30
Poland	77.6	16.4	11.9	24,117	36
Lithuania	73.5	16.5	12.7	26,006	37
Slovakia	76,4	15.0	12.2	26,764	40
Hungary	75.3	15.6	12.0	23,394	43
Latvia	74.3	16.0	11.7	22,589	44
Croatia	77.5	15.3	11.2	20,291	45
<b>Romania</b>	<b>74.8</b>	<b>14.7</b>	<b>10.8</b>	<b>19,428</b>	<b>50</b>
Bulgaria	74.3	15.0	10.8	16,261	56

*Source: Human Development Report 2016, p. 198.*

The data in the previous table highlight some key issues: countries with a high degree of human development are relatively constantly placed on the first positions of the hierarchy, even if there are still oscillations. The spectacular advances of some states are relatively rare, taking place only over longer periods of time. But they are not impossible, the example used is that of South Korea, a very poor state in the sixties, which became one of the most developed in the next half century. The secret of the South Korean miracle is presented as a combination of an authoritarian political regime (under the direction of General Park), governmental policies of accelerated industrial development supported by government subsidies and aggressive protectionism, massive investment in education and research, all leading to an economic and social leap which places South Korea today in the top twenty economies of the world (Chang, 2012, pp.20-23).

The South Korean experience shows that the differences do not depend on biological, climatic factors or on certain characteristics of the populations, as the example of the Korean peninsula shows us that the same people had completely different developmental evolutions determined by the different political and economic institutions for which they have opted, reinforcing the thesis that free political and economic institutions stimulate to a much greater degree the economic and social development (Acemoglu and Robinson, 2016).

Table no. 3 Social indicators related to social and economic development in EU countries

	<b>Infant Mortality Rate Per 1000 live-births</b>	<b>Current health care expenditure % of GDP 2014</b>	<b>Total public expenditure on education % of GDP 2014</b>	<b>R &amp; D expenditure % of GDP 2015</b>	<b>GDP at PPS, per capita, EU-28=100</b>
Germany	3,3	11,0	4,63	2,87	123
Denmark	3,7	10,37	...	3,03	125
Netherlands	3,3	10,93	5,53	2,01	128
Ireland	3,4	9,91	5,32	1,51	177
Slovenia	1,6	8,54	4,99	2,21	83
Czech Republic	2,5	7,56	3,84	1,95	88
Estonia	2,5	6,13	4,85	1,50	74
Poland	4,0	6,33	4,91	1,00	69
Lithuania	4,2	6,22	4,37	1,04	75
Slovakia	5,1	6,96	4,09	1,18	77
Hungary	4,2	7,17	3,98	1,38	67
Latvia	4,1	5,49	5,28	0,63	65
Croatia	4,1	6,71	...	0,85	59
<b>Romania</b>	<b>7,6</b>	<b>5,14</b>	<b>2,99</b>	<b>0,49</b>	<b>59</b>
Bulgaria	6,6	8,51	4,22	0,96	48

Source: NIS, 2017.

The data presented highlight Romania's negative performance in terms of certain social indicators, such as infant mortality, education and research spending: in all these aspects, Romania ranks last in the European Union, surpassing Bulgaria. The data presented show that while Romania performs better than Bulgaria in terms of economic performance, overcoming Croatia slightly over the last year, but low spending on health, education and research will contribute to the perpetuation of problems related to the access of the population to better living conditions, which will be a long-term problem.

#### 4. Conclusions

Has Romania overcome the level of underdevelopment? The answer to this question is definitely a positive one, but some comments are needed instead of conclusions. First of all, the historical period of the transition to a developed society was historically a short one (one hundred fifty years represents half of the time available to Western European countries). On the other hand, the states that are later modernized benefit from the experience of the previous ones, so it is possible to burn the stages and compress the process. Unfortunately, the "take-off" period (Rostow, 1960) was one in which the events at the European continent level were unfavourable to the states that were going through this stage: two military conflagrations that brought massive destruction to the economies of the region, two major economic crises, etc.

A second impediment to development was caused by the numerous changes in the economic and political system, starting with the dismantling of the economic market in the Austro-Hungarian Empire at the end of the First World War, and the construction period of a functioning national economy by integrating new provinces adjoined, brought about, at least in a first phase, high costs for new states. It was made within an international economic system unfavourable to the development of the agrarian states, and the process was stopped by the Second World War and by the forced passage to the communist system and the economic reconstruction according to the

Soviet model. Statistical data (Chirot, 1989, pp.380-384) show that the economic performance of underdeveloped states in the region was not disastrous (for example, Austria exceeded the 1913 per capita income level only after 1950). The seventh and eighth decades also represented periods of rapid economic and social development, followed by a new major economic and social destruction as a result of the collapse of the communist system worldwide. All these aspects show that development cannot be achieved when the state is subject to major economic and political fluctuations at too short intervals, which may be the explanation for the incomplete, uneven development we are currently witnessing.

Another conclusion worthy to be highlighted is that it is much easier to reach the economic development than to improve the quality of life of the majority of the population. An interesting conclusion, including the case of Romania, is that there is no need for a "genius" elite (Murgescu, 2010, pp.486-487): however, a pragmatic vision and punctual contributions to the good functioning of the institutions and of the economy as a whole are needed. As can be seen from the data presented throughout the article, economic growth can be achieved in a favourable period, even in the absence of a visionary elite, while for the sustainable development of the society, public policies implemented over longer periods are needed, the effects of which are permanently monitored and re-evaluated. Romania is currently occupying a much better position in terms of economic indicators than in terms of the social ones, which makes gradual economic evolution not to affect all social categories, causing a strong social polarization. From this point of view, things are not very good in our country, which has been subject to constantly increased inequalities over the last twenty-five years, becoming one of the most uneven countries in the European Union.

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## Differentiators of Organizational Dynamism

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### Abstract

*The aim of this paper is to present a few conclusions of the study on the dynamic capabilities of Romanian organizations that experienced a change trigger such as the need to adapt to the environment (reactive organizations) or to create or seize an opportunity (proactive organizations).*

*Implementation of the study required the use of advanced statistical technique, such as second-order structural equation modelling in AMOS. This technique revealed the mathematical relations between the dynamic capabilities dimensions such as coordination, sensing and learning capabilities and highlights the differences among the proactive and reactive organizations.*

*The results emphasize the differences among the components of the organizational dynamism of the Romanian proactive and reactive organizations.*

*Through its findings, the study brings important evidence that strategic paradigm and processual modifications are required for organizations that want to make a shift from the reactive approach to a proactive one.*

**Key words:** organizational change, dynamic capabilities, coordination, sensing, proactive

**J.E.L. classification:** C59, D22, D23, D83, D84

### 1. Introduction

In the last years a noun has become a buzzword at the global level: crisis. From the discussions about the economically disadvantaged parts of the world, where there is hunger, poverty and lack of jobs, houses and qualitative education, to those about climate changing, currency devaluation, energy price, resource depletion, or unsatisfactory results of financial instruments and institutions for each country or worldwide, the noun appears and reveals situations that are uncomfortable for governments, politicians and, more important, for the businessmen, entrepreneurs and employees.

As long as the crises continuously emerge, hatched by the global economic transformations, the importance of the organizational ability to add value within the challenging environment became more obvious. Therefore, the organizational capacity to generate and maintain the competitive advantage has become the most important characteristic of the organizations.

Organizations get their competitive advantage mainly by pursuing the shift from a current situation to a different, improved and desired new one. The change results and its' implementation are usually planned, but environment is changing itself, so the organizational agility becomes a key success factor for any improvement endeavor.

The dynamic capabilities highlight this perspective. They are organizational capabilities that support and determine the reconfiguration of the existing resources and capabilities, spawned by changes in the internal or external environment (Zahra, Sapienza and Davidsson, 2006).

Pavlou and El Sawy (2011) emphasized that the dynamic capabilities are abstract, intangible, and difficult to describe. Therefore, it is more convenient to represent them through (first and second-order) components that are revealed by specific routines.

The purpose of this paper is to apply a second-order model of dynamic capabilities developed on our previously works to identify the differences in the operational routines that lay down for dynamic capability of Romanian companies that implemented a change as result of the identification of a problem (reactive organizations) or of an opportunity (proactive organizations).

The paper briefly highlights the organizational routines that stand for the differences between the dynamism of the proactive and of reactive organizations.

The paper comes up to raise awareness for this subject and fill a gap in the literature and to propose further methods and instruments that stimulate the organizational agility.

A set of hypotheses were tested during the research, using primary data obtained through a questionnaire-based survey and SEM software (AMOS 20).

## 2. Literature Review

Change is the most obvious certainty in the business world. Its' necessity may differ for each organization, but it cannot be ignored by organizations that want to perform under the actual economic conditions.

However, while the companies' environmental conditions change continuously and the competition sharpens, the capacity to generate and maintain the competitive advantage has become the most important for organizations (Zahra, Sapienza and Davidsson, 2006 or Wang and Ahmed, 2007). They defined it as the dynamic capability - the capability for a rapid reconfiguration of the existing resources and capabilities. The dynamic capabilities stand for the capacity of an organization to create, extent or modify its resource base. Therefore, dynamic capabilities emphasize the importance of human capital, social capital, and organizational capital as drivers of the firms' performances (Sirmon and Hitt, 2009).

Many efforts were done by scholars to develop models for organizational dynamic capabilities. Pavlou and El Sawy (2011) proposed four dynamic capabilities as tools for reconfiguring the existing operational capabilities: sensing, learning, integration, and coordination. Also, innovation and corporate entrepreneurship are considered dynamic capabilities by Simsek and Heavey (2011).

Organisations need to be alert to both internal and external environment to identify in due time opportunities as well as challenges. Therefore, they need to develop their sensing capability – the ability to spot, interpret, and pursue opportunities in the environment. Teece (2007) identified the basic routines of the sensing capability: generating market intelligence, disseminating market intelligence, and responding to market intelligence. The routines are related to (i) identify changes in business environment, (ii) Identify new opportunities and threats, (iii) assessment of the effect of changes , (iv) identification of gaps between results and plans.

Organisations need also to develop the ability to use available resources in a timely, flexible, affordable and relevant manner, in order to respond to those changes effectively (Stragalas, 2010). Therefore, they need to develop their ability to orchestrate and deploy tasks, resources, and activities. This capability – defined by Pavlou and El Sawy (2011) as coordination capability - helps firms better synchronize their tasks and activities. The basic routines of coordinating capability are related to assigning resources to tasks (Helfat and Peteraf, 2003) or assigning the right person to the right task (Ambrosini and Bowman, 2009). The ability to identify complementarities and synergies among tasks and resources was emphasized in their work by Eisenhardt and Galunic (2000), while the importance of orchestrating collective activities was highlighted by Strang and Jung (2005).

While organizational change can be planned, knowledge is necessary to make it become reality. The learning capability of an organization was defined by Pavlou & El Sawy (2011) as the ability to revamp existing operational capabilities with new knowledge and involve key components that support processes such as searching for information, assimilating, developing and creating new knowledge. Also, Gunsel et al (2011) consider learning as the process of acquiring, distributing, integrating, and creating information and knowledge among organizational members.

From the organizational change point of view, the concept of dynamic capability includes the capacity to identify the need or opportunity for change, to formulate a response to that element and to implement the course of action. The relationship model between dynamic capabilities and organizational change has been studied among others by Navarro and Gallardo (2003), Whelan-Berry and Somerville (2009) or Sune and Gibb (2015). A second-order model of dynamic capabilities of Romanian organizations pursuing change was also developed in our previous work (Voica et al, 2017).



However, there is a gap in the studies regarding the specific differences of the organizational routines that are the basis of dynamic capabilities of the proactive and of reactive organizations. Therefore, the aim of this paper is to highlight the organizational routines that can differentiate the dynamic capabilities of the proactive and of reactive organizations.

The main hypotheses of the study are:

H1. The coordination capability has a significant, stronger positive effect on the dynamic capability for proactive organizations than for those that are reactive;

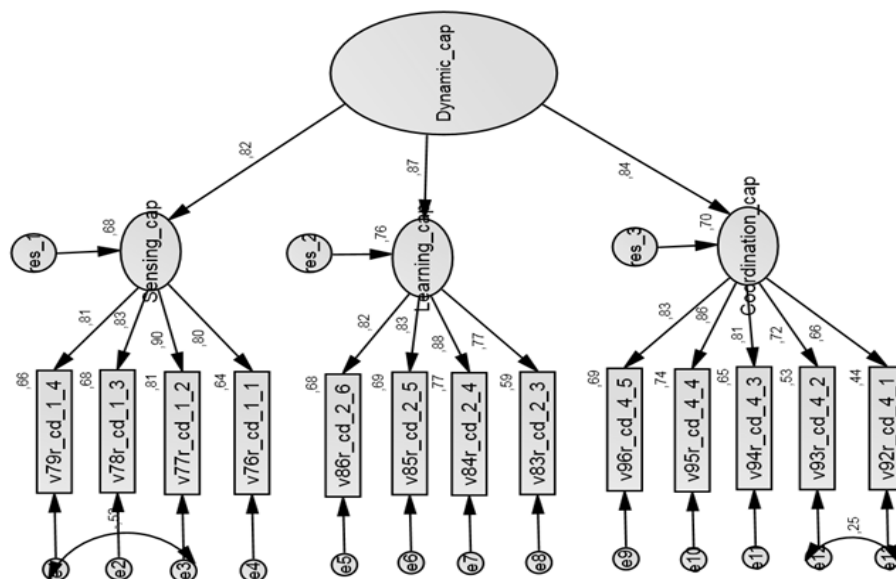
H2. The sensing capability has a significant, stronger positive effect on the dynamic capability for proactive organizations than for those that are reactive;

H3. The learning capability has a significant, stronger positive effect on the dynamic capability for proactive organizations than for those that are reactive.

### 3. Data and statistics

We used for this study the data collected for our other previous works (Voica et al., 2016), collected from change executives, managers and consultants that were directly involved in change and had extensive knowledge about the (processes and results of) organizational change initiative within Romanian organizations. A total number of 266 usable responses were obtained as result of various messages sent through e-mail. Non-response bias was prevented through questionnaire that accepted only full-completed responses. All variables are based on Likert-type scales with four intervals. The data analysis was carried out with help of descriptive and inferential statistics using SPSS 20 as support for processing the regression and AMOS 20 for SEM analysis.

Figure no. 1. Second-order structural model of the Dynamic capability of the Romanian organizations pursuing change.



Source: Voica O.M., Stancu S., Naghi L.E., Enhancers of organizational change: Materializing the dynamic capability framework.

We analysed the answers and identified organizations that proactively initiated the change due to the identification of an opportunity. On the other hand, there were organizations that started their internal change as a reaction at the environmental changes, only when threats were identified.

We grouped these companies and performed the dynamic capabilities parameters' estimates for each group. The differences identified were further tested to identify their significance.

The two groups to be compared differ in size (67 proactive vs 109 reactive organizations; 90 organizations have the same level of activeness), so this will affect standard errors of the same variable for each group. To control for these effects we performed the analysis by taking a random sample of the reactive organizations (the larger groups) to match the lower sample size of the proactive organizations (smaller group).

Figure no. 2 Standardized parameters for Reactive organizations

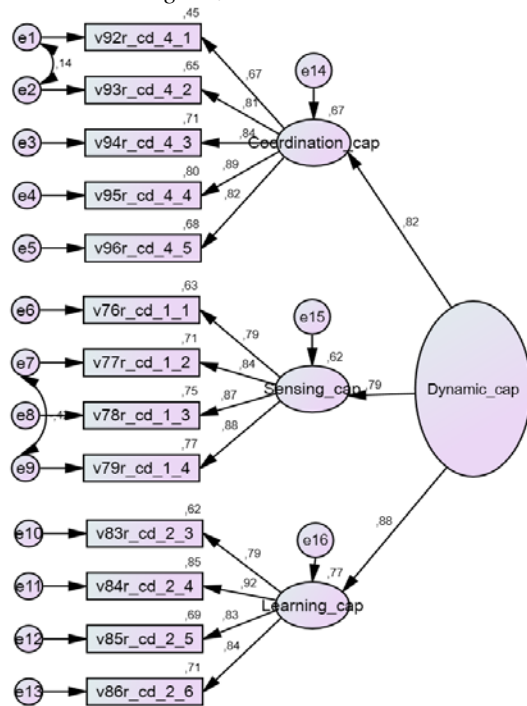
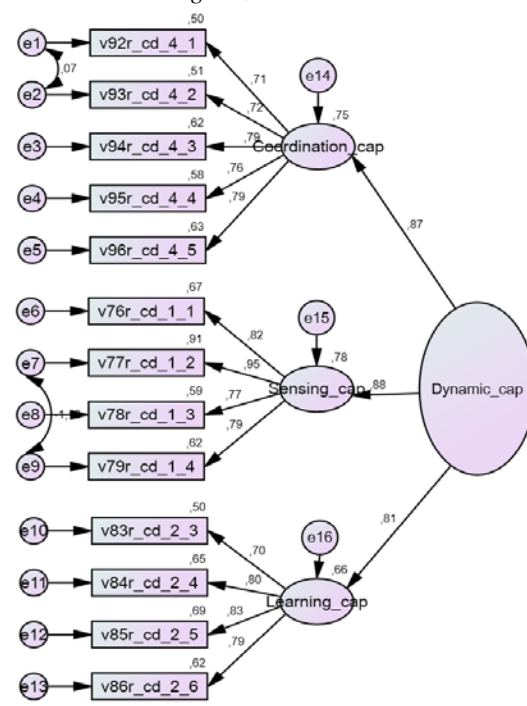


Figure no. 3 Standardized parameters for Proactive organizations



Source: AMOS 20 Output results for the analysed variables

We used AMOS 20 as suggested by Byrne B.M. (2010), Arbuckle J.L. (2011) to compute the regression weights for both proactive and reactive organizations. Even though we found differences of variables' coefficients among the two categories of organizations, it was necessary to identify if the differences are statistically significant.

Therefore, in order to check our hypothesis, we performed various Chi-square difference tests freely estimating the 2 models (one for each type of organizations), except constraining each path to be equal across groups.

#### 4. Conclusions

We found that chi-squared difference test was significant at 90% confidence level ( $p < 0.1$ ) for all variables that are specific to the coordination capability, indicating that the effect was different for proactive organizations than for the reactive ones.

Considering the factor loadings, we can conclude that the positive effect of each component on the coordination capability is stronger for proactive organizations than for those that are reactive.

In order to check the hypothesis that the coordination capability has a stronger positive effect on the dynamic capability for proactive organizations than for those that are reactive, we also constrained this path to be equal across groups. The chi-square difference test among the two types of organizations was significant at ~ 85% confidence level ( $p = .154$ ), indicating that the effect was different for proactive vs. reactive organizations.

Also, we checked the chi-square difference for the components of the sensing capabilities of the two categories of organizations. The chi-squared difference test was significant at 88% confidence level ( $p = 0.116$ ) only for the variable v76, for all the other variables that are specific to the sensing capability being not significant ( $p = 0.469$  for v78 and  $p = 0.434$  for v79), indicating that there is not a significant difference between the proactive organizations and the reactive ones.

Considering this fact, we can conclude that the positive effect of each component on the sensing capability is not significantly different for proactive organizations than for those that are reactive.

Also, we hypothesized that the sensing capability of proactive organizations has a stronger positive effect on the dynamic capability than that of the reactive organizations. We performed the invariance test and found that the chi-square difference test among the organizations was not

significant at 90 % confidence level ( $p=.381$ ), indicating that the effect was not significantly different for proactive when analysed against reactive organizations.

We also found that there is no significant difference between proactive and reactive organizations in terms of the effect of the learning capability's components. However, we hypothesized that the learning capability of proactive organizations has a stronger positive effect on the dynamic capability than that of the reactive organizations. We performed the invariance test and found that the chi-square difference test among the organizations was significant at 78 % confidence level ( $p=.219$ ).

Finally, we can conclude that coordination capability is more developed within the proactive organizations. The resource allocation according to the individuals' needs (v93) and the compatibility between processes and employees' expertise (v95) might be the support of their proactivity.

On the other hand, even though there is not significant difference in sensing capability of organizations on the dynamic capability, the proactive organizations seems to better stimulate the efforts to identify the changes in the business environment (v76).

Last, but not least, the learning capability is necessary (and useful) in any organizational endeavour. However, good results are obtained by both types of organizations (proactive and reactive) with a slight edge for proactive organizations when stimulate the use of knowledge to implement the organizational plans (v85).

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### Appendix - Distribution of answers for each variable

Variable	Item	Min		Max		Mean		Std. Dev
		At a very small extent	To a small extent	Largely	To a great extent	Statistic	Std. Error	Statistic
v76	There is a continuous effort to identify changes in business environment	19	68	140	39	2.75	.049	.792
v77	There is a continuous effort to identify new opportunities and threats	15	51	152	48	2.88	.047	.765
v78	The potential effects of environmental changes on activities are studied periodically	18	74	138	36	2.72	.048	.780
v79	Periodical identification of gaps between results and plans	22	70	140	34	2.70	.049	.796
v80	There is enough time assigned for the implementation of the organizational performance improvement ideas	28	101	115	22	2.49	.049	.793
v81	Multiple options are explored to overcome the critical moments	20	77	137	32	2.68	.048	.781
v82	New knowledge is imported in organization	17	97	121	31	2.62	.047	.773
v83	Imported knowledge and information are assimilated in organization	14	65	171	16	2.71	.040	.658
v84	Transformation of information in new knowledge, useful for processes.	17	76	149	24	2.68	.045	.727
v85	All knowledge is used to implement the organizational plans.	22	79	142	23	2.62	.046	.758
v86	It is generated New knowledge, capable to support (positively influence) the implementation plans.	22	75	150	19	2.62	.045	.738
v87	Organization members are willing to contribute to their team success	8	44	175	39	2.92	.040	.654
v88	Each person knows his colleagues individual activities and responsibilities	4	73	160	29	2.80	.039	.638
v89	Awareness about the other members' competencies that are relevant for the individual activities.	8	67	149	42	2.85	.044	.713
v90	Harmonization of the individual activities within the working groups	11	77	150	28	2.73	.043	.701
v91	Integration of the individual activities within the working groups	6	73	167	20	2.76	.038	.618
v92	Individual outputs are synchronized with the other members activity	12	73	159	22	2.72	.042	.678
v93	Resource allocation is done according to each individual's needs.	19	97	126	24	2.58	.046	.754
v94	Task allocation is done based on relevant competencies and knowledge for activity	8	58	160	40	2.87	.042	.689
v95	We get certainty about the existence of compatibility between the people's expertise and processes	9	74	152	31	2.77	.042	.692
v96	Working groups are well coordinated	14	68	156	28	2.74	.044	.713

## **Section IV**

### **Marketing – Management**

## The Seasonality in the Number of Overnight Stays by Residents in Romania and Bulgaria and Its Ranking in Connection to the EU Average Level

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### Abstract

*Studying the evolution of tourism over time, especially on the short or intra-annual term, highlights the seasonality of this economic activity. The main objective of this paper is represented by the comparative analysis of the seasonality recorded in the tourism activity, using the indicator "the number of overnight stays by residents" in Romania and Bulgaria, as well as its ranking in connection to the average seasonality registered in the EU member countries.*

*For the purpose of our quantitative research, we processed a database comprised of the monthly values of the "total number of overnight stays by residents", recorded from January 2005 to December 2016, using the moving average method and the seasonality coefficient. We believe that this information may be especially useful to the decision-makers of the Romanian tourism activity in the conception of the tourism development strategy.*

**Key words:** number of overnight stays, tourist seasonality, seasonality indices

**J.E.L. classification:** C10, C21, C53, M21, J63, Y32, Z33

### 1. Introduction

Romania and Bulgaria are two countries that became members of the EU at the same time, i.e. in 2007, being located in the same European region, having a similar economic and political evolution. These two countries are perceived as two competing tourist destinations. To a large extent, the components of the tourist product offered by the two countries are similar; however, the evolution of tourist activity (in recent years) in the two countries is different. In this study, we sought to analyze the evolution of seasonality using "the number of overnight stays by residents" as an indicator, in order to compare the residents' tourist activity from the two countries, as well as the average recorded in the EU. The results of the research are of a quantitative nature (related to the measurement of the intensity and dynamics of the seasonality in tourist activities), but also of a qualitative nature (represented by the identification and comparison of some aspects typical of the resident tourists' behavior in Romania, Bulgaria and at the EU-28 level).

### 2. Literature review

The competition between tourist destinations/ products has been transferred increasingly from natural and anthropic factors to expectations, perceptions, emotions offered, and experiences. For certain tourist segments, wishes have diversified extensively, leading to the formation of tourist niches (with different purchasing and/ or consumption behaviors), and these aspects have become criteria for the choice of holiday destinations (Herteanu, 2013). In this context, Morgan & Pritchard

(2001, p. 214) stated that "the battle for customers in tomorrow's tourism industry would be given not for the price but for the customers' minds and hearts" (Stăncioiu & all, 2011).

As stated by Taleb Rifai, Secretary General of UNWTO (2016), the current period is characterized by the travel revolution and by the revolution in the IT & C sector. The "travel and tourism" movement has now become a life component, a part of the culture of the contemporary human being; it is also a true driver for economic, social, cultural and even political transformations. Referring to the current importance and size of tourism, Bigovic (2011, p.16; 2012, p.102) states that tourism has become a specific phenomenon of the modern world, and points out that seasonality is "one of the most visible features of modern tourism".

In order to explain seasonality as a way of evolution of tourist activities, it is necessary to analyze its formative and limiting factors and to understand its action. Thus, BarOn (1975) distinguishes two important categories, i.e. natural factors and institutional factors, respectively. Koenig-Lewis and Bischoff (2005) state that natural factors are represented by climate and temperature conditions; they are predictable and resurface at known time intervals. Bigovic (2012, p.103) considers that institutional factors refer to traditions, customs, historical and religious holidays, legislation and the structure of the school year. According to Butler (1994), tourism seasonality is also influenced by factors such as fashion, imitation, inertia, social pressure, but also by other factors that can be found in the manifestation of the tourism demand and in the tourists' purchase and consumption behavior.

When considering seasonality in the literature, most of the time, only the tourism demand is discussed; for example, Biedermann (2008) considers that the permanent feature of seasonality is represented by a sudden change in demand. In this context, Butler (1994) points out that most studies on seasonality focused on analyzing demand patterns, describing seasonality in certain tourist destinations, identifying its negative effects and the policies needed in order to fight against the effects of seasonality.

### **3. Research methodology**

This study includes a quantitative research measuring the intensity and dynamics of the seasonal concentration of tourist activities in Romania, Bulgaria and the EU. For this purpose, we processed a Eurostat database (source: Nights spent at tourist accommodation establishments by residents/non-residents monthly data), represented by the monthly values of a suggestive indicator of the tourist traffic, i.e. "the number of overnight stays by residents", from January 2005 to December 2016, for "Hotels and Similar accommodation establishments". As research tools, we used the moving average method for calculating the deseasonalized series and the seasonality coefficients for concentration assessment. As a computer support for data processing, we used the EViews 5 program.

### **4. Results and discussions**

The coronogram of "the number of overnight stays by residents" from January 2005 to December 2016, in Romania, Bulgaria and the EU-28, obtained by EViews, is shown in Figure 1.

The following aspects are significant:

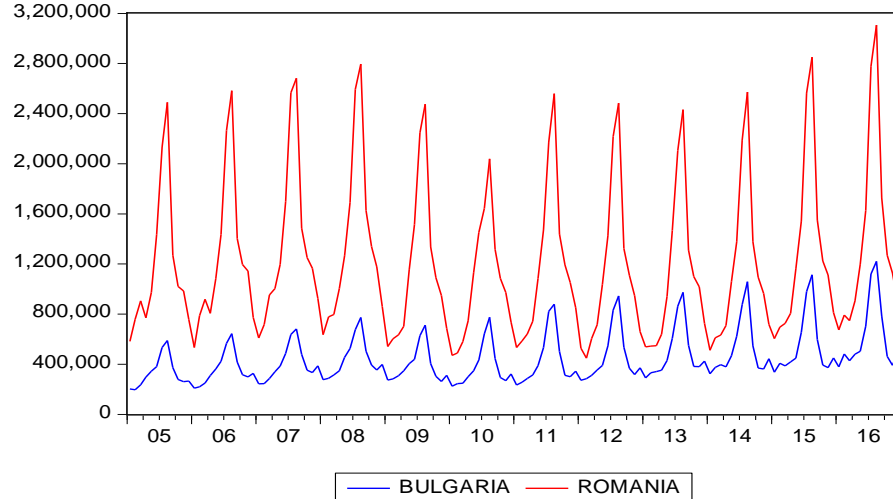
- Over the analyzed period, Romania presents large variations in "the number of overnight stays by residents" (increases and decreases) from one year to the next. The lowest level of this indicator was registered in 2010 and the highest level was recorded in 2016. Romania also recorded a decreasing trend in this indicator in the period 2008-2010. This reveals that, over this period, the Romanian tourists were less attracted to the tourist destinations from Romania, or as a probable consequence of the economic/ financial crisis, which triggered a decrease in incomes, the Romanians also reduced their holiday expenses in the country.

- Bulgaria recorded much lower levels of "the number of overnight stays by residents" compared to Romania. The minimum value of this indicator was reached in 2005 and the maximum – in 2016. The trend went slightly upwards over the period 2005-2016, and an insignificant decrease was registered in 2009 and 2010, compared to 2008. Under these circumstances, it can be

said that the effects of the economic crisis did not lead to significant changes in the behavior of the resident tourists from Bulgaria;

- At the EU level, we notice a sinusoidal and slowly growing trend of the correlation, at a somewhat constant pace, throughout the analyzed period. The lowest level of the residents' overnight stays was recorded in the EU in 2005 and the highest level was registered in 2016

Figure no.1 Evolution of the indicator "the number of overnight stays by residents" in Romania and Bulgaria, 2005-2016



Source: Author's own results obtained by processing Eurostat data, by EViews

Table no. 1 Seasonality coefficients for the indicator "the number of overnight stays by residents", per month, between 2005 and 2016, in Romania, Bulgaria and the EU

Month	Seasonality coefficients in Romania	Seasonality coefficients in Bulgaria	Seasonality coefficients in the EU
Jan	0.519857	0.668048	0.694439
Feb	0.588096	0.729248	0.763884
Mar	0.648213	0.761260	0.881415
Apr	0.729559	0.846372	0.945989
<b>May</b>	<b>1.028077</b>	0.984950	<b>1.042977</b>
<b>Jun</b>	<b>1.394200</b>	<b>1.266875</b>	<b>1.197619</b>
<b>Jul</b>	<b>2.085008</b>	<b>1.797920</b>	<b>1.479898</b>
<b>Aug</b>	<b>2.365847</b>	<b>2.031108</b>	<b>1.699320</b>
<b>Sep</b>	<b>1.306959</b>	<b>1.193235</b>	<b>1.199263</b>
Oct	1.075380	0.841462	1.000796
Nov	0.970332	0.780422	0.786450
Dec	0.717299	0.892240	0.762502

Source: Author's own results obtained by processing Eurostat data, by EViews

By analyzing the values of the seasonality coefficients (indicators) presented in Table 1, the following aspects were revealed:

- In Romania, over a six-month period, the values of the seasonality coefficients for "the number of overnight stays by residents" are higher than 1. From May to September, there is a concentration of the Romanian residents' holidays in their own country. Coastal tourism becomes the main attraction for resident tourists and it has a significant influence on the seasonality of the tourist activities carried out in Romania. The seasonal peak is recorded in July and August, the concentration of the activity (given by seasonality coefficient values) being higher in Romania (2.08 and 2.36) compared to Bulgaria (1.79 and 2.03), but also to the EU average (1.47 and 1.69).



In addition, Romania recorded the highest variations in its coefficient values, i.e. from a minimum 0.51 (in January) to a maximum 2.36 (in August).

- As regards Bulgaria, the increase in the seasonality coefficients is recorded over a shorter period of only 4 months (between June and September), which shows that Bulgarian residents concentrate their holidays during this warm weather period and choose as a tourist destination especially the Bulgarian seaside. The variation in the coefficients recorded in the other months is small, which may indicate that in off-season, the number of the residents who spend their holiday in the country changes slightly and there are practiced tourism forms specific to the cold season.

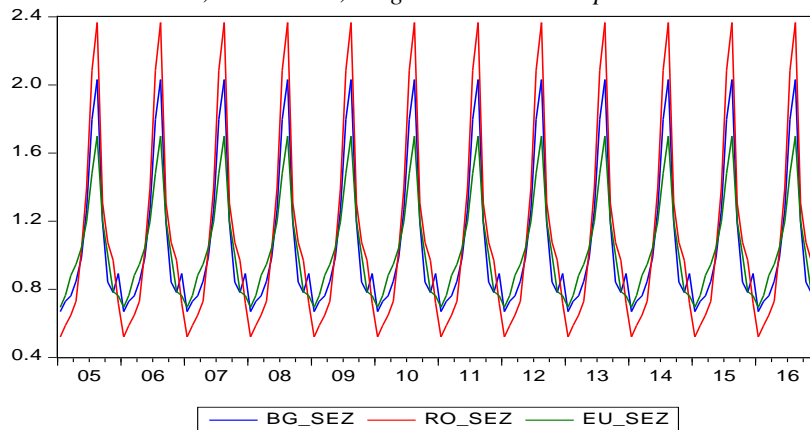
- It is also noteworthy that the seasonality coefficient values for "the number of overnight stays by residents" in Bulgaria are closer to the EU average, compared to the values recorded in Romania, which shows that seasonality (in Bulgaria and the EU average) is lower than in Romania;

- The average values of the seasonality coefficients recorded in the EU show that the concentration of the residents' holidays is recorded in each country over a six-month period, i.e. from May to September. At the same time, the EU recorded the smallest differences in the average values of the seasonality coefficients between season (May-September) and off-season (October-April) periods;

- The average value of the seasonality coefficients recorded in the EU in April (0.94) and the seasonality coefficient recorded in Romania in November (0.97) is close to 1, which shows that the seasonality (in these months) is very low. The explanation for Romania would be that in November the weather conditions favor the appearance of the first snow, the resident tourists choosing the mountain resorts from Romania, for practicing winter sports. In addition, some student categories (i.e. the pupils from the primary school) have a holiday in the early days of November.

The graphic representation supports the statement that Romania recorded the highest seasonality in terms of the number of overnight stays by residents", between 2005-2016, compared to Bulgaria and the EU average.

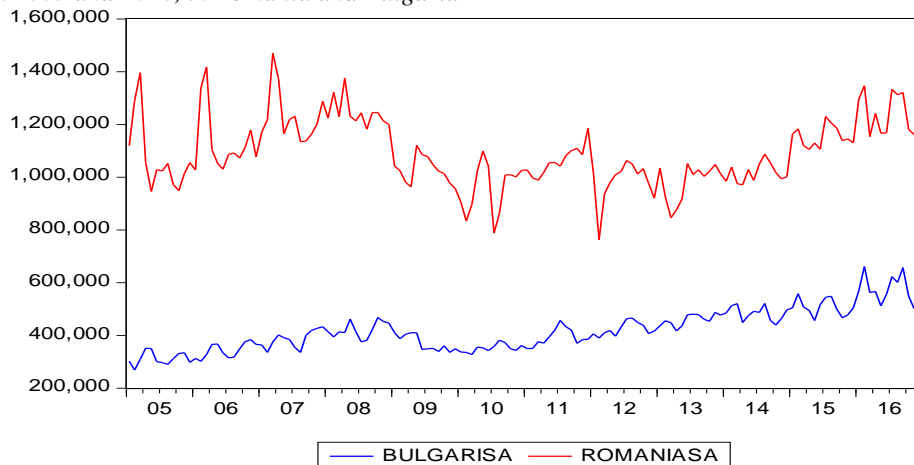
Figure no. 3 Seasonality coefficients for the indicator "the number of overnight stays by residents", per month, between 2005 and 2016, in Romania, Bulgaria and the European Union



Source: Author's own results obtained by processing Eurostat data, by EViews

In order to obtain the deseasonalized data series, we processed the initial database (the monthly values of "the number of overnight stays by residents", per month, from January 2005 to December 2016, recorded in Romania, Bulgaria and the EU), using the moving average method and the multiplicative variant.

Figure no. 4 The seasonally adjusted series for "the number of overnight stays by residents", per month, between 2005 and 2016, in Romania and Bulgaria



Source: Author's own results obtained by processing Eurostat data by EViews

The representation in Figure 4 shows that also when analyzing the deseasonalized data series, in Romania and Bulgaria, the seasonal nature of the tourist activity is more pronounced compared to the EU average. Figure 4 shows that the residents' tourist activity analyzed with the deseasonalized data series is higher in Romania compared to Bulgaria.

#### 4. Conclusions

The tourist activities performed by resident tourists show a seasonal evolution in Romania, Bulgaria and at the level of all the EU countries. In Romania, the flows of resident tourists show a strong concentration between June and September. There is also a pre-season period in May and a post-season period in October and November, when the value of the seasonality coefficients is very close to 1, which shows the reduction in seasonality. Residents choose to spend their holidays in Romania, especially during the warm-weather season (May-October), focusing especially in July and August. During this period, the seaside is the main tourist destination. The increase in the flow of resident tourists in November can be explained by favorable weather conditions for practicing winter sports; in addition, in December pupils and students are on holiday. The fewest holidays are spent by residents in the first three months of the year, most likely due to the unfavorable weather conditions experienced by Romania during this period, i.e. low temperatures, snowfall, blizzards, etc. Romania surpasses Bulgaria in terms of the values recorded each year in "the number of overnight stays by residents", over the analyzed period. This shows that, compared to Bulgaria, in Romania, the residents' tourist activity (expressed by this indicator) is more intense. Fewer Bulgarian residents choose to spend their holiday in their own country compared to Romanian residents.

By analyzing the average of the seasonality coefficients recorded per months, it is revealed that the flows of resident tourists from the EU member countries have a lower seasonality compared to those from Romania and Bulgaria. In other words, on average, the fluctuations in the number of trips made by residents in their EU countries are lower during the year, compared with the evolution recorded in Romania and Bulgaria. This feature is possibly triggered by the fact that, in EU economically developed countries, the tourists with higher incomes and more free time manage to travel almost constantly in their own country throughout the year. In this context, we consider that different behaviors are manifested by the resident tourists from Romania, Bulgaria and, as an average, at the EU level.

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## Travels as Life Style in View of Russian Travel-Bloggers

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### Abstract

*Appearance of Internet has given people never seen before access to information about events happening all over the globe. Person's need in self-expression and speaking his opinion due to Internet has received the powerful channel for realization. One of key results of said tools evolution nowadays are blogs and blogosphere uniting them into a single system.*

*Space of Russian blogosphere offers quite number of interesting resources dedicated to travels. Among authors of such travel-blogs – people of different age, education, professional activities, and other social-demographic characteristics. Special segment is taken by authors for whom travelling is not a temporary event in life, business trip, or vacation, but daily routine, life style.*

*Article shows results of content-analysis of travel-blogs of authors for whom travelling is daily practice and life style.*

**Key words:** travelling, life style, blogging

**J.E.L. classification:** Z39

### 1. Introduction

Appearance of Internet has given people never seen before access to information about events happening all over the globe. But most important advantage of Web according to users is a possibility to freely spread own information making it available for significant part of world population. Person's need in self-expression and speaking his opinion due to Internet has received the powerful channel for realization in form of numerous forums, chats, guest books, and other means of network communication. One of key results of said tools evolution nowadays are blogs and blogosphere uniting them into a single system.

### 2. Theoretical framework

#### 2.1. Blogging as a self-introduction

Wikipedia, free online encyclopedia being created by collective work of voluntary authors, the creature of Web 2.0 (same as the blogs) gives this event the following determination: “ Blog (a truncation of the expression "weblog") is a discussion or informational website published on the World Wide Web consisting of discrete, often informal diary-style text entries ("posts")” (Wikipedia.org, 2017). Blog is a website, major content of which is regularly added records, images or multimedia. Typical for blogs are not long records of temporary significance.

The Russian Magazine “Computerra” gives blog the following definition: “Blog is a network diary, — website where in reverse chronological order (last records are first) posted are diary notes on different topics. Most spread in Russian sector of the Web are personal blogs belonging to a certain author, where records are made on topics determined by owner (blogger)” (Protasov, 2006).

Under the BLOG we will mean personal web-page where a person (hereinafter the BLOGGER) posts information with purpose to express himself, his ideas, find like-minded people and communicate. As different from communication platforms such as forums, blog is a personal territory of author where he establishes his rules giving him additional possibilities for self-

expression and creativity. Other significant feature of blog differentiating it from typical mass media is initially personal nature of the one. Blog is on behalf of author and mostly contains information related personally to author including most interesting events of his life as well as opinion about different events in life of society. Thus, blog by essence is a product of blogger personality and bears information about his personal experience, mindset, likes, etc. However, final or resulting focus of blog, its function may be different from initial focus, more correctly, may be wider than the initial one. For example, with time personal blog may turn into a tool for promotion of political ideas, however, not losing its initial personal nature.

One of key factors conditioning blogs popularity is demand for self-expression (Zasurskyi, 2007, p.14). In a nutshell, free self-expression on one side having no, natural restrictions typical for communication in real life, and on another side – artificial restrictions set by administration of public internet-forums. However, only one this factor would be not enough to popularize blogs as any creative work should have not only the author but also the consumer. Presence of mass of consumers of bloggers' work is a consequence of another important need typical for many people, so called need in authority, i.e. a person to trust to. In real life, usually such people are parents, elder brothers, teachers, writers, political and spiritual leaders. If due to some reasons a person cannot find an authority for him-/herself in real life, Internet is to help with its vast range of well-known web stars, experts in different areas of life. Bloggers are just one type of such experts. Blogger having become an authority automatically becomes for his/her readers a source for information, that is, if not absolutely, trusted, but at least, deserving serious attention.

## 2.2. Russian blogosphere

Study of Russian blogosphere has identified number of basic features typical for bloggers and differentiating them from "common" people. Below is the list thereof.

- 1) Psychological extraversion and tendency to graphomania.
- 2) So called, active living position.
- 3) Extensive reading, erudition, ability to fast digesting of information.
- 4) Expert mindset, i.e. well-developed critical thinking to the detriment of creative thinking.
- 5) Need in acknowledgement, continuous support of their opinion.

According to Yandex (the most popular Russian search engine) Russian blogosphere accounts for over 1 million of blogs, half of which is regularly update. For leading hosting platforms for blogs are LiveJournal.com (228 thousand of active blogs), Liveinternet.ru (over 160 thousand), Blogs.mail.ru (72 thousand) and Diary.ru (over 44 thousand.). One other important parameter is a share of new posts a day demonstrating 'intensity' of blogosphere life on different segments. Unconditional leader on this parameter is Livejournal (44.78% posts in Russian blogosphere), and its closest competitor – Liveinternet (19.98%). Based on results of calculation by Yandex system, number of certain blogs is 4.5 thousand, and over 60% thereof operate on WordPress engine. Typical blogger is 21-year old female student living in Moscow, and circle of her readers is about 24 people (Krutova, 2017, p.46).

After having allocated general structure of discussion core of Russian blogosphere based on analysis of content and descriptions of 1200 blogs (10% of discussion core) there were identified and determined structures inside cloud. Researchers have determined four key network clusters making discussion core:

- political and public relationships (discussion of news, business and finances, social and political activity, etc.);
- culture (literature, cinema, elite and popular culture, etc.);
- regional bloggers (bloggers identifying themselves as residents of certain regions of Russia or cities);
- instrumental bloggers (bloggers in such group with large degree of probability actively use blog as a mean of income).

Travel-blogs – are instrumental blogs aimed at spreading information on tourist destinations, regions, countries, features of travels, lifehacks, recommendations for purchase on buying tickets, car rental, visa requirements, etc.

Space of Russian blogosphere offers quite number of interesting resources dedicated to travels. Among authors of such travel-blogs – people of different age, education, professional activities, and other social-demographic characteristics.

Special segment is taken by authors for whom travelling is not a temporary event in life, business trip, or vacation, but daily routine, life style.

Life style — (In Latin, *modus vivendi*) long-standing, typical for historically-exact social relationships forms of individual, group life and activity of people characterizing features of their communication, behavior and mindset in different areas. Life style — is long-standing form of being of human in the world, expressed in his activity, interests, commitments. Life style — is a method, forms and conditions of individual and collective living of person typical for certain-historical social and economic relationships. Key parameters of life style are labor (study for younger generation), life, public-political and cultural activities of people as well as different behavioral customs and expressions.

### 3. Research methodology and findings

Let us show results of content-analysis of travel-blogs of authors for whom travelling is daily practice and life style. Study was conducted in a period of 2015-2017. Analyzed were 96 author blogs with more than 2,800 units of information (thematical posts) published in segment of Russian Internet-space (Runet), authors, identifying themselves as Russian (Russian bloggers) and whose notes were dedicated to subject of travels. Important note is – that each of bloggers included into pool of study states that travel is his life style, thus general totality of respondents was determined based on their self-assessment. Study has covered authors of blogs having at least 10,000 subscribers (followers).

In process of content-analysis the following objectives were set as follows:

- social-demographic portrait of traveler – blogger;
- life style;
- motivation of travels;
- motivation for blogging;
- circumstances at which author has begun travelling;
- features of life style;
- sources of income;
- advantages of travels as life style;
- disadvantages of travels as life style.

Study gave following results.

It is impossible to form average portrait of travel-blogger. Study has shown that in space of Russian travel-blogging the following groups of authors can be allocated:

**Group № 1. "Travelling youth"** - about 15% of studied bloggers. Young single men and women travelling alone. In general, age of such bloggers does not go beyond 19-25 years. These, as a rule, are students (extramural studies), or recent university graduates.

In average, travelling youth travels 6-8 months per year choosing for travels certain regions (South-East Asia, Europe), or certain countries large in territory (China, India). Main reason for travels is a thrill of adventures, mustering something new, collection of impressions. To start travels named are short travels during study (on-job practice, students exchange, summer school, etc.).

Limitations of financial capabilities (typical expenses are – USD 300-500 per month) condition choice of accommodation, transportation, food and accessibility of learning objects during travel. During travels, young people choose not expensive accommodation (hostels, guest houses), actively practice couch-surfing. At traveling they often use hitch-hiking or resources where it is possible to find fellow travelers. Main source of income is remote work (freelance), that can be practiced during travels (translation, copyrighting, and etc.), savings accumulated between travels, as well as parents sponsorship. Blogs of such travelers usually do not give significant income, as they are not considered by authors as possibility for monetization.

Key motive of blogging is self-presentation, boast. Ratio of men and women in this category of bloggers is about equal. However, young men in this category more often restrict themselves by blog itself where they post text and visual information of limited volume. In their turn, young women actively use in addition to blog capabilities of Instagram as well, where they post large number of photos and videos of their travels.

As a main advantage of travelling life style respondents of this group note possibility to see other territories, meet new people, test themselves under extreme conditions. As disadvantages, they note financial limits that not allow for trying one or another amenities and touristic attractions at places of stay, as well as for simplifying travel process (travelling by more comfortable transport, for example). Moreover, risks associated with single travels (more related to young woman), are such as, sexual harassment by local men.

**Group № 2. "Rioters"** – approximately 55%. This group included men and women aged 35-45 years. Larger part of this group is formed by men. More often, representatives of this category have experience of family life, but at moment of travel life is divorced.

As a rule, "rioters" are former paid employees, middle ranking managers with high intensity and responsibility at work. During certain life stage, family difficulties occur, carrier gives lesser satisfaction (at first, moral, and not financial), and a person begins to wish "to quit and to go for good). In general, they travel for a long time, not coming back home for more than 10 months.

Such travelers have more financial capabilities than "travelling youth"; many of them have "safety net" in form of leased apartment or some other funds, so they can allow themselves more comfortable conditions of life. Rioters prefer to stay in one or another place for a longer time (1-4 months) as a mean for accommodation renting a flat, house or bungalow. For transportation, they use a rented car.

Major source of income during travel are capital resources formed in "former life" or constant remote work (not freelance). Average living budget during travel is USD 1500-2500 per month.

Remote work is a main source of finance for traveling; giving footprint on a travelling style. In particular, this conditions choice of life with comfortable workplace and high-speed Internet connection. So, many budgetary options are not looked at, initially.

Blogging for such travelers is possibility to share skills, life-hacks. Self-presenting function of such authors is presented is rather weakly than, of young travelers. Moreover, maintaining blog rioters consider as a tool (one of) to earn money adjusting affiliated payments from external sites on basis of partnership agreements or by placement of direct ad.

As a main advantage of life style in travelling representatives of said group name social freedom, lack of restrictions associated with working mode, duties, deadlines, etc.; and as consequence – lack of stress. Second important advantage is possibility to "liberate mind" re-think certain issues, review their principles, behavior, etc. Moreover, there is named is possibility to try exotic and extreme types of activity, i.e. diving with sharks, bungee jumps over waterfall, night safari, etc.

Of disadvantages – they name gradual reduction of self-discipline, free day regime does not promote for time planning, regularity of some exercises (morning jogging, exercise, self-education, etc.).

**Group № 3. "Family travelers"** - 20% of studied travel-bloggers. This group includes bloggers traveling with family. Their age boundaries, in general, do not fall lower than 30 years. Among studied by us bloggers only 4 were younger by age. Often these are married couples with children.

Travelers of this group choose "long" routes stopping for 6-12 months at a certain place and traveling "short distances" to places nearby. Many of them travel "by wheels" in own trailer; although, this option is often chosen by pre- and retirement age travelers (over 50 years old). For such travelers, main motive is a wish to diversify their life, to try something new, to learn about culture, customs, cuisines of other countries. Rather rarely they try extreme types of activity.

Budget of "family travelers" is significantly higher than the youth one, but often is lesser than budget of rioters. In average for a family consisting of 2 adults and 1-2 children aged before 15 years spends USD 1000-2000 per month during travels. Income part is accumulated from capital resources (apartment lease, savings in bank, etc.), permanent remote job, temporary jobs at location (seasonal works on harvesting, tutoring local population, being a guide tour for countrymen, etc.).

Blog is used as a mean of communication with countrymen (as such travelers aimed at living abroad for many years abroad), possibility to share experience, discoveries, practical advice. As a source of income this is the group of authors where blogs are used more often. Authors knowingly promote their resources, adjust CEO-optimization, work on growth of blog popularity. This group has a largest percent of use of direct ad and partner payments. Often, on pages of blog paid consultancy services are being provided. However, as a main source of income blog is looked at rather rarely.

Among advantages of traveling life style named by family travelers – are freedom of travel, feeling of being “man of world”, lack of restrictive circumstances (work schedule, obligations, and etc.), stress, possibility to turn children to world values by practice, and not by notes in school books. However, as disadvantage they name lack of systematic education for children, restrictions for their socialization. Young married couples (including with small children) also name lack of support from elder generation, misunderstanding on part of their parents and other relatives of chosen life style.

**Group № 4. “Travelling workers”** - 8%. These are bloggers for whom life in travel is more work than a life style. They may include journalists writing on subject of tourism, flora, fauna, expeditions, studies, etc.; professional tour guides and travel-trainers who arrange tours or travels by order; esoteric coaches organizing retreats, vipassanas and other special tours.

In practice, it is impossible highlight reasons promoting for their start of life in travels. The same refers to sources of income of such authors. At this sense, this is the closest category of travelers.

Speaking about blogging of such “travelling workers”, it acts as a tool for promotion of professional skills, service ensuring on- and off-line traffic of potential customers.

**Group № 5. Others** – 2%. This category includes bloggers who knowingly restrict media-activity by narrow specialized subjects, i.e. gastronomy and culinary aspects, architecture, air-flights, and etc. So, it is not possible to give objective characteristic of such travelers’ life style.

#### 4. Conclusion

It should be noted, that mass travels of Russians have begun due to political events that caused break of the Union of Soviet Socialistic Republic and formation of independent state – the Russian Federation. For Soviet people travels (especially abroad) were almost inaccessible in practice. New social-economic and political conditions as well as globalization processes, transformation of international relationships, technology innovations and many other factors nowadays allow Russians to travel abroad, to learn about the world, to get acquainted with other cultures. However, until now long travels are perceived as something unusual, a headliner. People able to travel for more than a month and even a year, cause surprise, curiosity, partly even envy; thus, making their life style interesting and perceptive subject for study.

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## Cyclicality - Unavoidable Process in the Economic Evolution

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### Abstract

*In general, conditions of economic nature undergo changes; moderate expansions give often birth to inflation and it turn to recessions. Lately more and more economists have tried to approach a series of aspects concerned with the development of business cycle at macro-economic level, the relationship existing between business cycle at macro-economic level and business cycle specific to micro-economic one.*

*When identifying a business cycle special attention is given to the periods in which the economic activity declines. The phases of cyclic movement are mutually conditioned and prepare in time the premises which provide the economic activity with continuity, qualitative changes and progress.*

**Key words:** Cycle, cyclicality, fluctuations, productivity

**J.E.L. clasification:** M16, M21

### 1. Introduction

In time, economic activity does not have a uniform, linear evolution, but a fluctuant one. Therefore, distinction must be made between the following categories of fluctuations: (Negucioiu, 1996, p.208)

➤ *seasonal fluctuations* of economic activity which occur all along the same calendar year and are generated by natural or social causes. They have a high degree of predictability (they can be generated by the seasonal character of some activities which are being carried on in agriculture, in the field of building industry, tourism industry) and they can also be determined by a series of social circumstances (traditions, habits, religious holidays);

➤ *accidental fluctuations*, usually determined by a series of events and causes which cannot be foreseen in advance such as: natural cataclysms, diverse political and social events;

➤ *cyclic economic fluctuations (aggregates)*; these fluctuations are generated by internal economic causes of functioning of national economies and they occur with a certain regularity. Such fluctuations, with cyclic character, occurred significantly at the beginning of the 19<sup>th</sup> century, and the following conclusion has been drawn from their analysis that the alternation of business expansion and contraction periods, of the economic activity on the whole is being carried on with a certain regularity in time.

On the whole, the evolution of main economic phenomena is carried on under wave-like form having a cyclic character.

In the characterization of cyclicality, as a movement form of economic activity, it starts from the succession and repeatability in time of some economic estates (certain phases of cycle) which resemble in broad lines from one cycle to another. The phases of cyclic movement are mutually conditioned and prepare in time the premises which provide the economic activity with continuity, qualitative changes and progress. Therefore, economic theory has drawn the conclusion that cyclicality is the natural, normal form of evolution of the economic activity.

## 2. On Cyclicity

The literature provides a multitude of definitions of the concept of economic cycle.

Paul Samuelson defines the concept of business cycle "as an oscillation in the total national production, income and use (labor force)", which in the author's view lasts between two and ten years, being marked by „ a large extraction or contraction in the most sectors of economy". (Samuelson, 1992,p.551)

An important role in economic cycles is played as well by Joseph Schumpeter (his books *Die Theorie der Wirtschaftlichen Entwicklung* ; *Business Cycles*, who considers that an economic cycle consists of the phase of prosperity, phase of recession, phase of depression and phase of recovery.

Arthur Burns and Wesley Mitchell, in the study *Measuring Business Cycles* identify a few of the relevant characteristics of business cycle: (Burns, 1946, p.480)

➤ It is „ a type of fluctuation of the aggregated economic activity of a nation that organizes its activities in the main on the count of trading companies”;

➤ A business cycle consists in an expansion which „occurs at the same time in many economic activities” followed by a period of recession;

➤ The duration of a business cycle can be longer than a year, up to 10-12 years.

The literature provides more categories of economic cycles: long cycles, decennial cycles and short cycles.

➤ Long cycles have a period of evolution from 20-30 years up to 500 years; they include cycles of 100 years, cycles of 180 years, cycles of 500 years and Kondratieff cycles;

➤ Decennial cycles or also called Juglar after the name of the French economist concerned with the evolution of medium-term fluctuations;

➤ Short or Kitchin cycles, thus called after the name of the American economist who in the year 1923 highlighted them.

Kondratieff cycles identify a dominant ascending part of prosperity as well as a descendent one specific to the decline period of economic activity.

*Ascending phase* is characterized by preponderance of years of economic prosperity and relatively high growth rhythms of the national income, investments, production, sales, including sustained raise of the standard of living. According to Kondratieff, this phase is specific to the following periods: (Tacu, 1998, p.387)

\* 1779-1814, when: the industrial revolution is propagated from England towards other countries, constructions and agriculture are developed (England); investments in USA and Europe are encouraged, a moderate rate of interests is kept.

\* 1849-1873, when: a low rate of interests is kept; the first signs of economic boom in Germany are registered; remarkable discoveries and inventions (steel, chemicals) are made;

\* 1896-1920, innovations and inventions previously made, become widely exploitable; Taylor's and Fayol's ideas are getting spread (both in the USA and Europe); interests are kept relatively low and credit availabilities are registered; the unitary national state is getting formed in Romania, developing measures of national industry are adopted.

\* 1939-1971, at the beginning of this period a lower rate of economic growth is registered; in all capitalist countries the development of company structures of corporation type are encouraged; the reconstruction after the second world war takes place in Romania, by promoting centralized economy.

In *the descending phase* a slowdown of the rhythms of production growth takes place, including investments and incomes, while the persistence of some negative phenomena in economy (inflation, unemployment) are accentuated. The periods specific to this phase are mainly characterized by:

\* 1814-1849, real incomes and demand are gradually reduced; great financial speculations take place; attraction of bond papers in financial fluxes brings about an explosion of prices; economic decline is emphasized also by the material losses registered after the world wars and revolutions which took place all over the world; the revolution of 1848 takes place in Romania.

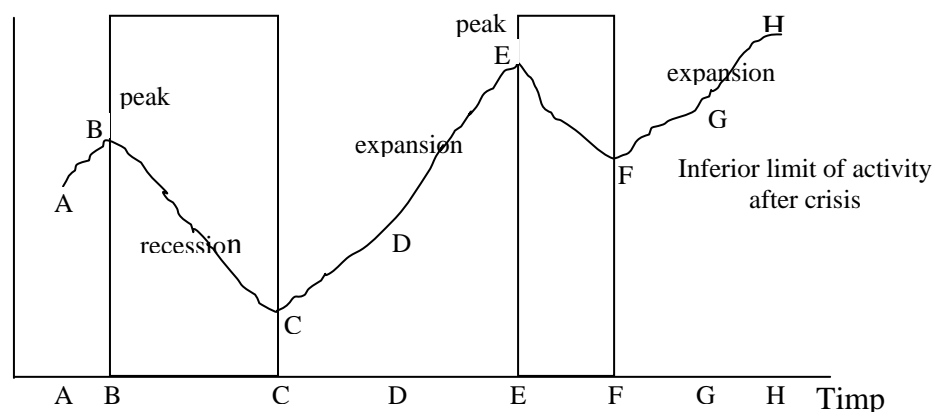
\* 1873-1896 is the period when unemployment reaches high rates both in Europe and in the USA; global demand is reduced; drops in the exchange house in Wien, London are registered; the first great strikes take place in Europe and USA.

\* 1920-1939, the beginning of recession is marked by the year 1920 when the highest level of interest rates is registered; in 1929 stock exchange market crashes in USA and in other western countries; massive bankruptcies are registered all over the world; credit price increases and global demand is drastically reduced.

\* 1971- 1997, is the period when fundamental changes take place in Central and East Europe; new economic regional groups are getting formed; as trading exchanges are getting diversified, developed countries take advantage significantly of comparative account; the transition in the East European countries requires supplementary investments and credits provided by the Occident; the number of member states increases within the European Union (15 member countries).

Decennial cycles are also known as Juglar type cycle, after the name of the French economist Clement Juglar who analyzed them. In the paper *Des crises commerciales et leur retour périodique en France, en Angleterre et aux États Unis* (1860) Clement Juglar identifies four phases of this cycle: prosperity, crisis, liquidation and recession. (Houston, 1995,p.22). The Juglar cycle is characterized by regularity (there is a period of 6-10 years), generality (it is found in the main activity branches and all capitalist countries) and great amplexness ( a relatively long period between the highest and the lowest level of activity is registered)

Figure no.1 Phases of decennial cycle



Source: P. Wonnacott, R. Wonnacott, *Economics (Third Edition)*, Mc. Graw – Hill, Inc, 1986, p.138

*Small or Kitchin cycles* are specific to the sector of constructions and farmers. These cycles do not show themselves by a real crisis but by braking expansion which influences the overall economy.

### 3. Economic Fluctuations

Economic market theories register fluctuations at the general level of economic activity.(Stiglitz, 2002, p.559)

Expansion (boom) is characterized by an increase in sales and prices and by a general growth of incomes. In such a more favorable economic conjuncture, businesses flourish and demand of goods becomes dynamic with perspectives of getting consolidated. A strong investment process takes place in economy together with the modernization of the existing capacities of production and generation of new ones, and the increase in demand of consumption goods is the determining factor for production growth and employment rate of labor force. The company accrues fast the volume of sales, products are well received on the market by clients, and the profit made is big enough to cover the investment expenses.

In this phase artificial stimulation of demand takes place in multiple ways, making obvious stock growth in view of bargain sales with greater gains. Aggregated demand in artificially stimulated growth, by enlargement of monetary mass and rotation speed of currency determines a slow but long term tendency of price rise. Monetary authorities adopt measures against inflationist phenomena in order to slow down the global demand, especially by rising interest rate fact that leads to slowdown of investments. Effective rate of profit in new investments tends to be smaller than the anticipated one, thus causing a slowdown of renewal and modernization of production capacities. Under these circumstances, economy enters a new phase, a new cycle. (Băeșu-Constantinescu, 2005, p.168)

To describe the moment when economy goes from the expansion phase to the recession one or the other way around, economists use notions of inferior peaks and points of hump. The local maximum of production is the peak whereas the local minimum of production is the inferior point of hump. Since the Second World War and up to present the medium duration of expansions has been of 56 months, the shortest expansion has been of 12 months, and the longest has been of 106 months. (Stiglitz, 2002, p.559).

A crisis is being defined as a temporary but often violent and profound break of an ascending evolution of economy, balance between production and consumption which follows after the maximum point of growth in a cycle. The so-called crisis is a sudden, disturbing phenomenon which in the company is felt by an abrupt fall of prices, by massive dismissions of labor force, by stock exchange crashes, and even by the bankruptcy of that company.

Depression is the period which comes after crisis and it is characterized by stagnation of economic activity, diminishing of production, price cutting, unemployment increase, a series of companies withdrawing their activities or slowing them down. The demand tends to decrease more and more as a consequence of the deceleration or reduction of investment process as well as because of diminution of incomes of some part of the population, this one being unable of dealing with price rise. A reduction in current production volume takes place under the incidence of diminution of orders correlated to tightening of monetary mass and significant decrease of profit rate, shares' flow. The companies that have born up the crisis and depression are adopting drastic measures of cost reduction such as renewal of active labor means based on some technical innovations.

Recommencement or reanimation of economic activity is closely related to the update of permanent capital and especially of its active part, fact that leads to the overcoming of the lowest point in the cycle in question. The company tries to improve its production capacity and find new ones. Thus, the demand for labor force increases and reduction of unemployment takes place.

Recovery or reanimation of activity turns gradually into a boom whose duration can differ depending on the conditions of every country.

Modern economies are being faced with cyclic fluctuations of businesses. The international crisis since the 1950s influenced the economies all over the world. The price rises of oil since 1973 had global consequences leading to the entry to recession of most industrialized economies. Statistical data show that in the period 1990-1991 countries such as USA, Canada and Great Britain have come across recession, while Japan has undergone an economic growth. After the year 1991, the economies of these three countries began to recover and register some economic growth as well, while Japan's economy has known a prolonged recession period until the year 1995. (Stiglitz, 2002, p.566).

#### **4. Conclusions**

Business cycles are specific to each economy, but their frequency, duration and amplitude differ significantly from one country to another. It is difficult to draw a comparison between business cycles registered over the time at international level (Stiglitz, 2002, p.566).

Increase in productivity is the fundamental element of economic growth and implicitly of the standard of living in a modern economy. In the moments when the economy goes through expansion and recession periods, PIB and occupancy of labor force fluctuate. To understand the

way business cycle influences productivity one should analyze the evolution of a company when the economy goes through a recession period. (Stiglitz, 2002, p.675)

It should be taken into consideration that companies do not have an identical evolution on the market; the evolution of distinct phases of business cycles can be in the following situations: on the ascending phase, the cyclic evolution of economic agents can be constant and in regard to the economic growth, and on the descending phase the cyclic evolution of economic agents can lead either to the company's recovery or to its bankruptcy. Consequently, in practical activity there is a relationship of dependence between the business cycle at macro-economic level and that at micro-economic level.

In the characterization of cyclicity as a form of movement of economic activity it starts from succession and repeatability in time of some phases of economy (certain phases of cycle) which resemble in broad lines from one cycle to another. The phases of cyclic movement are mutually conditioned and prepare in time the premises which provide the economic activity with continuity, qualitative changes and progress. Therefore, the economic theory has drawn the conclusion that cyclicity is a natural, normal form of evolution of the economic activity.

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## The Travel Agency Website – Factor for Business Success

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### Abstract

*E-commerce is a constant of contemporary life. The online purchase of tourist products is a complex and delicate process, and in this respect, the website has a decisive role. The way the website is designed, the information provided and the functional characteristics can make a difference between an ordinary and a successful travel agency. This article provides an analysis of the websites of the best known travel agencies in Brașov County. The evaluation highlights that, in terms of product, non-product and reservation features, the analyzed websites meet the desired characteristics. But as concerning payment, functionality and customer relationship management features, these elements are poorly highlighted. This assessment suggests the preference of travel agencies to address to local inhabitants, thus demonstrating their propensity on the outgoing component of the intermediary activities they carry out.*

**Key words:** tourism website, website evaluation, travel agency, e-commerce.

**J.E.L. classification:** M31, Z33.

### 1. Introduction

The proliferation of information technology occurred inevitably in the tourism industry, as well as in the entire global economy. In recent years, the Internet has become a new channel for the commercialization of products conventionally sold through traditional outlets (Hernández *et al*, 2009, p. 362). As a matter of fact purchasing online travel products has become the most successful business of e-commerce (Kim *et al*. 2007, p.591). In 2017, in Romania, according to the Ministry of Tourism records, there are in operation 2.653 licensed travel agencies (Romanian Ministry of Tourism, 2017). In Romania, travel agencies are required to have their own website, as a mandatory element in obtaining the tourism license (National Authority for Tourism, 2013).

The goal of this paper is to evaluate the travel agencies websites, being thus analyzed the best known travel agencies in Brașov County. For this purpose, the author proposed an overall assessment of these websites, based on the specific features and dimensions highlighted by Cao and Yang (2016). The analysis is concluded with a set of proposals meant to increase the professionalism in creating and managing travel agencies websites.

### 2. Literature review

The development of technology and the evolution of e-commerce activities have a strong relationship (Chu *et al*, 2007, p.156). E-commerce differs from traditional commerce for a number of reasons: the client is in front of a computer and its physical movement is no longer necessary, time and energy consumptions are low, the purchase is customized by numerous filters that can be accessed, and the performance security is currently very high.

While the Internet has become the primary information source for travel planning and certain channels such as online travel agencies dominate the online information space, today's consumers continue to utilize a variety of channels, both online and offline, to obtain rich and personally relevant information for upcoming trips (Xiang *et al*, 2015, p.246). By gathering and organizing

information, offline channels can provide scene experience, personal and professional information and advice to meet travelers' demands on a continuous basis (Kim *et al.*, 2007, p. 601). Owing to the rapid development of economy and the innovation of information technology, travelers' consumption demand has become more diverse and travel agencies need to develop continuously, as they cannot rely only on lowering the price to attract consumers (Long *et al.*, 2017, p.303).

Travel agencies and online travel agencies (OTAs) deliver travel-related products/services and provide travel-related information and various services to customers (Kim *et al.* 2007, p.592). OTAs especially, but nowadays also traditional tourism agencies, have online platforms that provide customers with information, tools and ways to plan, book and buy tourist services. The emergence of OTAs proposes a networked travel agency sales model and a more interactive communication that is convenient for tourists (Cao *et al.*, 2016, p.284). At first sight it may be argued that in comparison with the traditional agencies, OTAs have a certain handicap, since they do not have direct face-to-face communication and cannot provide customized information and travel services. Their main asset is, therefore, the website, which in case of meeting quality and creativity features, enables humanized, uncomplicated, secured and more customized services. Nevertheless, for the entire tourism distribution system, websites play an important role in providing tourism information, enabling customers to make reservations, fulfilling tourists' requirements, and meeting their expectations (Liao *et al.*, 2017, p.262).

The website core functions are considered the following (Chu *et al.*, 2007, p.156):

- transaction incubation – which furnish participants and the host with basic information processing capabilities;
- transaction negotiation – which facilitate the negotiation of a commercial transaction;
- transaction formation – in which transactions are finalized, participants are authenticated for payment, and digital products are sent to the purchaser;
- transaction management - functions which enable the online coordination of multiple interrelated activities. They can be used to assist in the management of online business processes, enabling the integration, consolidation, optimization, and control of e-business processes.

The most notable characteristics which substantiate the rapid growth of e-commerce in tourism are security, ease of use, finding low prices, accessibility, responsiveness, speed, content quality, personalization, design and presentation, booking flexibility, ability to book all travel services in one transaction, interactivity, sorting options, playfulness and technology integration (Susser *et al.*, 2006, p. 406; Kim *et al.* 2007, pp.592-595; Hernández *et al.*, 2009, p. 364; Chiou *et al.*, 2010, p. 285).

Website content is one of the main factors influencing the visit to a tourist destination. When choosing a destination, visitors get detailed information such as address, pictures, a map, facilities, reference rates and reviews (Cao *et al.*, 2016, p.283). Because of their role in providing information, tourism websites are becoming increasingly important and they are the most frequently visited online information source by travelers (Chiou *et al.*, 2011, p.1473). At the same time, it was acknowledged that more websites that allow online booking have emerged, diminishing the role of traditional travel agencies (Vijoli, *et al.*, 2016, p. 154).

Cao and Yang (2016, p.284) analyzed e-commerce activities in tourism, i.e. attraction websites (AWs), official tourism websites (OTWs), and online travel agents (OTAs), enhancing thus the websites' role to reflect the real situation at a destination. Starting from the conclusions formulated by Chiou *et al.* (2011, p.1465) who analyzed tourism websites' five main features (place, product, price, promotion and customer relationship), and by Ye *et al.* (2016, p.13) who assessed four websites' performance attributes (customer relationship, information, security and function), Cao *et al.* (2016, p. 286) completed a set of features comprising six dimensions used for the analysis of e-commerce adoption on tourism websites (product information, non-product information, reservations, payment, functionality, and customer relationship marketing). Travel agencies should appreciate consumers' perceptions of web functionality, web content, and information security, because this information significantly influences online tourism services continuance (Liao *et al.*, 2017, p.262). Moreover, the attributes should be improved by providers to enhance overall customer satisfaction with travel agencies websites in order to secure their strategic development (Ye *et al.*, 2016, p.14).

### 3. Research methodology

The features proposed by Cao *et al.* (2016, p. 286) to evaluate travel agencies websites comprise six dimensions:

- a) *Product information.* Comprehensive attributes of the information provided regarding services, help, safety, and lodging options;
- b) *Non-product information.* The informational content present on the websites in terms of both variety and suitability to tourists' needs;
- c) *Reservations.* Options involving online transactions, bookings, and services;
- d) *Payment.* The payment method of choice;
- e) *Functionality.* Accessibility of desired information on the website, links to other tourism websites, and ability to execute the users' commands;
- f) *Customer Relationship Marketing.* Through constant conversations with tourists, and capturing the tourist preferences and behavior on the website, managers can acquire more insights into the demands and preferences of tourists and provide adequate means to retain customer loyalty and increase sales and opportunities to up-sell to tourists.

The evaluation of travel agencies websites was conducted among the best-known tourism intermediaries from Braşov County and the sample included the following eight travel agencies: Kron-Tour Lufthansa City Centre (KT), Viotop Travel (VT), Micomis Travel & Tours (MTT), Paralela 45 (P45), J'Info Tours (JIT), Smart Tours (ST), Eximtur (E) and TUI Travel Centre (TTC).

### 4. Results

The travel agencies websites were consulted and the results of the analysis are presented in table no.1.

Table no 1. The analysis of travel agencies websites in Braşov County

Dimension (Features)	KT	VT	MTT	P45	JIT	ST	E	TTC	Percentage of website features (%)
<b>1. Product information</b>									
Description of product and services	YES	YES	YES	YES	YES	YES	YES	YES	100
Rates/fares	YES	YES	YES	YES	YES	YES	YES	YES	100
Photo gallery	YES	YES	YES	YES	YES	YES	YES	YES	100
Virtual tours	NO	YES	NO	YES	NO	NO	NO	NO	25
Interactivity	YES	YES	YES	YES	YES	YES	YES	YES	100
Privacy and security	YES	YES	YES	YES	YES	YES	YES	YES	100
FAQs	NO	YES	NO	NO	YES	NO	NO	NO	25
<b>2. Non-product information</b>									
Weather/climate	NO	NO	NO	YES	NO	NO	YES	NO	25
Travel directions	NO	NO	NO	NO	NO	NO	YES	NO	12,5
Local transport information	NO	NO	NO	NO	NO	NO	YES	NO	12,5
Where to stay	YES	YES	YES	YES	YES	YES	YES	YES	100
Safety	YES	YES	YES	YES	YES	YES	YES	YES	100
News	YES	YES	YES	YES	YES	YES	YES	YES	100
Travel tips	YES	YES	NO	YES	YES	YES	YES	YES	87,5
Contact details	YES	YES	YES	YES	YES	YES	YES	YES	100
Multiple languages	YES	NO	YES	NO	YES	NO	NO	NO	37,5
Visa Information	NO	NO	NO	NO	NO	NO	NO	NO	0
<b>3. Reservations</b>									



Checking availability	YES	YES	YES	YES	YES	YES	YES	YES	100
Making online reservations	YES	YES	YES	YES	YES	YES	YES	YES	100
Tracking reservations	YES	YES	YES	YES	YES	YES	YES	YES	100
Cancelling reservations	YES	YES	YES	YES	YES	YES	YES	YES	100
Cancellation policy	YES	YES	YES	YES	YES	YES	YES	YES	100
Amending reservations	YES	YES	YES	YES	YES	YES	YES	YES	100
Creating customer accounts	NO	YES	YES	YES	YES	YES	YES	YES	87,5
<b>4. Payment</b>									
Credit cards	NO	NO	NO	NO	YES	NO	YES	YES	37,5
Debit cards	NO	NO	NO	NO	YES	NO	YES	YES	37,5
Electronic cash	NO	NO	NO	NO	YES	NO	NO	YES	25
Virtual credit cards	NO	NO	NO	NO	NO	NO	NO	NO	0
Currency converter	NO	NO	NO	NO	NO	NO	YES	NO	12,5
<b>5. Functionality</b>									
Reciprocal links	NO	YES	YES	NO	YES	NO	NO	YES	50
Blog/Chat	NO	NO	NO	NO	NO	NO	NO	YES	12,5
Search function	NO	NO	NO	NO	NO	NO	YES	YES	25
Site map	NO	NO	NO	NO	NO	NO	NO	NO	0
Maps	YES	YES	NO	YES	YES	NO	NO	YES	62,5
Games	NO	NO	NO	NO	NO	NO	NO	NO	0
Free downloads	NO	NO	NO	YES	NO	NO	NO	NO	12,5
<b>6. Customer relationship management (CRM)</b>									
Community/Forum	NO	NO	NO	NO	NO	NO	NO	NO	0
E-mail address	YES	YES	YES	YES	YES	YES	YES	YES	100
Feedback	NO	NO	NO	NO	NO	NO	NO	NO	0
Promotions and special offers	YES	YES	YES	YES	YES	YES	YES	YES	100
Email newsletter	NO	YES	YES	YES	YES	YES	YES	YES	87,5
Call-back services	YES	YES	YES	YES	YES	YES	YES	YES	100
Customer surveys	NO	NO	NO	NO	NO	NO	NO	NO	0
Comment box	NO	NO	NO	YES	NO	NO	NO	NO	12,5
Travel customization	NO	NO	NO	NO	NO	NO	NO	NO	0
Online consulting	NO	NO	NO	YES	NO	NO	YES	YES	37,5
Complaint handling	NO	NO	NO	YES	NO	NO	YES	NO	25

Source: Author's own research

The analysis highlight that the assessed websites are focusing in presenting product, non-product, and reservation elements, which in essence, are the main data requested by tourists when searching travel services and products. A special attention should be granted to non-product features, i.e. weather, travel directions, local transport information, multiple languages and visa information, elements that emphasize the fact that, in the vast majority, the travel agencies address mainly to local inhabitants, thus reflecting their focus on outgoing travel activities and Romanian potential tourists. Being primarily interested in selling tourist services, the reservation feature is very well represented. At the same time, it is worth mentioning the obvious weaknesses of payment features, suggesting the lack of confidence in electronic payment methods. Functionality features are also poorly presented within the assessed websites. As for the CRM features, elements like community/forum, feedback, customer surveys, travel customization, online consulting or complaint handling, issues important for modern and experimented visitors are poorly highlighted, likewise.

## 5. Conclusions

The efficiency and relevance of the content and functionality of the website are essential attributes for a travel agency's development. Managing continuous improvement and readjustment to permanently changes in tourists' preferences are, to an increasing extent, priority activities. The website represents an increasingly important mean not only to collect travel information, but also to buy tourist products. Companies in the tourism field should be aware of the need to approach the customer and to build a long-term relation with him (Chițu, *et al.*, 2013, p.101). On this line, the website could greatly influence consumer loyalty.

Travel agencies' managers who strive to differentiate themselves from competitors should consider the website as an important tool in their company's overall marketing and management strategy. As a result, the customers may develop their loyalty and tend to use online tourism services time after time again (Liao *et al.*, 2017). The possibilities to approach the websites' management are unlimited, the lack of creativity being the main cause of failures (Stăncioiu, 2004).

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## The Services Identity and Their Management in the Actual Economic Context

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### Abstract

*This article is an introduction to the unique characteristics of services and to their overall management within a dynamic context. The article highlights the economic and social significance of services, the differences between services and goods and the importance of management services.*

**Key words:** service, good-service duality, services management

**J.E.L. classification:** M11; O14; O32.

### 1. Introduction

Constituting themselves as an integrating part of modern economy, the services have a major contribution also on labor force occupation, and the technological progress, the amplitude of the labor social division, the increasing in the services demand, both of individual consumers as well as of companies, represents the arguments that present the base of services diversification.

### 2. The services concept and the main requests that a service shall fulfill

The increasing trend of the importance granted to the service sectors is clear if we observe how two thirds from the gross domestic product of the great economic powers, like the United States and the Scandinavian countries derives from services. (Normann, R., 2002)

As we know, the economic activity of a society determines human life quality and their living standard. Presently there are talks about postindustrial society, where the modern economies are dominated by a large rate of labor force occupation in the services sector. This aspect is comprised in Table 1.

*Table no. 1. The percentage of labor force occupation in the services sector for the first 10 postindustrial economies*

Country	1985	1995	2005
United States	70.0	74.1	78.6
Australia	68.4	73.1	75.8
Lowlands	68.3	73.4	76.5
Sweden	66.1	71.5	76.3
United Kingdom	64.1	71.4	77.0
France	61.4	70.0	74.8
Japan	57.0	61.4	68.6

*Source:* Adapted after Fitzsimmons, James A.; Fitzsimmons, Mona J., "Service Management – Operations, Strategy, Information Technology, 2011, pag. 3

The researchers from the economic domain did not reach to a unanimous accepted definition of the services due to the multitude of the useful effects produced by these, but also of the way in which the services are perceived by them. By means of the definitions from the specialty literature, either the services characteristics are highlighted (Grônroos, Ch, 1990) or the accent is on the utility, advantages obtained after performing them (Kotler, Ph. 1983).

Nevertheless, we may affirm that services are economic activities whose result is immaterial, that ad some utility as a result of performing them. Services are „economic activities offered by one part to another, most frequently employing on the performance basis in order to bring the destined one the desired results or in objects or assets for which the buyers hold responsibilities. In exchange for their money, time and effort, the client service expects to obtain a value from the access to goods, professional competencies, facilities, relations and systems, but they are not the owners of any physical element involved.”(Lovelock, Ch.; Wright, L., 2007)

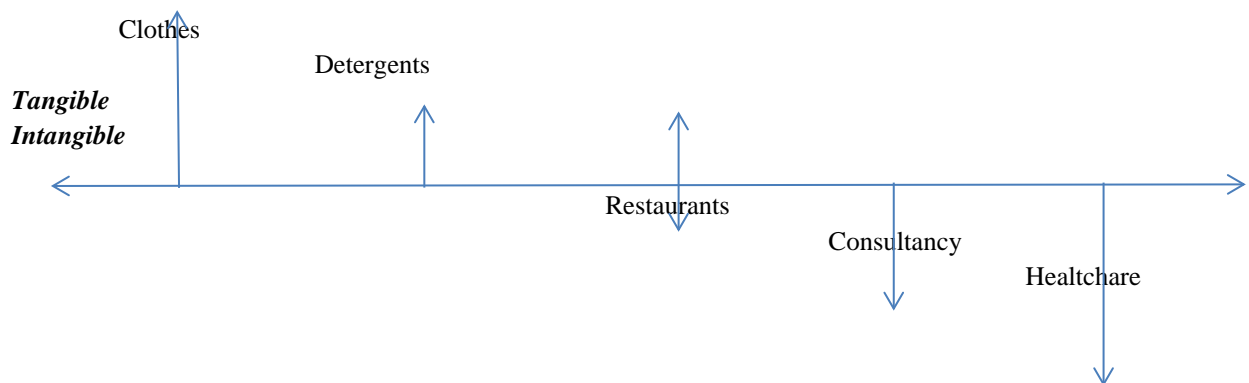
The service is also „an experience perishable in time, intangible, and realized by a consumer acting in the co-producer’s role”. (Fitzsimmons, J. A.; Fitzsimmons, M. J, 2011)

There is a certain confusion between goods and services. Therefore I found useful and necessary to approach goods duality versus services.

Goods duality versus services is given by the percentage between the tangible and intangible product’s component. The prevailing tangible component gives to the product’s buyer „the physical possession”. Therefore, the acquisition of a laptop will give to the buyer the ownership quality, whereas the transportation services acquisitioned for their utility will not make the beneficiary the owner of the transportation means that perform the service desired by the client.

In Figure no. 1 the product’s distinction in function of their dominant component is highlighted.

Figure no.1. The product’s distinction in function of their tangibility/intangibility component



Source: Militaru, Gh, “Services Management”, Editura C.H. Beck, București, 2010, pag. 6

If we look at the services from their performing point of view, those, unlike the goods, involve the client in their production process, the client being a component part of the services performing system.

Also, in practice, activities may be classified on a scale that starts with the service in pure status, where the service performance results materialize only in an intangible result and a pure good, meaning that no intangible service accompanies the good in cause.(Ionciă, M, 2003) Therefore, the duality relationship between goods and services is spotlighted.

### 3. The necessity of understanding the services management concept

The service represents a process, and the management is the ability to direction the social processes. The organizations that perform the services are more sensitive to their management qualities than any other type of organization. An important part of the management is to identify the critical factors that make so particular the functioning of services systems and tracing of the

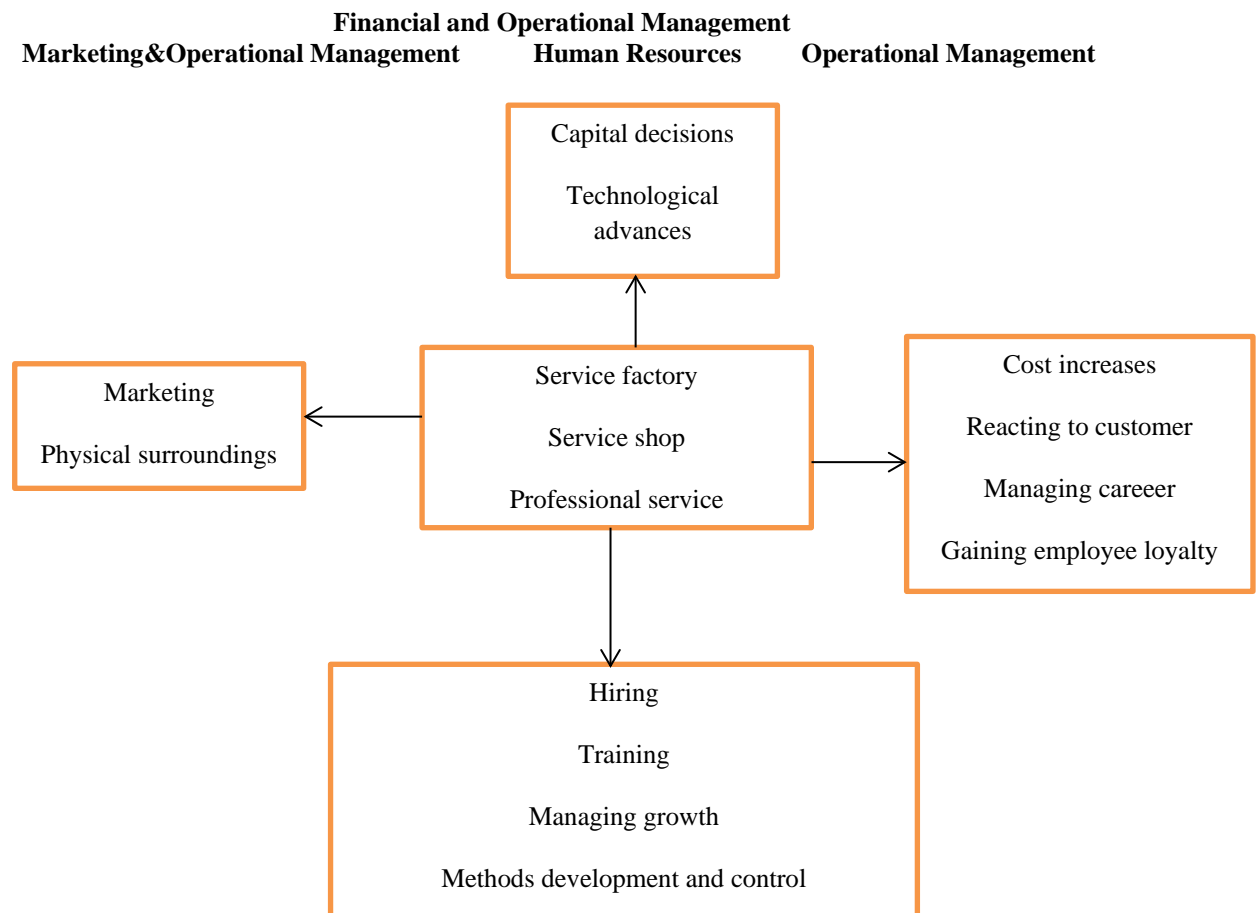
most powerful modalities of control and maintenance of these attributes, in an extremely concrete manner.

As a result of the globalization process, but also due to the role and place that the sector of services is occupying nowadays, the service management approach became extremely important in the context of the regional and international increased competition.

In the concept of services management defining, an important role is held by the service management matrix (Fig. No.2) that highlights the importance of integrating all functional management activities in the overview managerial strategy of the service performing organization.

The matrix depicts the correlation between the organization's functions and may represent a model for the managers, in order to take the best strategic decision taking into account the performing and delivering services systems.

Figure no. 2. Service management matrix



Source: after Nankervis, Alan, "Managing services", Cambridge University Press, 2005, pag. 19

An important services domain management guide has been elaborated, which comprises the following elements: (Nankervis, A., 2005)

- Identifying a target market segment;
- Developing of a service concept that shall serve it;
- Identifying of an operational strategy that shall support the respectively service;
- Projecting a system for performing that service.

In an obvious manner, all this elements are sustained by all the organization functions: finance-accounting, commercial, human resources, production, research and development.

Therefore, the services management represents the process and relations by which means these methods, techniques and management services that lead to an increase in the activity of the service performing companies are being identified.

The services are exposed to the pressure of all external factors like the political, social, economic, technology ones, reason for which the services management must efficiently face all these factors, therefore ensuring the survival as well as the performance of the organization performing the services. All of these are just a part of the arguments at the base of understanding and appreciating the services management role.

#### **4. Conclusions**

The services importance in the modern economies is set off by the place they occupy within the national economic frame, by the fact that are constituted in a different sector. The services have a major contribution in the labor force occupation. The technological progress, the amplification of the social labor division represent the arguments that are at the basis of the services diversification.

Services are economic activities whose result is immaterial, that bring a plus of utility following their performance. The duality between goods and services is set off.

As a result of the globalization, but also due to the role and place presently occupied by the services sectors, the services management approach became extremely important in the context of regional and international increasing in competition.

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# Strategic Planning Method Used in Enterprise Management

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## Abstract

*For pilotage organization's management system it is necessary to predict a wide range of future events that influence the success of a business.*

*Function of prediction, one of the most important functions of management, received wide development in recent years due to the behavior of organizations need allowing them to adapt rapidly to changes in the internal and external.*

*The forecast underpinning the planning, programming and control management systems, is an essential component of strategic planning.*

*Planning at company level is a formal process which creates the willful representation of the future state of the company, stating the means and methods necessary to materialize the desired state.*

**Key words:** method, planning, time series, variation.

**J.E.L. classification:** C22, M19.

## 1. Introduction

Forecast of changes in economic processes on short, medium and long term can be a variety of methods, which enable a determination of how to address specific market phenomena as their specificity and the degree pursued precision forecasting.

Prediction methods can be grouped into two categories: qualitative methods and quantitative methods.

Quantitative forecasting models are based on statistical tools provided by statistics, mathematical science or econometrics and qualitative methods are supported by judgments and opinions of specialists, of functional services in the enterprise or the combination of these two levels.

In practice, opting frequently, for a combination of methods, especially if the forecast turns out to be a decisive factor for the enterprise.

The first group of methods is based on previous data group and on the use of specific methods for calculating the forecast, but it is not possible to include the qualitative, such as, for example, the influence of a new advertising campaign (Oprescu et. al., 2003, p. 57).

Quantitative methods based on time series are frequently used for the programming and the control of the production and inventory.

The second group of methods is based, in particular, a careful analysis of the opinions expressed.

Qualitative forecasting methods are less analytical, are commonly used in long-term strategic planning and decisions structural units of the company.

## 2. The method of time series decomposable

The method of time series decomposable involves determining separately of the four components that accompany a time series and their isolated forecast as follows (Rațiu-Suciu et. al., 2009, p.68):

- trend;
- seasonal variation (S);
- cycling variation (C);
- random variation (R);

The conclusion reached in the study of the method was that these components can express both a forecast ( $P_t$ ) for the next stage (t), and the fractions of the phases as a product of terms,

$$P_t = T_t \times C_t \times S_t \times R_t$$

**The trend ( $T_t$ )** expresses the general tendency of the phenomenon or indicator  $P_t$ , developed over a long period of time.

It may be revealed as the only series of which finite differences are constant or as a key component that can be isolated from other components for time series decomposable.

Identifying trends can be made by plotting scale at terms of the series or analytical by trying multiple functions among which we choose one with a minimum standard deviation (Collins *et. al.*, 2012, p. 117).

**The cyclical component ( $C_t$ )** in the time series is manifested by relatively large oscillations of the indicator or analyzed phenomenon, and the cycle time can be seen from the perspective of several years.

These oscillations are generated by alternating periods of growth to periods of stagnation and economic recession and other general causes (political activity) or regional (union action, currency market fluctuations, etc.).

**The seasonal component ( $S_t$ )** occurs as a result of seasonal influences of the year. In contrast to cyclical component this has an oscillation frequency (half, quarter, week, month).

Sometimes seasonal variation is caused by the seasons, the oscillating behavior of consumers on the market for a particular product or customs, traditions or social phenomena (religious holidays, school holidays).

**The random component ( $R_t$ )** occurs without special cause to determine causal and predictable manner or without the possibility of being awarded a pattern of systematic repetition.

### 3. Methodological example of forecast for decomposable series

Table no. 1 render annual or quarterly sales of a consumer electronics company relating to a period of five years.

Table no.1 Sales development of electronic products

The year	Sales volume			
	Quarter I	Quarter II	Quarter III	Quarter IV
2011	0,9	1,5	0,9	3
2012	1,2	1,2	0,9	1,8
2013	1,8	3,6	2,6	5,1
2014	1,8	1,5	2,2	4,8
2015	2,1	1,9	0,9	2,5

Source: (Rațiu – Suciu et. al., 2009, p.27)

Required to forecast sales in the 6th year division by quarters.

#### Solution:

After collecting and adjusting the data, and the dynamic graphical representation of the series following the steps:

#### E1: Underlying trend

Usually, the trend is set about graphics. From Figure 1 it is noted that a straight line upward trend plays suggestive sales development in this case.



The straight line formula used will be:

$$T_t = a + bt$$

Next calculate the parameters a and b of the straight line using normal equations system.

Examination of the structure of the normal equations system it is therefore necessary to assemble Table no. 2.

Table no.2 Preparing numerical data necessary to solve system

$t_i$	$x_i$	$t_i^2$	$x_i t_i$
1	0,9	1	0,9
2	1,5	4	3
3	0,9	9	2,7
4	3,0	16	12
5	1,2	25	6
6	1,2	36	7,2
7	0,9	49	6,3
8	1,8	64	14,4
9	1,8	81	16,2
10	3,6	100	36
11	2,6	121	28,6
12	5,1	144	61,2
13	1,8	169	23,4
14	1,5	196	21
15	2,2	225	33
16	4,8	256	76,8
17	2,1	289	35,7
18	1,9	324	34,2
19	0,9	361	17,1
20	2,5	400	50
$\sum t_i = 210$	$\sum X_i = 42,2$	$\sum t_i^2 = 2870$	$\sum X_i t_i = 485,7$

Source: (Adapted by Rațiu – Suciu et. al., 2009, p.22)

Replace the data located on the last line of the table no. 2 in the following system:

$$20a + 210b = 42,2$$

$$210a + 2870b = 485,7$$

This system is solved with respect to a and b, yielding a = 1.45; b = 0.063.

Trend function will be:

$$T_t = 1,45 + 0,063 t$$

Next will replace t with values in the first column of Table 2, leading the trend for each month separately.

$$T_1 = 1,45 + 0,063 * 1 = 1,513$$

$$T_2 = 1,45 + 0,063 * 2 = 1,576$$

$$T_3 = 1,45 + 0,063 * 3 = 1,639$$

$$T_4 = 1,45 + 0,063 * 4 = 1,702$$

.

.

$$T_{20} = 1,45 + 0,063 * 20 = 2,71$$

**E2: Calculation cycling variation**

The graph in Figure 1 it is seen that in the case of the numerical example there is a cyclic variation around the trend.

The index with which to be taken into consideration the cyclic variation will be expressed as a proportion relative to the trend.

Therefore will use the moving average of 4th order designed to eliminate seasonal influences, such as suggested the sales curve in the figure are present and in this case (Ciobănică, 2011, p. 44).

Index measurements of cyclical variation involves the following steps:

**P<sub>1</sub>:** Calculate simple moving average ( $MM_{ti}$ , where  $i = 1, \dots, 17$ )

$$MM_1 = \frac{x_1 + x_2 + x_3 + x_4}{4} = \frac{0,9 + 1,5 + 0,9 + 3}{4} = 1,575$$

$$MM_2 = \frac{x_2 + x_3 + x_4 + x_5}{4} = \frac{1,5 + 0,9 + 3 + 1,2}{4} = 1,650$$

$$MM_3 = \frac{x_3 + x_4 + x_5 + x_6}{4} = \frac{0,9 + 3 + 1,2 + 1,2}{4} = 1,575$$

.....

$$MM_{17} = \frac{x_{17} + x_{18} + x_{19} + x_{20}}{4} = \frac{2,1 + 1,9 + 0,9 + 2,5}{4} = 1,85$$

In Table no. 3 shows simple moving averages  $MM_{ti}$  calculated for the entire analyzed period.

**P<sub>2</sub>:** Calculate moving averages centered ( $MMC_{ti}$ ,  $i = 1, \dots, 16$ )

$$MMC_t = \frac{MM_t + MM_{t+1}}{2}, \text{ where:}$$

$MM_t$  = moving average in the first quarter  $t$ ;

$MM_{t+1}$  = moving average in the next quarter.

$$MMC_1 = \frac{MM_1 + MM_2}{2} = \frac{1,575 + 1,650}{2} = 1,6125$$

$$MMC_2 = \frac{MM_2 + MM_3}{2} = \frac{1,650 + 1,575}{2} = 1,6125$$

$$MMC_3 = \frac{MM_3 + MM_4}{2} = \frac{1,575 + 1,575}{2} = 1,575$$

.....

$$MMC_{16} = \frac{MM_{16} + MM_{17}}{2} = \frac{2,425 + 1,85}{2} = 2,1375$$

In Table no. 3 shows centered moving averages values  $MMC_{ti}$  calculated for the entire analyzed period.

**P<sub>3</sub>:** Cyclic variation index is calculated using the formula:

$$C_{ti} = \frac{MMC_i}{T_i}, \quad i = 1, \dots, 16$$

$$C_1 = \frac{MMC_1}{T_1} = \frac{1,6125}{1,513} = 1,065$$

$$C_2 = \frac{MMC_2}{T_2} = \frac{1,6125}{1,576} = 1,023$$

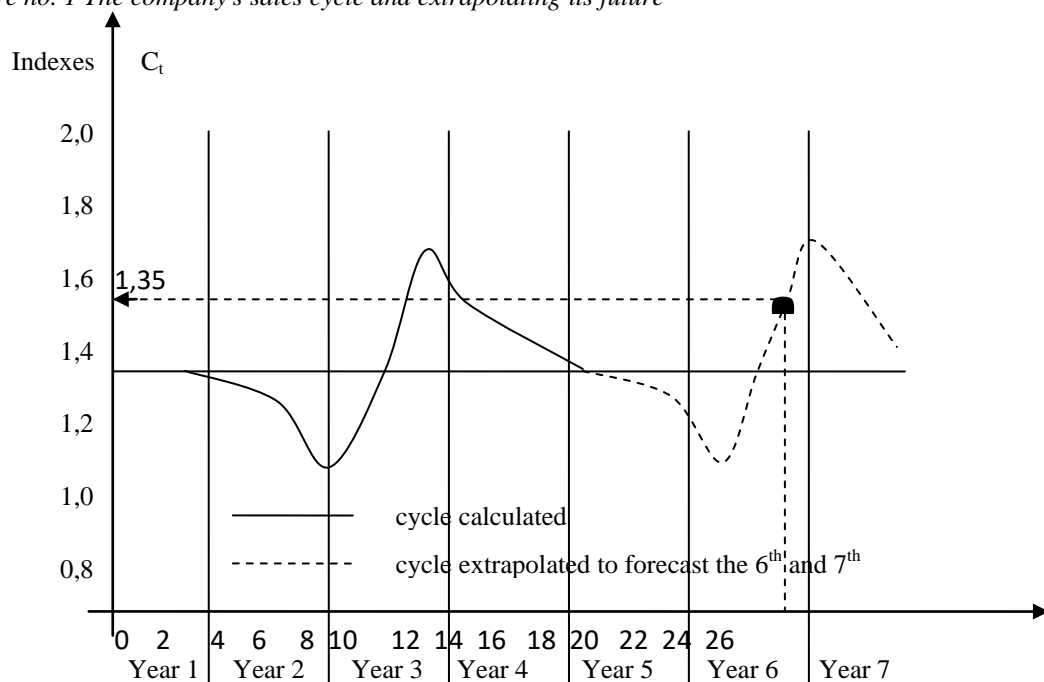
$$C_3 = \frac{MMC_3}{T_3} = \frac{1,575}{1,639} = 0,96$$

.....

$$C_{16} = \frac{MMC_{16}}{T_{16}} = \frac{1,6125}{1,621} = 1,002$$

Figure 1 shows the indexes cycloidal curve ( $C_t$ ) from Table 3.

Figure no. 1 The company's sales cycle and extrapolating its future



In Table 3 shows the variation of the values index cyclicaly calculated for the entire analysed period.

Table no. 3 Table of cyclically variation

Years	Quarter	Sales $x_i$	$MM_{ii}$	$MMC_{ii}$	$T_{ii}$	$C_{ii}$
1	1	0,9				
	2	1,5	1,575			
	3	0,9	1,650	1,6125	1,639	0,98
	4	3,0	1,575	1,6125	1,702	0,95
2	5	1,2	1,575	1,575	1,765	0,89
	6	1,2	1,275	1,425	1,828	0,78
	7	0,9	1,425	1,350	1,891	0,71
	8	1,8	2,025	1,7250	1,954	0,88
3	9	1,8	2,450	1,2375	2,017	0,61
	10	3,6	3,275	2,8625	2,08	1,38
	11	2,6	3,275	3,2750	2,143	1,53
	12	5,1	2,750	3,0125	2,206	1,37
	13	1,8	2,650	2,7	2,269	1,19

4	14	1,5	2,575	2,6125	2,332	1,12
	15	2,2	2,650	2,5875	2,395	1,08
	16	4,8	2,750	2,7	2,458	1,09
5	17	2,1	2,425	2,5875	2,521	1,02
	18	1,9	1,85	2,1375	2,584	0,83
	19	0,9				
	20	2,5				

Source: (Adapted by Rațiu – Suciu et. al., 2009, p.24)

**E3:** Seasonal component index calculatuiin  $S_t$

The formula which allows to determine this index is:

$$S_t = \frac{X_i}{MMC_{ii}} = \frac{T \times C \times S \times R}{T \times C} = S \times R$$

Index measurements of cyclical variation involves the following steps:

**P1:** Calculate values ( $S \times R$ ) for the analysed period:

The evolution of seasonal component can be seen in Table 4.

$$S_1 \times R_1 = \frac{X_1}{MMC_1} = \frac{0,9}{1,6125} = 0,5581$$

$$S_2 \times R_2 = \frac{X_2}{MMC_2} = \frac{3}{1,6125} = 1,8604$$

Table no. 4 Values ( $S \times R$ ) associated to the company sales

Year	Quarter	Sales	MMC <sub>ii</sub>	( $S \times R$ ) <sub>i</sub>	Year	Quarter	Sales	MMC <sub>ii</sub>	( $S \times R$ ) <sub>i</sub>
	$t_i$	$x_i$				$t_i$	$x_i$		
1	1	0,9			4	11	2,6	2,143	1,2132
	2	1,5				12	5,1	2,206	2,3118
	3	0,9	1,6125	0,5581		13	1,8	2,269	0,7933
	4	3,0	1,6125	1,8604		14	1,5	2,332	0,6432
2	5	1,2	1,575	0,7619	5	15	2,2	2,395	0,9185
	6	1,2	1,425	0,8421		16	4,8	2,458	1,9528
	7	0,9	1,350	0,6666		17	2,1	2,521	0,833
	8	1,8	1,7250	1,0434		18	1,9	2,584	0,7352
3	9	1,8	1,2375	1,4545	19	0,9			

Source: (Adapted by Rațiu – Suciu et. al., 2009, p.32)

**P2:** Determine indications of seasonal variation own professed values (S) as arithmetic averages ( $S \times R$ ), grouped by quarters for the five years analyzed (rațiu-Suciu et. al., 2009, p. Seasonal indexes (S) for dynamic sales series is shown in Table 5

**E4:** Calculation of the random component index R

The formula which allows to determine this index is:

$$\frac{S \times R}{S} = R$$

The values of the random component obtained by applying this formula are shown in Table 5.

Table no. 5 Table of random variation

Year	Quarter	$(S \times R)_i$	$S_i$	$R_i$	Year	Quarter	$(S \times R)_i$	$S_i$	$R_i$
1	1				4	11	1,2132	0,8391	1,4458
	2					12	2,3118	1,7921	1,2899
	3	0,5581	0,8391	0,6651		13	0,7933	0,9606	0,8258
	4	1,8604	1,7921	1,0381		14	0,6432	0,8695	0,7397
2	5	0,7619	0,9606	0,7931	5	15	0,9185	0,8391	1,0946
	6	0,8421	0,8695	0,9684		16	1,9528	1,7921	1,0896
	7	0,6666	0,8391	0,7944		17	0,833	0,9606	0,8671
	8	1,0434	1,7921	0,5822		18	0,7352	0,8695	0,8455
3	9	1,4545	0,9606	1,5141	5	19			
	10	1,2576	0,8695	1,4463		20			

(Adapted by Rațiu – Suciu et. al., 2009, p.32)

At the moment it has all the data needed to calculate forecast sales of electronic products in the 6th year, global and quarterly.

This step is performed in two stages:

I. First shall be made calculation of quarterly forecast because they are independent variable function trend.

Serial number of the 6th year will be:

Such, the trend  $Q_t$  will be:

- for quarter 21nd, first quarter, 6th year:  $Q_{21} = 1,45 + 0,063 \times 21 = 2,773$
- for quarter 22nd, 2th quarter, 6th year:  $Q_{22} = 1,45 + 0,063 \times 22 = 2,836$
- for quarter 23nd, 3th quarter, 6th year:  $Q_{23} = 1,45 + 0,063 \times 23 = 2,899$
- for quarter 24nd, 4th quarter, 6th year:  $Q_{24} = 1,45 + 0,063 \times 24 = 2,962$

The sum of the quarterly values calculated above is trend for the 6th year, as follows:

$$Q_6 = Q_{21} + Q_{22} + Q_{23} + Q_{24}$$

$$Q_6 = 2,773 + 2,836 + 2,899 + 2,962 = 11,47 \text{ thousands electronics}$$

II. Trend values for quarters  $Q_{21} - Q_{24}$  multiplied by the corresponding indices cyclically  $C_t$ , seasonal variation ( $S_t$ ) and random variation ( $R_t$ ), according to formula:

$$P_t = T_t \times C_t \times S_t \times R_t$$

Following these explanations, using the formula above results:

- $P_{21} = 2,773 \times 0,68 \times 0,9607 \times 0,7944 = 1,4390$
- $P_{22} = 2,836 \times 0,86 \times 0,8695 \times 0,5822 = 1,2346$
- $P_{23} = 2,899 \times 1,09 \times 0,8391 \times 1,5141 = 4,0146$
- $P_{24} = 2,962 \times 1,35 \times 1,7921 \times 1,4463 = 10,3642$

It is noted that the production of electronic products is in great demand in the 4th quarter of the 6th year which has been predicted.

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## Study on the Decision-Making Process in Selecting Rail Infrastructure Managers

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### Abstract

*The current economic context led to a significant decline in job vacancies in parallel with the downsizing numerous organizations were forced to make. Some of them ceased the hiring process as in the case of the national company CFR SA, while those with available positions focus on multiple skills and abilities and expertise exhibited in certain fields. In the context of the research concluded by the author, the identified issue circled around the decision to select the most suitable manager possessing the necessary qualities to participate in a scientific activity within the railway sector. To deliver a scientifically based solution also objectively determined, we built a specific multicriterial tree pattern with utility functions for the professional performances assessment and used the DEXi expert system in view of reaching the optimum version and making the selection decision. This method is our own contribution for the assessment of managers' professional.*

**Key words:** decision, rail transport, DEXi, utility functions

**J.E.L. classification:** M12

### 1. Introduction

Increase in rail infrastructure interoperability and main railroads interconnection throughout Europe is a current prerequisite demanded by the European Railway Agency (ERA), and for the accomplishing of those objectives a series of measures was already set, materialized through the adoption of certain directives imposed by the European Commission, that the Ministry of Transport in Romania transposed into our legislation (Dăneci-Pătrău, 2013, p.314). A measure among the European Union members to even out practices related to controlling access on the rail infrastructure for all railway vehicles was adopted by ERA, which organized a training course in Brussels in June 2017, where the theme pinpointed experience exchange between rail infrastructure management specialists from all European Union states. Romania was represented there by eight engineers from the public rail infrastructure management of CFR SA, every one of them from each operational territorial center. To select the suitable people to partake in this course, the Railway Traffic Directorate within CN CFR SA (Romanian National Railway Company) requested each of the eight Traffic Divisions that are part of the regional railway centers to identify a manager, expert in rail infrastructure control and operation.

Research hypothesis were drawn from the findings yielded by the documentary research and discussions held with the managers of different departments within “CREIR CF” Constanta branch. These were in respect of:

- I1. The assessment of human resources to be selected is inadequate, being developed globally and not according to types of employees.
- I2. The rail infrastructure personnel selection methodology is outdated and doesn't consider the new exigencies from the railway transport human resource management.

Within “CREIR CF” Constanta branch of CN CFR SA, the problem identified targeted the decision of selecting the most suitable manager that possesses the necessary qualities to attend this scientific manifestation. In this regard, the regional director together with the head of Traffic Division selected the manager from the Division's organizational chart who top-ranked following

high professional and management performances assessed in 2016. The decision to assign candidates belonged to the head of Traffic Division, also head manager over all organizational charts and was approved by the regional director.

The list of candidates comprised the heads of some departments and compartments subordinated to Traffic Division, who are responsible for the traffic organization, management and control on the rail infrastructure and have vast experience in the field. The six managers designated to be part of the final selection process, expert engineers in the railway transport technology were: the head of Railway Infrastructure Access Control Department, the head of Railway Infrastructure Access Regulations Department, the head of Railway Traffic Department, head of Constanta Railway Traffic Regulator; the head of CFR Constanta Station and the inspector for Rolling Stock Sector;

## 2. Research methodology

This subchapter debates the approach applied in the case of the selection decision-making in relation to human resource management which integrates multi-criteria modeling in an expert system. The approach is strictly founded on qualitative decisional know-how extensions, the equivalent of decision attributes and rules branching. The decision-making process is supported by DEXi expert system, a specialized expert system shell for databases interactive construction, options evaluation and outcome argumentation. Practical use of the system is illustrated by the application used for human resource selection for a manager position within "CREIR CF" Constanta branch of CN CFR SA. Allowing for the method established by the regional director and the head of Traffic Division to choose the most suitable manager, we initiated the documentary research by collecting and compiling data from the Traffic Division recordings and archives. In this respect, the professional performance evaluation forms of the Traffic Division's personnel annually filled in by the direct supervisor were studied. This type of form is processed in compliance with a renowned model and applied to all employees irrespective of the position held (Pitariu, 2016, p. 238).

To develop the research, the scientific research logic chart described in figure 1 was elaborated by laying out hypothesis carried forward. It involves the decisional process of selecting the appropriate railway managers making use of the multi-criteria model and DEXi expert system. As the branch management has never dealt with such request before and considering the need to use a sound scientific reflection, we consider as opportune our proposal with regard to the use of manager selection methodology, namely the multi-criteria tree structure which uses utility functions and the DEXi expert system.

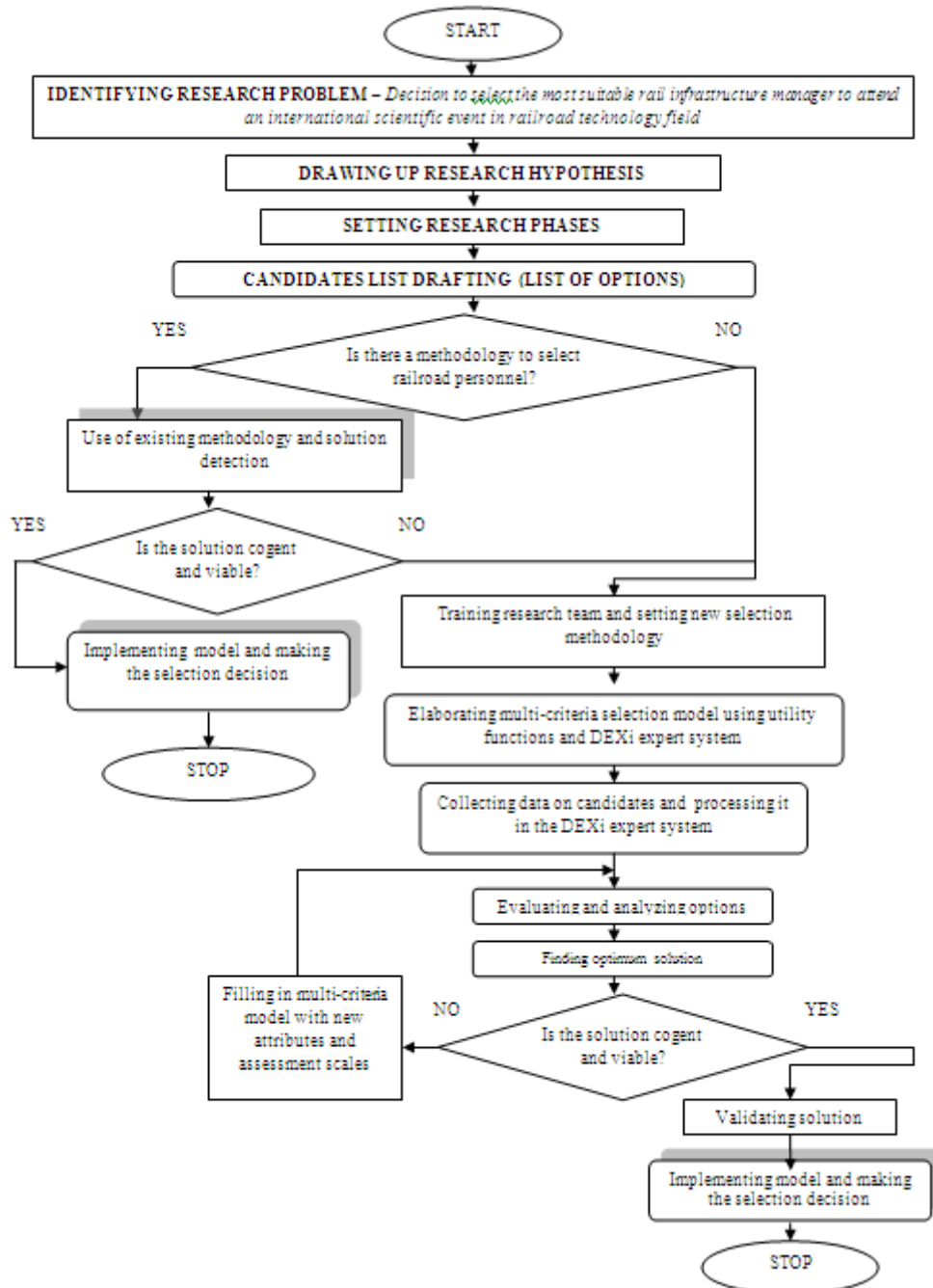
The answer to the problem concerning the suitable manager selection was based on the use of a specific multi-criteria hierarchical model, implemented with existing technological information. The basic principle lying at the bottom of decisional modeling was disintegrating the decisional problem in smaller less complex sub-problems expressed through professional performance evaluation criteria. As per the model, the decisional problem options are disassembled in more dimensions called attributes or criteria.

These attributes are qualitative variables which stand for decisional sub-problems hierarchically organized so as the attributes from the superior hierarchy to depend on the attributes from the lower hierarchy. Each action is firstly described by a value vector of the corresponding attributes, and then the vectors are examined by a utility function previously defined by the expert.

The utility functions define the relationship between attributes at different levels serving partial sub-problems aggregation in the final evaluation or classification. The evaluation outcome  $F(ai)$  must be equal to the utility function outcome  $F(X1, X2, \dots, Xn)$ . Final evaluation of an option is given as an attribute from the root. On this basis, options are compared and graded, the best being selected by the decision-maker.

Our approach was built on the use of a qualitative decision model. To create and apply the qualitative decision model, DEXi expert system was used. According to the definition forwarded by a group of authors (Zaharie et al., 1999, p.9), expert systems are computer programs that use artificial intelligence technologies to simulate the judgment and behavior of a human with expert knowledge and experience in a particular field and subsequently use them to solve difficult problems in said field.

Figure no. 1. Integrated model for the selection of rail infrastructure management



Source: Author

DEXi system was created by Marko Bohanec in partnership with researchers from the “Josef Stefan” Institute within “Maribor” University, Slovenia and allows the creation of multi-criteria models as decision tree structures, the description, evaluation and analysis of options pursuing decision-making and reviewed outcome argumentation (Jereb and Rajkovic, 2005, p.199). DEXi is a decision program based on a tree-shaped attributes assessment. These attributes have discrete values and use categorization words to define them.

### 3. Introduction to completed phases and outcome

This initial stage started when the decision problem regarding the selection of the most suitable manager to participate in the training course surged and was reckoned to be difficult and important enough to require a systematic approach and the use of a decision problem modeling. The issue

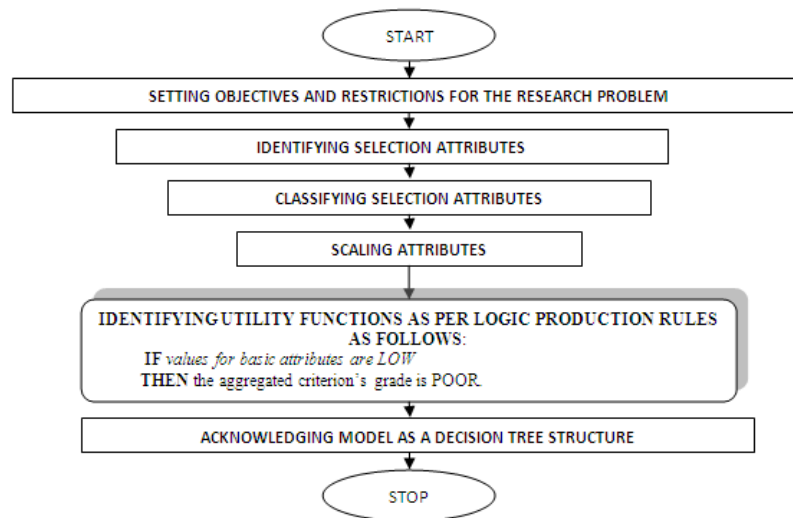


identified had certain properties specific to such approach, as:

- it referred to comparing alternative options and namely experts in rail transport technology;
- the objective was picking the best option or options evaluation in view of classifying them in a preferential list.
- the problem could be disintegrated in smaller less complex problems, each option being described through grades applied to the basic criteria in alignment with problem disintegration;
- Options assessment was carried out by comparing options, considering one or more criteria, using utility functions to obtain intermediary and final grades.

The model construction underwent completion of all presented stages in the logic chart of figure 2.

Figure no. 2. Logic construction chart for multi-criteria selection model



Source: Author

Identifying the attributes whose objective consisted of gathering all the relevant attributes necessary for the rail managers' evaluation was accomplished in three brainstorming sessions where we asked a group of assessors made up of the regional director, the head of the Traffic Division and the head of Human Resources Department to fill in a form of ten criteria they believed to be the most important in evaluating rail infrastructure managers' professional performances, as well as assigning them a grade from one to ten to show their significance. The result was a twenty-attribute list, including supplementary attributes or duplicates, categorized in the following stage.

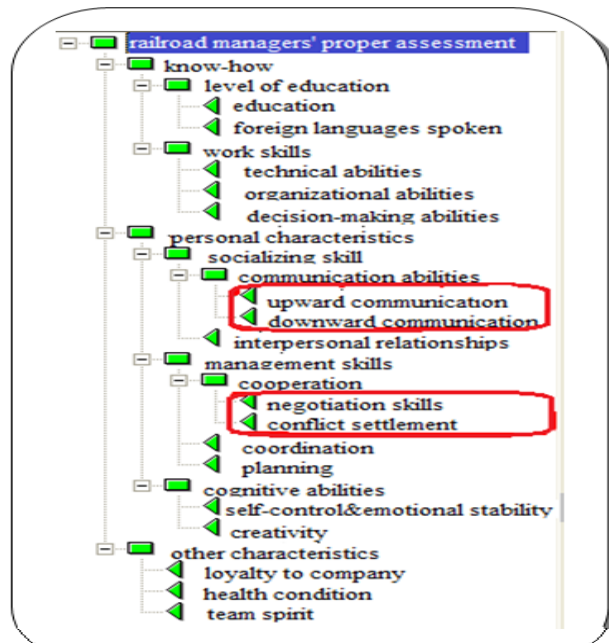
Attribute classification whose objective was putting up an attribute hierarchy based on foreseen interdependence and influences over the final decision. The process included the use of classification, comparison, top-down disintegration techniques and attribute list uncluttering. To avoid an explosion of combinations in the fourth stage of this study, DEXi requires that each aggregated attribute depend on the fewest possible basic attributes. In this respect we used two or three attributes, and the outcome of this stage regarded the creation of the multi-criteria tree structure and its associated scaling system.

Attribute scaling whose objective aimed the assigning of a value scale to each of the ordinal or nominal attribute in the multi-criteria tree structure built. The number of values represented by grades expressing the position on scale was kept as lowest possible, but at the same time, high enough to differentiate quality situations. In our case, attributes scale gradually and hierarchically raises from three values at the basic level, namely "low", "medium", "high" up to five values for root attributes: "very low", "low", "medium", "good", "excellent".

The role of the utility functions was to provide values as grades for aggregated attributes from inferior levels up to the highest aggregated value. In DEXi, the utility function of each aggregated attribute is progressively presented as a table where each row designates a logic expression.

Each option equating a candidate manager was assessed from the beginning to the end, compliant with the decision rules resulted from utility functions. As a result, each option received a grade corresponding to an assessment value for individual professional performance. Enabling immediate comprehension of the evaluation outcome is allowed in DEXi if "Graphic" menu is used. Consistent with the latter, by opting for unidimensional display only from the aggregated root attribute viewpoint. The multi-criteria model, exemplified in figure 3 has thus become operational.

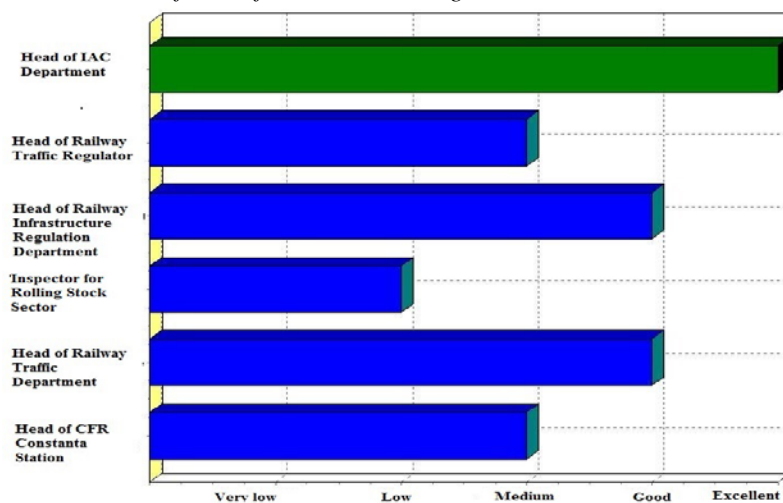
Figure no. 3. Final multi-criteria tree structure included in DEXi



Source: Author

Under these conditions, by finalizing the scaled values of the new criteria introduced, the DEXi expert system provided us with the best-performing manager who, according to the graph in figure 4, proved to be the head of the Head of IAC Department. From the comparative analysis of the options, the Head of the IAC Department surpassed the Head of Railway Traffic Regulator, excelled at the level of the competencies in the railway transport technology and having a higher level of graduated graduates, respectively a master in railway technology.

Figure no. 4. Final outcome of rail infrastructure managers' assessment



Source: Author

Notable features stamped onto the decision tree created are not only the simplicity prevailing in its visual display but also the high complexity and difficulty degree in using it, imposing the use of numerous skills and knowledge to solve problems where need be. Expansion of participative dimension of human resource management activities brings in discussion the use of adequate decision techniques and the model suggested falls under these requirements as it allows, on one hand considering experts among branch management for the decision variables identification and evaluation and, on the other hand, efficient capitalization of the time they have at hand. The novelty and necessity to implement the practical model with regard to solving various management decision problems are provided by the fact that the probabilistic decision modeling technique through DEXi expert system was never used before by the railroad companies or other companies in Romania, economic literature in our country tangentially delving into the theoretical approach of this issue.

#### 4. Conclusions

At the end of the endeavor, based on the options evaluation eased by the DEXi expert system, by agreeing with the multi-criteria model we suggested, the branch management made the final decision by choosing the head of IAC (Infrastructure Access Control) to participate in the training course organized abroad. To boost the efficiency of human resources management activities within CN CFR SA, we see the decision model implementation as extremely useful, with certain specific adjustments to optimize training activities for all employee categories, both with executive and management positions. This is possible due to DEXi expert system, which through an appropriate database management is able to provide the human resource managers and experts with the defective field for each employee's professional training. Moreover, the use of DEXi expert system becomes imperative under the conditions of permanent downsizing within the railway transport system, providing assistance to the superior management for future decision-making to cut back railway personnel

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## The Attitude of Service Consumers Regarding Tourist Advertising in Mountain Banat

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### Abstract

*The purpose of this paper is to investigate the manner in which advertising influences the behavior of the consumer of tourism services.*

*The theoretical considerations focus on the analysis of the attitudes that influence the behavior of the consumer, consequently this endogenous factor will be subjected to a fundamental analysis in order to understand the mechanisms of influence on a certain type of behavior of the individual viewed from the point of view of his quality of consumer of tourist services.*

*In order to achieve the proposed goal, the research focuses on studying the behavior of the consumer of tourist services at Resita. In order to achieve this goal, we chose the questionnaire as a research tool. This last chapter of the paper introduces the selected research methodology, the analysis and processing of the research results, as well as the interpretation of the research data.*

**Key words:** consumer, advertising, tourism, research, behaviour.

**J.E.L. classification:** M31.

### 1. Introduction

In many cases, marketers are interested in the behavior of buyer in the future. Let suppose a company has just developed a new product and was interested in determining if there is sufficient demand in the market to justify placing the product. Consumer services has much to offer to our understanding of how globalism works to transform the local through advertising. (Zhao Xin and Belk Russell, 2008)

Using attitudes to provide the application is not limited to new products. We find that the informants are duped by careful advertisements. (Beverland and Lindgreen&Vink, 2008)

Of course, using attitudes to predict the behavior is based on the assumption that attitudes are related to behavior.

### 2. Theoretical considerations

In order to conceive and promote a competitive Romanian tourism product, it is essential to adopt a quality improvement strategy. In this sense, I adhere to the idea that "quality does not mean everything, but everything is nothing without quality."

Promotional activities in tourism require significant investment due to the large geographic extent of tourist markets, the manifestation of fierce international competition and the intangible nature of the tourist product. From this last perspective, it can be said that the intangible nature of tourism service leads to an increase in the importance of the promotional strategy, the main element of which is to invest (associate) with tangible attributes of services by linking them to specific benefits.

Thus, the means of communication must suggest the speed and efficiency of the services provided by the tourist units, the high degree of comfort provided by them, the used images rendering the exterior and interior appearance of some accommodation structures, restaurants and modern leisure centers.

The purchase process is the result of internal and external stimuli on consumer behavior. Individual attitudes are designated by all beliefs, emotional states and consumer propensity to act in an impulsive manner in relation to the act of purchase.

### 3. Method

First of all, I would like to highlight that the purpose of this study is the attitude of the consumers living in Resita towards Banat Montan.

In order to complete the study, we chose three objectives in order to understand what the people from Resita are thinking:

- Identify how service consumers are pleased with tourist advertising in Mountain Banat;
- Identify the type of factors that influence consumer behavior;
- Identify different types of advertising that attract tourists in Mountain Banat;

We developed a questionnaire that is composed by 9 questions(6 closed questions with choices and 3 questions of identification), in order to have a better image of the behavior of the online consumer related to brand image. The questions we chose are related to age, gender and the occupation of subjects.

For the study we chose the survey method(trading method), for this method it is necessary to have statistical information about the population from Resita, in our case, information about the age and gender of people surveyed.

We studied the impact that advertising has on consumer's behavior and we can say that the impact is huge, people being mostly influenced on what they see on online media and advertisements. One of the major studies of marketing is consumer's behavior and how he is manifesting it.

Due to the lack of data from the population from Resita we couldn't opt for questioning people by the occupational criteria.

The survey was conducted during September-October 2016, being a requirement for the development of the paper and was calculated using the formula below:

$$R = \frac{n}{N} * 100 = \frac{t^2 * p * q}{e^2}$$

Where:

- R - sampling rate
- N - researched population size
- n - sample size
- t - the coefficient of confidence
- p - frequency of the phenomena
- e - tolerated margin error

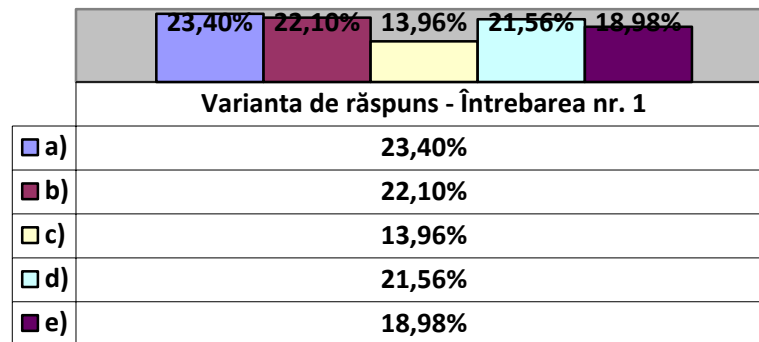
The shape of the study was build by the survey conducted on a sample for the population of Resita(Dinu Gabriel and Dinu Loredana, 2012)

### 4. Results

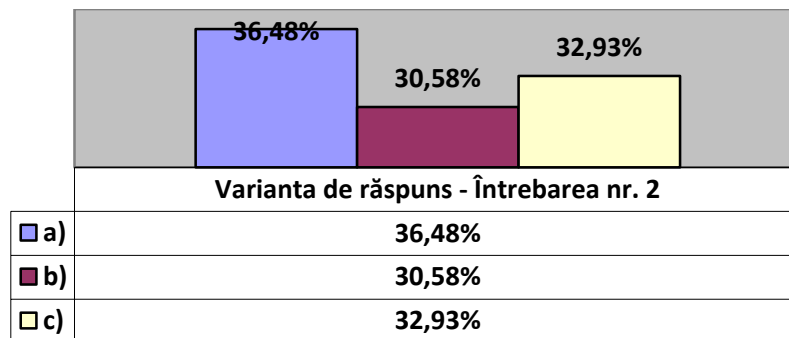
In the following, it will be presented, analyzed and interpreted the answers provided by 366 subjects of the survey questions 1-6 of the questionnaire. Questions 7-9 refer to the criteria for analysis of results (age, gender, not being necessary individual analysis of the study conducted).

Further, I realized interpretation of research results:

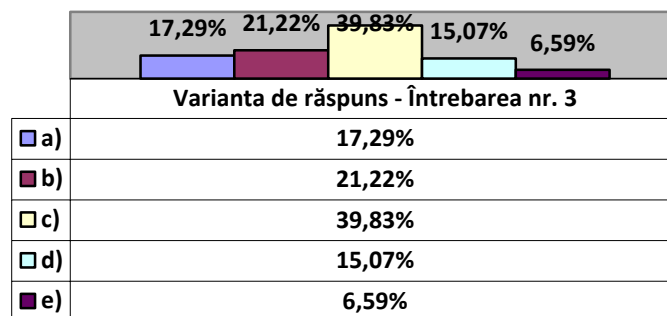
1. Regarding the factors that influence, in question number 1, on the whole sample, most of the subjects (23.40%) state that endogenous factors, such as needs and motivations, most influence the behavior of the consumer (11.30% men and 12.10% women). The idea that the influence of attitudes and preferences on consumer behavior is the largest belongs to a percentage of 22.10% of the respondents (10.17% men and 11.93% women). Those who consider culture and social class as strongly influencing consumer behavior are 21.56% of the subjects: 10.23% men and 11.33% women, and 18.98% (8.90% men and 10.08% % of women) claim that exogenous factors such as reference groups and family influence consumer behavior, whereas only 13.96% of which 6.76% men and 7.20% women appreciate that self-image has a positive impact on consumer behavior.



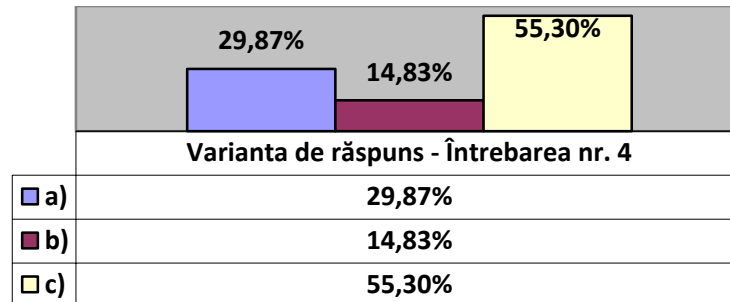
2. In terms of the usefulness of tourism promotion, on the total sample, most subjects (36.48%, of which 16.37% men and 20.11% women), say it is useful to promote tourism in Banat. In a fairly large number, 32.93% are undecided, who do not know if promotion is useful (men are more undecided 17.49% than women 15.44%). In 30.58%, respondents say promoting is not helpful.



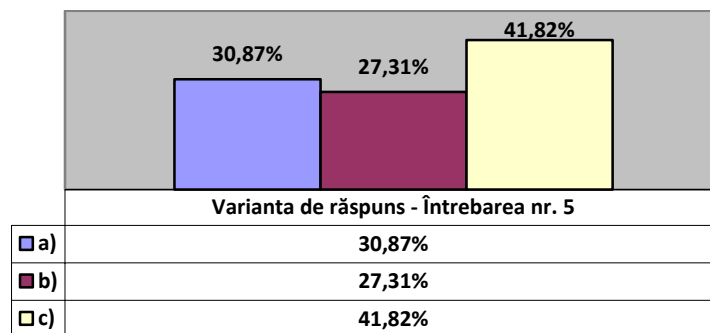
3. Regarding the satisfaction of how to promote tourism in Mountain Banat, on the total sample, 39.83% of the subjects are undecided at the question whether they are satisfied with the way of tourism promotion. Of these, the most undecided (25.56%) are men and 14.27% are women.



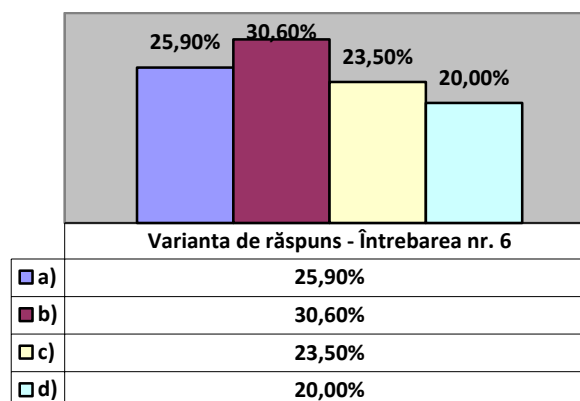
4. Regarding the purchase of tourist packages following some actions to promote Mountain Banat, on the total sample, 55.30% (30.31% men and 24.99% women) of the respondents are undecided in relation to their attitude towards the tonsi products acquired after the promotion, compared to the classical method without promotion. 29.87% (11.38% men, 18.49% women) show a positive attitude towards the products acquired following the information, while only 14.83% of the respondents have a negative attitude towards the same acquisition , 20% men and 6.63% women).



5. Regarding the attitude of the consumers of tourist services towards the touristic potential of the area, on the total sample, 30.87% of the respondents responded positively to the tourist potential of the area (12.25% men and 18.62% women).



6. Regarding the frequent visit of the area by tourists, the second answer (multiple) is the top among the respondents, regardless of gender, age or occupation. Interestingly, all age groups visited the tourist area at least once (under 20 years: 20 %, 20-29 years: 26.56%, 30-39 years: 25.86%, 40- 49 years: 27.53%, between 50-59 years: 21.21%, over 60 years: 30.87%), but also that 40% of those interviewed, aged 30-39, visited tourist area several times produced on the internet.



## 5. Conclusions

For the Mountain Banat tourist area, the near future can not reserve radical changes, given that the investments in the access and private ways of modernizing the accommodation structures are reduced. For noticeable changes, the area requires government attention, substantial investment, clear product or image strategy, and promotion.

Through everything I have said in the paper, through everything I have just demonstrated or formulated, I have sought to support the development of tourism in the tourist area Mountain Banat, to prove the opportunity of research in this field and the necessity to intensify it, being convinced that only the tourist area Mountain Banat can become a tourist paradise, as it deserves and we all want.

The Mountain Banat tourist area meets all the conditions to define its personality alongside other areas of the country. To achieve such an objective, no effort, however large and sustained, is unjustified.

Concluding, Romania's tourist offer is still lacking in diversity to be truly attractive. For Romanian tourists, the services in question are usually confused with the touristic zone (accommodation and meals). For foreign tourists, the offer is slightly more diversified, but not enough to motivate them to extend their stay in our country. The reason, I believe, is that in Mountain Banat the creators of tourist programs are rare and their combining possibilities are minimal.

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## Tourism Promotion - Primary Element in Mountain Banat

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### Abstract

*This paper aims to support tourism development of Mountain Banat, to prove the opportunity of research in this area and the need to intensify them.*

*The marketing research methodology conducted among tourists, followed just specific stages of such an approach, following accepted standards for marketing research.*

*We can say that tourism development in the region depends largely on the awareness of potential tourists about natural attractions, cultural attractions of that area, this awareness-raising activity can be substantially supported by establishing and operating an adequate number of information centers and tourism promotion*

**Key words:** promotion, tourism, research, behavior.

**J.E.L. classification:** M31.

### 1. Introduction

Tourism is one of the sectors with the greatest potential to deliver economic growth and development. Today, tourism is one of the most dynamic economic sectors that are recording an upward trend and permanent changes.

As in all other sectors, tourism, promotional activities are aimed to attract new customers and retaining old ones, addressing directly or through intermediary networks to all the public or some well identified groups of target customers. While production and marketing is done especially at local level (by companies or groups of tourist companies), the promotion could encourage firms at all levels (local, regional, national and even international).

### 2. Theoretical considerations

As O. Snake mentions "the promotion of tourism activity is a specific form of communication, which is the transmission of messages and information in many ways, designed to inform the tour operators and potential tourists on product characteristics and the components of tourism services, .., to develop a positive attitude towards tourism service companies".

The tourist promotion involves actions to support and influence the purchase behavior in order to produce favorable changes in tourists mentality and as well in the current and potential tourists habits.

The existence of valuable heritage tourism does not automatically lead to the manifestation of a profitable tourism unless it is accompanied by appropriate services to make them accessible to tourists and to capitalize on them. Thus, regions of the country with relatively modest tourism potential have reached a significant tourist activity due to effective management of marketing activities. Tourist destinations are entities that are raising many questions concerning the management of marketing activity, primarily due to the multitude of local factors. The management activities in the tourist destination is a challenge because within it are acting private and public

companies whose interests should be aligned with the interests of the destination. Management decisions must thank the local population and the tourists.

Tourist information can come from various sources, but the largest impact are personal communications. The decision of the tourist regarding the tourist destination that he will choose is often influenced by subjective recommendations and information of people in his entourage (social media) that "experienced" the tourism products. To this is added the information obtained from the sales force of the tourism facilities (travel agencies, accommodation structures, tourism offices) channels of experts (leaders, prescribers) as well as impersonal communication channels (media "atmosphere "and" events ").

The promotional activity meets a large variety in terms of content, role and embodiment. The explanation stems from the facts that, with continuous increasing and diversifying the tourism product, the intensification of tourist traffic, communicating problems with internal and external users are becoming increasingly important. Basically, without a modern and efficient system of communication and information, tourism activity can not be conducted properly.

If managers and specialists in the field are concerned about these issues will not be known until after conducting a marketing research designed for this purpose. Therefore, we considered useful conducting a marketing research among tourists visitors of Banat Montan that will produce valid and valuable information to reach reliable conclusions about the awareness of it.

### 3. Method and results

This research is part of the basic research, aimed to develop the marketing theory, based on primary data analysis.

From the type of information are using from research is a qualitative research and from the venue is a field research.

In the process of building an efficient study is needed first a research program establishing the stages and the resources required to achieve optimal research and obtaining the most important information necessary for the decision.

Thus, we conducted a qualitative research, with the following steps:

- Setting the number of interviewees;
- Sampling;
- Conducting survey;
- Presentation and interpretation of results.

Qualitative studies consist of collecting and analyzing the elements that can explain the opinions, attitudes and behaviors of all categories of individuals involved in the studied subject.

The advantages of a qualitative study are:

1. It is quick because information is gathered from a small sample (10-70 people), and data processing is not complicated;
2. The representation of the sample in relation to the studied population is not indispensable;
3. It is less expensive than a quantitative study;
4. Makes it possible to invent the attitudes, preferences of consumers.

Disadvantages:

1. Information obtained from an unrepresentative sample can not be extrapolated to the whole population; the results are only hypotheses that will be validated by a qualitative study;

2. The quality of the data collected depends primarily on the competence of the investigators

The method used is the method of sampling rates that is a rational choice of individuals aiming to obtain a structure in the sample by sex, age and occupation.

As a form of research we used individually structured survey based on a questionnaire composed of 10 questions, all closed. The questionnaire contains seven questions of content and three questions to identify the person surveyed.

Sample structure by gender:

male: 35 men

females: 37 women

Sample structure by age criterion:

- under 20: 12 people  
male:  $12 \times 51,14\% = 7$  men  
female:  $12 \times 48,86\% = 5$  women
- 20-29 years: 9 people  
male: 5 male  
female: 4 women
- 30-39 years: 11 people  
male: 6 men  
female: 5 women
- 40-49 years: 13 people  
male: 6 men  
female: 7 women
- 50-59 years: 11 people  
male: 5 male  
female: 6 women
- Over 60 years: 16 people  
male: 7 men  
female: 9 women

The information, as they were collected from the questionnaire was centralized and the interpretation of the data that were obtained will be presents in this study. The interpretation of the results will be presented highlighting the most important aspects and trends for the purpose proposed by the percentage representation of the results.

The analysis of the results of the study was done for each question contained in the questionnaire, emphasizing, in each case, the decisive trend in the behavior of the tourists.

61.49% of the respondents did not visit Mountain Banat, while 13.05% visited the area three or more times.

Adventure and fishing are among the top tourist preferences (31.04%), while a small part of the respondents, 3.9%, said they chose the area for other reasons.

49.98% of the respondents opted for a stay longer than 3 nights, at the opposite end, 18.46% of the subjects opting for 1-3 nights of accommodation.

Regarding the source of information used, 69.83% of respondents used the knowledge of relatives / relatives to choose the area as a tourist destination. We notice that the decision of the tourist regarding the destination he/she chooses is influenced by the recommendations and information of those who have "consumed" the respective tourist products. Only 2.28% of the subjects chose Mountain Banat after consulting leaflets.

The most efficient way of the tourism promotion is the advertising made by the actual consumers of the tourist product. Ideally is that the satisfied tourists to recommend to their friends to visit the area, and to appeal to that accommodation unit that has reached the level of the exigencies of those clients.

Regarding the degree of satisfaction with the advertising made to the studied area, only 24.26% of the respondents declared themselves satisfied, 75.74% of the subjects being dissatisfied with the promotion of Banat Montana.

Regarding the future behavior of the surveyed tourists with regard to the researched tourist product, there is a favorable tendency in their attitude.

89.06% of tourists said they would return to this area in the future, while only 10.94% said they would not return. We observe a positive attitude of the tourists towards the analyzed area, which shows a high degree of satisfaction with the potential offered by the studied tourism product.

More than three-quarters of surveyed tourists (94.24%) would recommend Mountain Banat to relatives / friends, while only 5.76% of respondents said they would not.

In conclusion we can point out that although Mountain Banat benefits from a great tourist potential, insufficient promotion of tourist attractions (low number of tourist information centers, lack of promotional materials such as free brochures in accommodation units, lack of cultural guides from which the tourist can learn the activities and cultural events taking place during his stay) lead to the anonymous stay of a wonderful area.

#### 4. Conclusions

A promotional major factor in tourism is the degree to which tourism image, created as a result of promoting actions, corresponds both expectations and consumer preferences and realities with which they have contact during the voyage.

The persuasion and influence force of personal communications of an individual who consumed a tour product is significant because the credibility of the transmitter, which in conception of the receiver is objective and can not be suspected of links of any kind with the company providing tourism services. In order to meet a higher level of requirements and preferences of tourists, it is indicated that the staff involved in this activity to suggest them (even discreet) to make an oral promotion, telling their friends about the satisfactions they have had in the voyages and holiday destinations.

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## Computer Science within the Academic Curriculum Used in Maritime Training

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### Abstract

*In our study we underline the need that academic curriculum used in maritime training must be in resonance with the achievements in the Computer Science and Information Technology fields.*

*Starting from the fact that the primary role of maritime transport is to ensure the economic link between production and consumption, we connect it with the development in computer related domains.*

*In our days, computers are utilized in nearly each facet of our lives. The computer industry is one among the quickest growing segments of our economy. Computer professionals in maritime field might find themselves in a variety of situations. To maintain a competitive edge, the maritime industry should continue to make creative scientific and engineering advances in order to provide the most effective possible technological assets and information systems. This can be achieved by the connection to the computer science curriculum which can be adapted to the needs of the maritime domain.*

**Key words:** academic curriculum, maritime training, economic link, Computer Science

**J.E.L. classification:** A00

### 1. Introduction

Maritime transport is a complex economic activity that has developed with the world economy, closely following upward developments as well as downward developments in world trade. At the same time, shipping has contributed in a way significant development of the world economy, (Dragomir *et al*, 2015, p.238) being one of the main factors of global economic cooperation. The primary role of maritime transport is to ensure the link between production and consumption, especially to ensure a continuous flow of raw materials to the productive industry (Bussow *et al*, 2013, p.12) and to move the finished products to the markets and consumers in good time.

Table no. 1 Short Sea Shipping (SSS) of goods by reporting country and direction, 2010-2015 (gross weight of goods in Mio tones)

Country	2010	2011	2012	2013	2014	2015
Belgium	130,059	125,620	123,928	126,632	134,328	131,176
Bulgaria	18,872	21,240	22,111	24,124	21,950	21,451
Denmark	66,830	67,748	66,185	66,267	66,591	73,055
Germany	157,703	168,314	170,372	171,892	176,969	174,050
Estonia	28,325	31,236	25,459	28,318	29,850	23,673

Ireland	37,062	36,092	37,007	37,076	36,789	40,005
Greece	81,507	78,047	90,517	94,571	95,971	98,158
Spain	176,841	186,987	191,110	186,037	196,322	196,668
France	194,162	194,267	170,971	166,647	171,901	169,279
Croatia	15,526	13,181	12,120	12,130	10,384	11,863
Italy	310,669	298,715	285,475	272,295	262,481	272,172
Cyprus	2,649	4,441	5,676	6,680	6,720	6,929
Latvia	46,965	53,425	60,969	56,302	58,160	56,187
Lithuania	28,281	32,155	32,391	31,315	30,680	31,348
Malta	3,465	2,950	3,045	2,756	2,921	3,409
Netherlands	275,906	256,839	262,935	261,224	272,552	286,231
Poland	49,482	48,068	48,755	51,998	54,165	55,789
Portugal	35,431	35,681	34,663	39,229	41,723	44,909
Romania	23,954	24,645	23,908	26,354	31,264	31,285
Slovenia	7,832	7,904	8,809	9,191	9,837	11,336
Finland	91,158	94,680	87,984	90,168	89,593	85,492
Sweden	148,673	148,032	142,110	145,828	149,912	151,101
United Kingdom	316,253	320,074	310,995	306,880	315,734	313,498
Norway	140,084	145,377	147,360	152,279	150,292	160,418
Turkey	242,603	256,949	254,590	264,001	258,547	268,491

Source: <http://appsso.eurostat.ec.europa.eu/nui/show.do>

Table no. 2 Country level - passengers embarked and disembarked in all ports, by direction 2010-2015

Country	2010	2011	2012	2013	2014	2015
Belgium	829	824	850	859	821	844
Bulgaria	1	1	1	2	1	2
Denmark	41,993	41,527	40,965	41,266	41,353	41,647
Germany	28,780	29,233	29,481	29,848	30,780	30,087
Estonia	11,186	11,846	12,654	13,146	13,654	14,164
Ireland	3,089	2,906	2,758	2,747	2,755	2,751
Greece	86,189	79,183	72,899	72,918	66,533	65,680
Spain	21,518	21,868	21,629	22,871	23,486	24,522
France	27,218	25,552	24,815	25,634	26,638	26,133
Croatia	25,124	26,947	26,706	27,355	23,523	27,271
Italy	87,658	81,895	76,735	73,238	72,225	70,268
Cyprus	107	92	91	99	76	68
Latvia	720	844	885	932	862	661
Lithuania	251	281	286	280	280	286
Malta	8,300	8,621	8,535	9,170	9,669	9,910
Netherlands	1,994	1,770	1,706	1,738	1,819	1,910
Poland	2,601	2,528	2,358	2,201	2,224	2,421
Portugal	701	677	565	555	551	583
Romania	0	0	0	0	1	1
Slovenia	39	36	34	28	27	34
Finland	17,867	18,074	18,264	18,524	18,487	18,884
Sweden	30,185	30,094	29,471	29,146	29,244	29,500
United Kingdom	28,824	28,002	26,516	27,472	28,135	27,805

Iceland	638	404	710	751	723	737
Norway	5,876	6,130	6,003	7,898	7,908	7,311
Montenegro	:	:	319	184	108	99
Turkey	1,577	1,842	1,828	2,058	2,150	2,233

Source: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar\\_mp\\_aa\\_cphd&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=mar_mp_aa_cphd&lang=en)

At Community level, maritime transport is of particular importance, representing the main mode of transport through which imports and exports are made. Approximately 40% of goods for domestic trade and 70% of goods for external trade are transported by sea. The importance of maritime transport is recognized at Community level and in the light of the many jobs created both directly and indirectly in related economic sectors, but also due to the important revenues brought by this sector to the national budgets of the states.

## 2. Computer Science

In our days, computers are utilized in nearly each facet of our lives: at home and work, in microwave ovens, watches, automobile engines, video games, telephones, desktops mainframe computers in business and government, supercomputers are pushing out the frontiers of science and technology. The computer industry is one among the quickest growing segments of our economy which growth guarantees to continue well into the new decades.

As the main asset of social development, (Drăgănescu, 2001, p.3) education should adapt its new technological advancements to the advantage of the citizens and their desires by taking into consideration the building of a contemporary society that's supported by knowledge. Technology becomes the foremost applicable technical support, given the new challenges (Manole *et al*, 2016, p.89) of the knowledge society.

CS (Computer Science) is the traditional computing field and contains algorithms, graphics, robotics, and artificial intelligence. IT (Information Technology) has a more applied computing degree and contains databases, internet technology, and PC (personal computer) security. Each of these fields give a powerful computing foundation for technical maritime domain or management responsibilities and/or graduate study.

The worldwide proliferation of refined aircraft, maritime transport of individuals or merchandise, and surface platforms requires a better level of knowledge of advanced computer systems unexceeded in maritime history. During this multi-threat setting, time essential, management of multiple computer systems and also the fast integration, analysis and dissemination of data is important to the existence of maritime systems. To maintain a competitive edge, the maritime industry should continue to make creative scientific and engineering advances in order to provide the most effective possible technological assets and information systems. More than ever, there is a requirement for officers with the scientific and technical training necessary to perform effectively on the given tasks.

The evolution of transmissions has also had effects in the naval field, perhaps more than in others. The necessity of permanently assuring communications with the landing gear either operating as a command point or at the headquarters of a shipping company operating that ship is the essential element in navigation, both sea and river.

Vessel-specific communication services are provided by simple, easy-to-operate, easy-to-operate radio and satellite communications systems and equipment available globally. Services are provided by radio equipment operating in VHF / UHF / HF bands or satellites that use frequencies in specific bands. These systems provide the need for voice and data services such as Internet access, e-mail, access to weather-hydrological services, ship management, naval traffic monitoring, life-saving, social services, etc. All of these services typically have centralized link management systems, in a unitary architecture, generally geared to IP technologies.

### 3. Academic curriculum and the maritime training

The information services implemented and assured in extended computer networks facilitate the exchange and accuracy of information circulated in the system. The purpose of implementing these IT services is to make the order act more efficient.

Computer professionals in maritime field might find themselves in a variety of situations: formulating and testing, analyzing new challenges for efficient solutions, using advanced multi-media or communications equipment, working in teams used for development of systems. In the following lines we describe some of the fields of research and vocational areas in computer science (U.S.N.A., 2017, p.1) and information technology which can be used in the academic curriculum in maritime training.

- Artificial Intelligence is a domain in which can be developed computer programs that might simulate human learning and the ability to reason.
- Enterprise Computing is the field which can design, manage, implement, and modify information systems that support optimally the numerous and changing necessities of organizations.
- Software Engineering is the domain which develops methods for the creation of software systems on time, within a target budget, and with less or no defects.
- Computer Theory investigates the fundamental theories of how computers are solving problems, and apply the obtained results to other fields of computer science.
- Operating Systems and Networks develops the basic software that information systems utilize to administer themselves or to interact with other information systems.
- Software Applications are applying technology and computer science to solve situations or problems outside the computer domain in fields such as medicine or education.
- Modeling and Simulation can construct computer simulations in all the fields to solve real world problems and improve the art and science of simulation.
- Gaming, Graphics, & Sound endorse realism in entertainment applications or training by achieving gaming mechanisms with captivating sounds and images.
- Computer and Network Security is the field that defends and protects computer systems on all levels against threats domestic or foreign for: networks, desktops, global systems, national systems.
- World Wide Web Design and Support is the field of interactive, informative, and artistic web design followed with dynamic and static content support.
- Databases and Knowledge Management is exploring how modern database and logic systems can help people to exploit and manage the great volume of digital information accessible in our days.

The technology leap made in the field of communications to this day has been a huge one. If we analyze the development of communications systems, from the first telegraph and telephone to mobile communications, radio or satellite, locally or globally today, we can see the multitude of services offered to a wide range of activities of the maritime and not only. The effects of advances in communications technology, especially in the digital era, in economic and social terms, are immeasurable. The technical achievements specific to the information society have also produced effects in the sphere of maritime domain and communications used in this field.

The primary objective of the specialized communication and information structures of the maritime actors is to provide network and system services in accordance with user-specific requirements, with the appropriate characteristics and performance in terms of stability, flexibility, interoperability and security of information, with the use of efficient resources available.

The maritime training and specialization of marine personnel is organized and carried out on the basis of the provisions of the law on education in force, in order to ensure the requirements of the relevant fields and specializations, (Păunescu, 2011, p.58) in compliance with the content standards and the adequate training weights for the basic disciplines in the field, complementary and specialized.

The introduction of broadband platforms in the field of naval communications has lagged behind existing systems and technologies at land-use and which have evolved more rapidly from



short-range broadband communications due to the complexity of the equipment used and, implicitly, its high cost and related services. Lately, progress has been made in this area through the creation of broadband equipment, especially satellite communications. By putting into operation of satellite-based satellite systems installed on board ships we can say that the first steps have been taken towards broadband communications that provide the necessary communication services on board.

#### 4. Conclusions

Maritime transport is seen as a complex economic activity that has developed with the world economy. The link between production and consumption is the primary role of maritime transport, it is ensuring a continuous flow of raw materials to the productive industry and the movement of the finished products to the markets and consumers in optimal time.

The worldwide proliferation of maritime transport of individuals or merchandise, needs a better level of knowledge of advanced computer systems unexceeded in maritime history.

Computer professionals in maritime field have new challenges: formulating and testing, analyzing new challenges for efficient solutions, using advanced multi-media or communications equipment, working in teams (Manole, 2015, p.59) for developing of the systems.

The technology leap made in the field of communications is a huge one. If we analyze the development of communications systems we can see the multitude of services offered to a broad range of activities in the maritime domain.

In our study we described some of the fields of research and vocational areas in computer science and information technology which can be used in the academic curriculum in maritime training and the link with the economic domain. As the primary objective of the specialized communication and information structures of the maritime actors is the providing of network and system services in accordance with user-specific requirements, and with the appropriate characteristics and performance in terms of stability, flexibility, interoperability and security of information, with the use of efficient resources available. This can be done only with a strong training in the domain, for the maximization of the efficiency.

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## Calculus of the Resources Cumulative Task Using Different Technics and Software

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### Abstract

*The present paper main objective is to reveals how one can use two software application tools: Microsoft Project 2013 and Oracle Primavera P6 Professional for the project planning management, especially for industrial projects and for the calculus and graphical representation of resources cumulative task. The present planning consider four small processes with a total of 38 activities and seven resources. The two software are used for leveling the project's resources and for giving the necessary information about the evolutions of cumulative tasks and how its values influences the cost of project. In conclusions comparison between the values and graphical representation presented by the two software shows differences of exemplifications, most of them from the graphical point of view.*

**Key words:** cumulative task, planning software

**J.E.L. classification:** M11

### 1. Introduction

The planning of processes and the phases or tasks or material is at the base of every business in terms of time reduction and, in the end, for the main goal of lowering the costs. The theory of planning have at its basis the schedule and leveling of tasks and resources on criteria like constrains or lacks etc. For this to be managed in programs and software were developed for easier, better planning and for dealing with complex systems and plans.

One of the important part of planning, due to its importance to schedule of the work in time (by minutes, hours, days, weeks etc.) and thus important for calendar and also for calculating the costs, is the resources cumulative task.

The resources cumulative task represent, in simple words, the sum of hours (or different time measurements) for a resources, considered in a constant sequentially manner, in order to evaluate and control the resource allocation in time. The resources cumulative task gives information and data for the calculus of the costs based on the resources allocation.

The relevance of the present work rises from the need to understand how to calculate the resources cumulative task using specific software: Microsoft Project 2013 and Oracle Primavera P6 Professional.

### 2. Data

The data used are represented by 38 coded tasks with durations between 2 and 7 days, representing 4 items and using 7 resources, also coded.

For easier representation and analysis the tasks were named with letters and were coded as follows:  $A_{xy}$ , where: A is the code for the task, x – the number of the item and y – the number of the tasks type A that are used for the item x. Also, the resources were coded as RN, where N – the attributed to the resources. For the data used an example is presented in table 1 where, for paper space reason, only two items are presented. The table shows the task name, the task duration, the start day, the finish day, the resource name, the predecessors of the task and the item that the task

are belonging to and gives it the code.

Table no. 1 Example of tasks for the items P1 and P2.

Nr. Crt.	Task Name	Duration	Start	Finish	Resource Names	Predecessors	Item
1	A11	5 days	Wed 03.01.18	Tue 09.01.18	R1		P1
2	B11	5 days	Tue 09.01.18	Mon 15.01.18	R2	1FS-1 day	P1
3	B12	7 days	Fri 12.01.18	Mon 22.01.18	R2	2FS-2 days	P1
4	C11	5 days	Fri 19.01.18	Thu 25.01.18	R3	3FS-2 days	P1
5	C12	5 days	Tue 23.01.18	Mon 29.01.18	R3	4FS-3 days	P1
6	D11	6 days	Mon 29.01.18	Mon 05.02.18	R4	5FS-1 day	P1
7	E11	2 days	Mon 05.02.18	Tue 06.02.18	R5	6FS-1 day	P1
8	A21	5 days	Wed 03.01.18	Tue 09.01.18	R1		P2
9	A22	6 days	Fri 05.01.18	Fri 12.01.18	R1	8FS-3 days	P2
10	B21	4 days	Wed 10.01.18	Mon 15.01.18	R2	9FS-3 days	P2
11	B22	4 days	Fri 12.01.18	Wed 17.01.18	R2	10FS-2 days	P2
12	C21	5 days	Tue 16.01.18	Mon 22.01.18	R3	11FS-2 days	P2
13	D21	5 days	Fri 19.01.18	Thu 25.01.18	R4	12FS-2 days	P2
14	D22	5 days	Thu 25.01.18	Wed 31.01.18	R4	13FS-1 day	P2
15	F21	4 days	Wed 31.01.18	Mon 05.02.18	R6	14FS-1 day	P2
16	E21	3 days	Mon 05.02.18	Wed 07.02.18	R5	15FS-1 day	P2

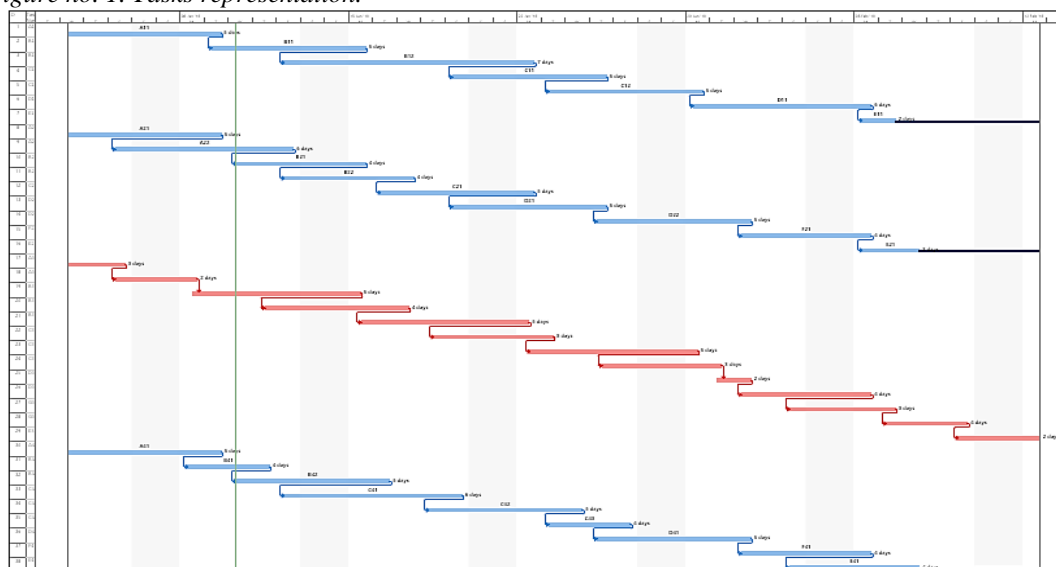
Source: Author's work.

For the type of the organization of production the authors chosen the mixed planning with finish-to-start lags between the tasks.

### 3. Calculate the resources cumulative task

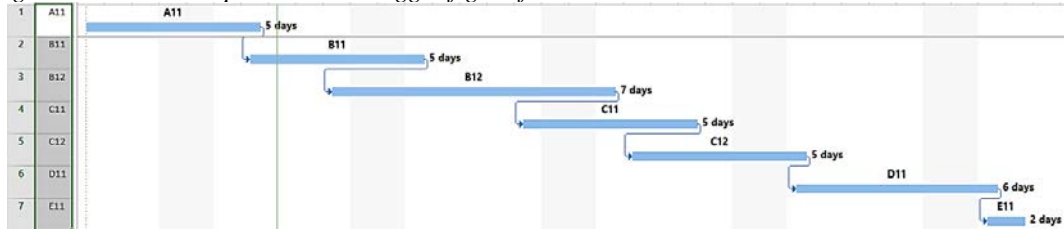
The first step of any production planning is introduction of data and the first schedule of that data. In figure 1 and 2 the authors shows how the Microsoft project 2013 schedule the tasks fed to the software.

Figure no. 1. Tasks representation.



Source: Author's representation using Microsoft project 2013.

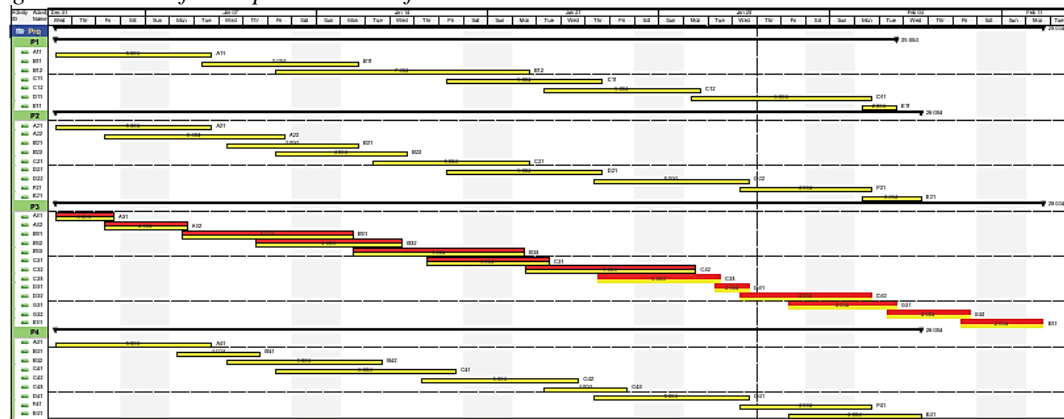
Figure no. 2. Tasks representation. Bigger figure for better view



Source: Author's representation using Microsoft project 2013.

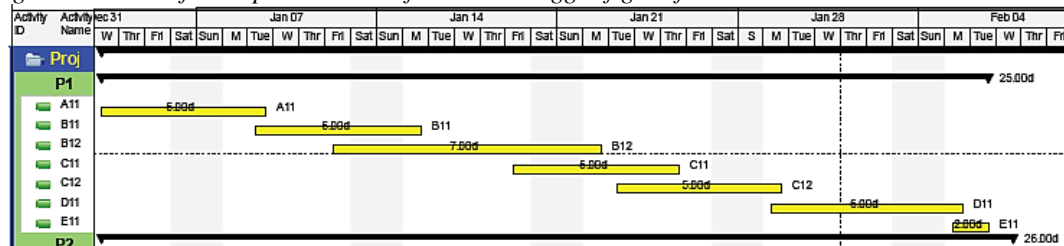
In figure 3 and 4 the authors shows how the Oracle Primavera P6 Professional schedule the tasks fed to the software

Figure no. 3. The first representation of the tasks.



Source: Author's representation using Oracle Primavera P6 Professional. (See references)

Figure no. 4. The first representation of the tasks. Bigger figure for better view



Source: Author's representation using Oracle Primavera P6 Professional.

For the resources cumulative task graphic representation the authors choose the two phases of the leveling process: the unleveled phase and the leveled phase.

In order to reveal the graphic representations of resources cumulative task one can use two at least three possibilities:

1. Graphics elaborated by the software (see figures 8 and 9);
2. Graphics based on values extracted from the software reports (se figures 5, 6 and 7);
3. Queries for the software of both value and graphics, if the software has the capabilities (both Microsoft Project 2013 and Oracle Primavera P6 Professional have those capabilities).

The authors choose for this paper the first and second way of graphic representation considering the need to reveal both types of problems.

First the authors extracted the values for the considered project, from the Microsoft project 2013. In figure 5 there is an example of the resource R1 with a total of 208 hours in 8 days, for 6 task, but we must have in mind that in this case the resources are unleveled.

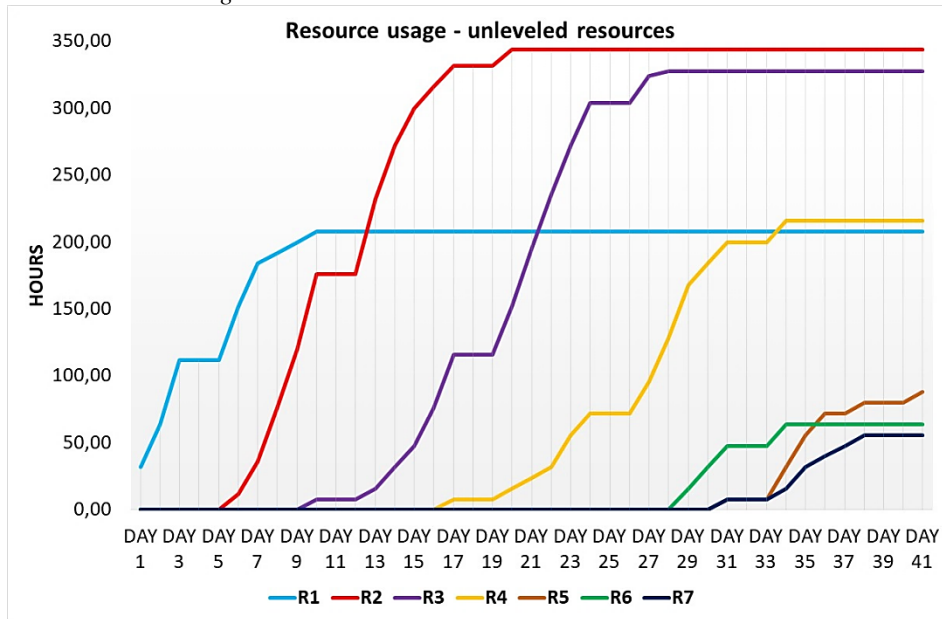
Figure no. 5. Resource usage example.

ID	Resource Name	Work	Details	W	T	F	S	S	08 Jan '18	M	T	W	T	F
1	R1	208 hrs	Work	32h	32h	48h			40h	32h		8h	8h	8h
	A11	40 hrs	Work	8h	8h	8h			8h	8h				
	A21	40 hrs	Work	8h	8h	8h			8h	8h				
	A22	48 hrs	Work			8h			8h	8h	8h		8h	8h
	A31	24 hrs	Work	8h	8h	8h								
	A32	16 hrs	Work			8h			8h					
	A41	40 hrs	Work	8h	8h	8h			8h	8h				

Source: Author's representation using Microsoft project 2013.

Using the data for all the 7 resources the authors used Microsoft excel graphics to represent the evolution for the cumulative task, showed in figure 6.

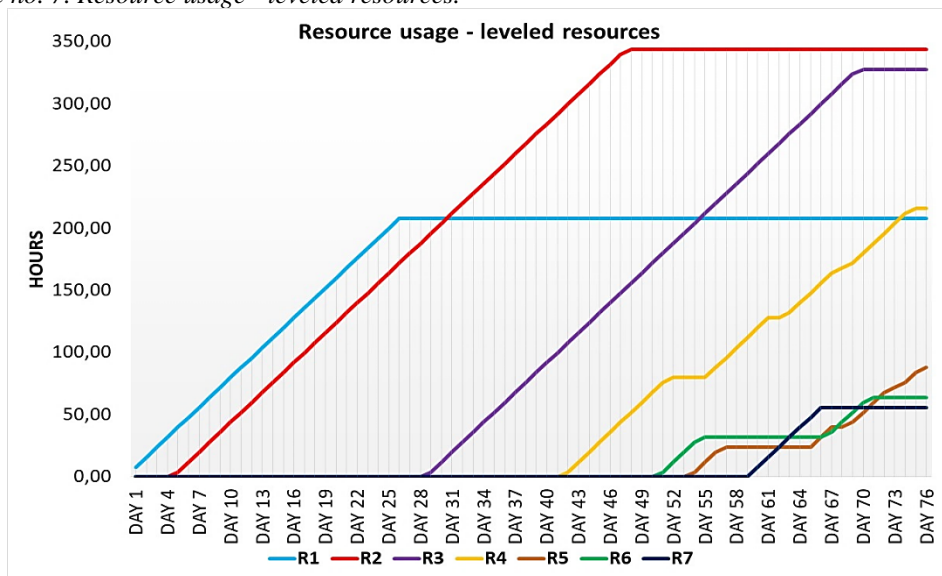
Figure no. 6. Resource usage - unlevelled resources.



Source: Author's representation using Microsoft excel 2013.

After the resources overallocation are leveled, the values for the resource cumulative task reveals a different graphic, represented in figure 7.

Figure no. 7. Resource usage - leveled resources.



Source: Author's representation using Microsoft excel 2013.

The second way to represent the resources cumulative task, that the authors considered, is the automatic graphical representation that the software have built in. The Oracle Primavera has default representation of resources cumulative task evolution (while in Microsoft project 2013 the resources cumulative task evolution must be accessed by the user), represented by a green line in figure 8, showing the case of unlevelled overallocated resources.

Figure no. 8. Resource usage - unlevelled resources.



Source: Author's representation using Oracle Primavera P6 Professional. (See references)

In figure 9 the Oracle Primavera shows cumulative task evolution in the case of leveled overallocated resources is shown.

Figure no. 9. Resource usage - leveled resources.



Source: Author's representation using Oracle Primavera P6 Professional.

### 3. Conclusions

First the authors must emphasize that the leveling process for the used data had the same result as the leveling process was used on both software Microsoft Project 2013 and Oracle Primavera P6 Professional.

The graphical representations of resources cumulative task gives information and data for the calculus of the costs based on the resources allocation in order to calculate hourly or daily use of the resources and so to determine the costs or needs for new more resources for the decrease of the project time.

The two software has the capabilities to show the values and the graphics for the resources cumulative task. The authors choose to use a combination of values

#### 4. References

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- [https://docs.oracle.com/cd/E68202\\_01/client\\_help/en\\_US/helpmain.htm?toc.htm?activities\\_window.htm](https://docs.oracle.com/cd/E68202_01/client_help/en_US/helpmain.htm?toc.htm?activities_window.htm) (for figures no. 8 and 9);
- <https://support.office.com/en-us/article/level-resource-assignments-49fb52d5-ff4a-4b1f-b5c1-af057ab38ba2> (for figure no.5);



## Leveling a Simple Manufacturing Process Using Microsoft Project and Oracle Primavera

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### Abstract

*The present paper main objective is to put forward two software application tools: Microsoft Project 2013 and Oracle Primavera P6 Professional, used for the management process planning, especially for industrial projects. Second goals is to compare some feature of the two software and emphasize some aspects used for an easier use. The presentation and comparison considered four small processes with a total of 38 activities. The two software are used for the leveling of seven labor resources defined for the achievement of the activities. The results of the analyzes point out that even the two tools have the same purpose, Microsoft Project can be used for general simple to average processes' complexity and size, Oracle Primavera has more specialized possibilities (libraries and specific project plans) and more possibilities to model the actions needed for better leveling.*

**Key words:** project management, MSProject, Oracle Primavera

**J.E.L. classification:** M11

### 1. Introduction

The planning of processes and the phases or tasks or material is at the base of every business in terms of time reduction and, in the end, for the main goal of lowering the costs. The theory of planning have at its basis the schedule and leveling of tasks and resources on criteria like constrains or lacks etc. For this to be managed in programs and software were developed for easier, better planning and for dealing with complex systems and plans.

So, starting from this, the main objective of the present research is to put forward two software application tools: Microsoft Project 2013 and Oracle Primavera P6 Professional, used for the project management, especially for industrial projects. Second goals is to compare some features of the two software and emphasize some aspects used for an easier use of them.

The relevance of the present work rises from the need to understand how to work with different software and which are the specific characteristics of those software for the resources leveling process.

For the present paper the authors chosen two common and known software: Microsoft Project 2013 and Oracle Primavera P6 Professional.



## 2. Data

The data used are represented by 38 coded tasks with durations between 2 and 7 days, representing 4 items and using 7 resources, also coded.

For easier representation and analysis the tasks were named with letters and were coded as follows: Axy, where: A is the code for the task, x – the number of the item and y – the number of the tasks type A that are used for the item x. Also, the resources were coded as Rn, where n – the attributed to the resources.

For the data used an example is presented in table 1 where, for paper space reason, only two items are presented. The table shows the task name, the task duration, the start day, the finish day, the resource name, the predecessors of the task and the item that the task are belonging to and gives it the code.

*Table no. 1 Example of tasks for the items P1 and P2.*

Nr. Crt.	Task Name	Duration	Start	Finish	Resource Names	Predecessors	Item
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13	D21	5 days	Fri 19.01.18	Thu 25.01.18	R4	12FS-2 days	P2
14	D22	5 days	Thu 25.01.18	Wed 31.01.18	R4	13FS-1 day	P2
15	F21	4 days	Wed 31.01.18	Mon 05.02.18	R6	14FS-1 day	P2
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*Source:* Author's work.

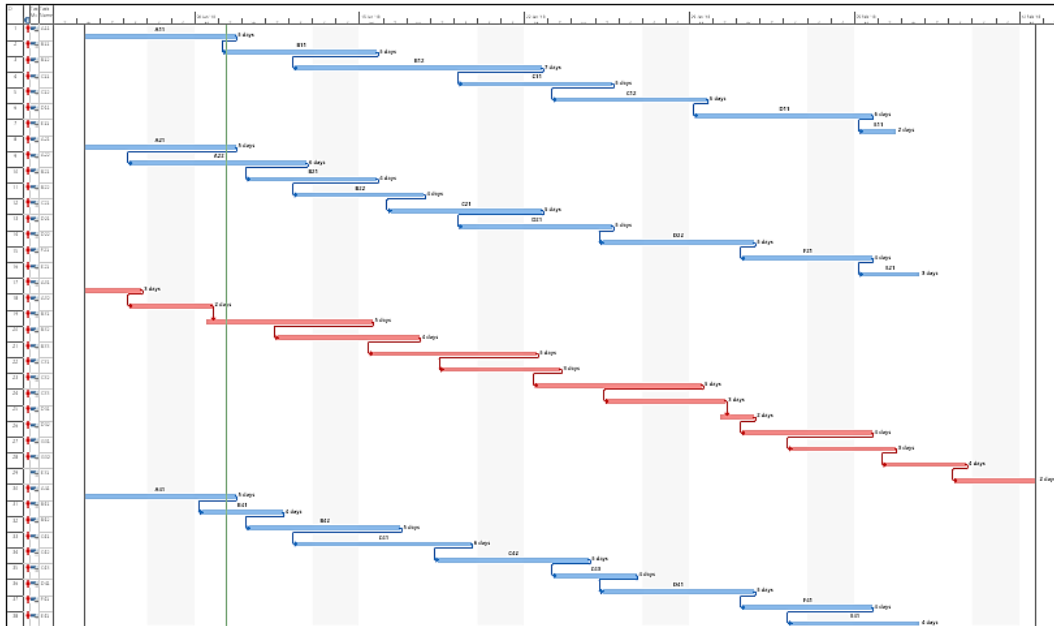
For the type of the organization of production the authors choose the mixed planning with finish-to-start lags between the tasks.

## 3. Software application

The first step of any production planning is introduction of data and the first schedule of that data. In figure 1 and 2 the authors shows how the Microsoft project 2013 schedule the tasks fed to the software.

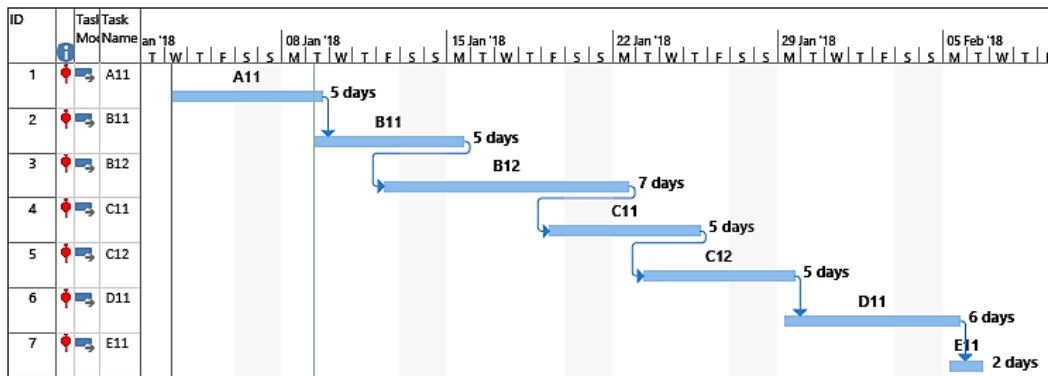
In figure 3 and 4 the authors shows how the Oracle Primavera P6 Professional schedule the tasks fed to the software.

Figure no. 1. The first representation of the tasks. Microsoft project 2013.



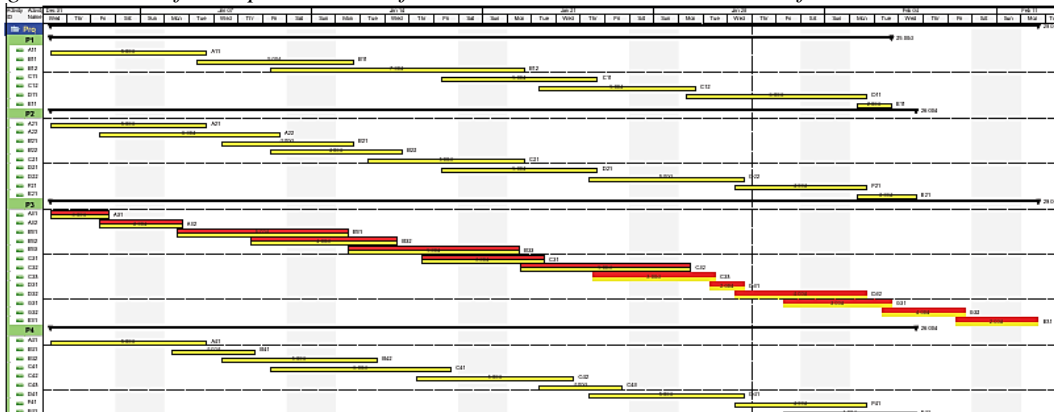
Source: Author's representation using Microsoft project 2013.

Figure no. 2. The first representation of the tasks. Microsoft project 2013. Bigger figure for better view.



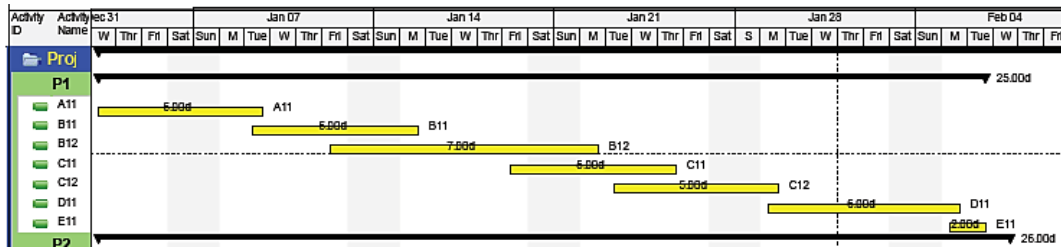
Source: Author's representation using Microsoft project 2013.

Figure no. 3. The first representation of the tasks. Oracle Primavera P6 Professional.



Source: Author's representation using Oracle Primavera P6 Professional. (See references)

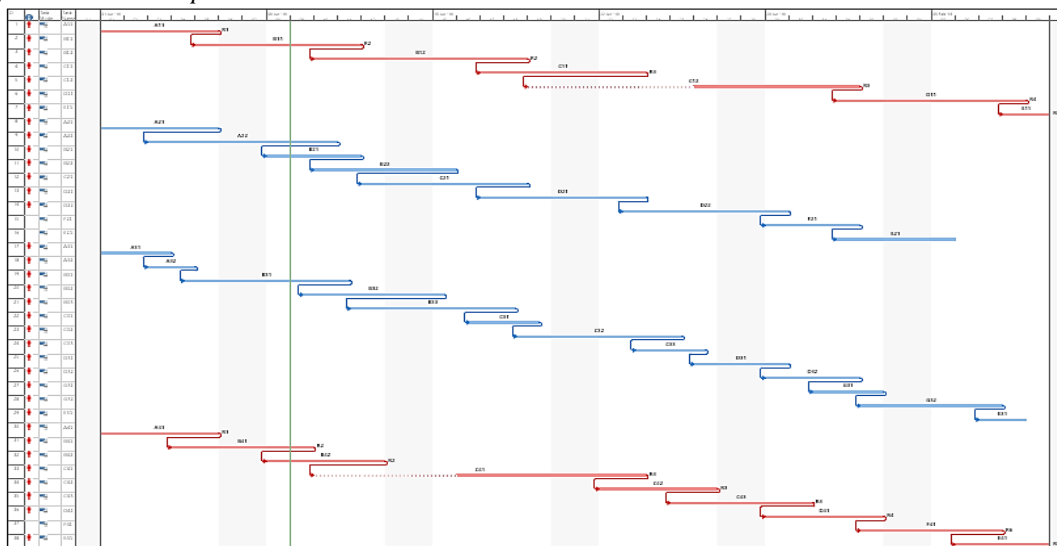
Figure no. 4. The first representation of the tasks. Oracle Primavera P6 Professional. Bigger figure for better view



Source: Author's representation using Oracle Primavera P6 Professional.

The second step is to add constrains particular to the project, to the planning, to the task or to the resources. Constrain can imposed on the task regarding the time and the way the task behaves or can be imposed to the resources as their calendar or units. In figure 5 tasks C21 was delayed with 5 days from the previous start and tasks C41 was delayed with 4 days from the previous start.

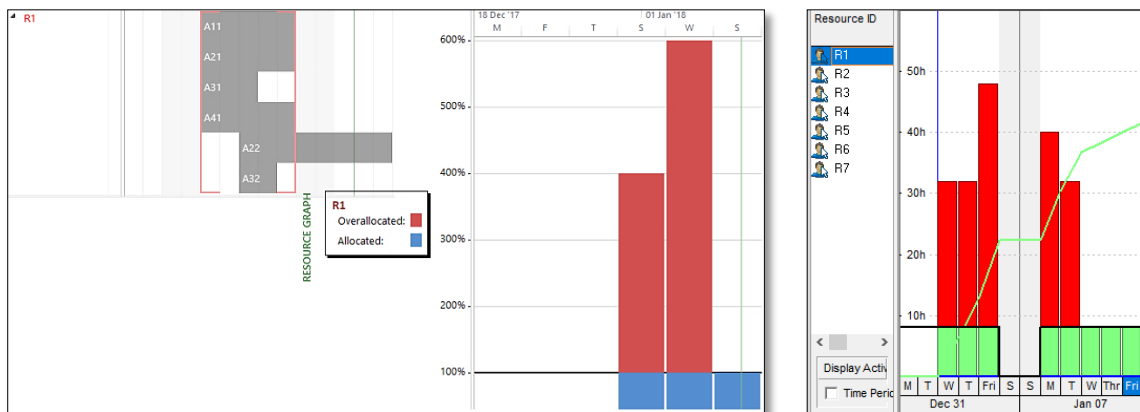
Figure no. 5. Task representation with constrains.



Source: Author's representation using Microsoft project 2013.

The next step consist in the analysis of the resource allocation graph that shows the critical resources and the over-allocations. In figure 6 the authors shows the representations for both software of the R1 resource over-allocation.

Figure no. 6. Resource allocation graph.



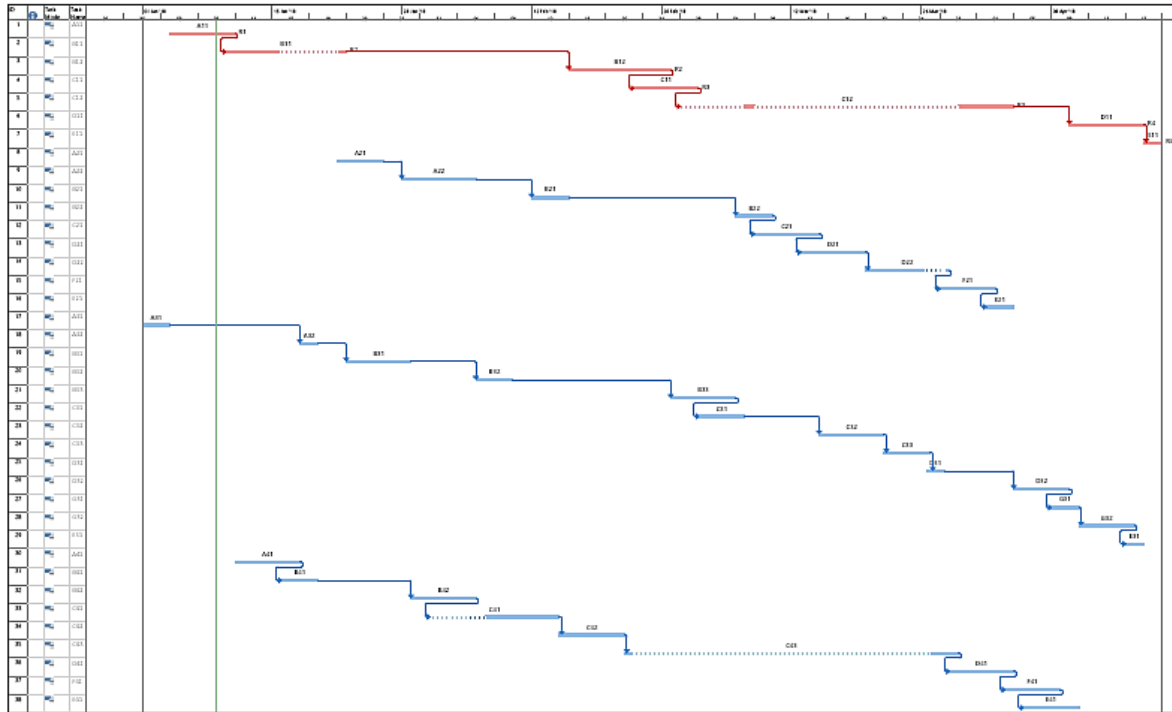
a)

b)

Source: Author's representation using a) Microsoft project 2013; b) Oracle Primavera P6 Professional. (see references)

The final step of the planning before the analysis of the planning results and effectiveness is the leveling. In figure 7 the leveling of resources. The result of the leveling must be the removal of the over-allocations.

Figure no. 7. Resource leveling.



Source: Author's representation using Microsoft project 2013. (See references)

#### 4. Acknowledgement

For better understanding of how the two software works the authors analyzed few differences. Because is one of the most important (if not the most important), the way the data are fed in. As tasks can be defined with very few differences between the two software the authors turn the attention to the resources.

Considering the Oracle Primavera the new resources can be defined as labor, material or nonlabor, but the most important feature is the predefined library with many types of resources belonging to certain industries and domain of manufacturing.

In the case of Microsoft Project the resources are not defined as different types or presented in a library.

The leveling is also essential so the difference about the approach of how the process can be adjusted through the requirements of the user.

Microsoft Project offer the possibility to level the resources using the following conditions:

- Level only within available slack;
- Leveling can adjust individual assignment on a task;
- Leveling can create splits in remaining work;
- Level resources with the proposed booking type;
- Level manually scheduled tasks.
- Leveling order (that is the main condition):
  - Task ID only;
  - Standard
  - Priority, Standard.

Oracle Primavera P6 Professional give almost the same options, but also add more possibilities to level the resources, suing conditions like:

- Consider assignment in other projects with equal/higher than ...;
- Preserve schedule early and late dates;
- Level resources only within Total float;
- Leveling priorities: here the specialist can define different priorities from several variants (more than the 3 ones from the Microsoft Project).

## 5. Conclusions

The authors considered the following conclusions based on the work and experiences with the two software analyzed in the present paper.

Even that both software are giving the same results the Microsoft Project looks more close to small and medium number of task, while the Oracle Primavera P6 is more interested to big planning with the possibility of largely internet implication in the cooperation between different parts or projects from different regions of the world.

The Microsoft Project improved greatly from the previous versions, especially reporting and different type of viewing and is strong point on the way the software is revealing the view of different forms or graphs or diagrams. The Oracle Primavera P6 also have new features (as against Primavera P3 for example) and the way the user interact with the software is changed and looks more easy to use.

Both software offers the possibility to change or create graphical representation in concordance with the user's needs.

Another strong difference is that Primavera looks more specialized and more accurate from the business planning point of view, giving more possibilities of panning like Cost accounts, funding resources, projects portfolios etc.

For new users

## 6. References

- [https://docs.oracle.com/cd/E68202\\_01/client\\_help/en\\_US/helpmain.htm?toc.htm?resources\\_windo\\_w.htm](https://docs.oracle.com/cd/E68202_01/client_help/en_US/helpmain.htm?toc.htm?resources_windo_w.htm) (for figure no. 3);
- [https://docs.oracle.com/cd/E68202\\_01/client\\_help/en\\_US/helpmain.htm?toc.htm?resources\\_windo\\_w.htm](https://docs.oracle.com/cd/E68202_01/client_help/en_US/helpmain.htm?toc.htm?resources_windo_w.htm) (for figure no.6.a);
- <https://support.office.com/en-us/article/view-your-team-s-work-with-team-planner-2ff8816a-c332-45b9-8c53-633ec7db6a8a> (for figure no.6.b);
- <https://support.office.com/en-us/article/level-resource-assignments-49fb52d5-ff4a-4b1f-b5c1-af057ab38ba2> (for figure no.7).

## Pursuing Happiness in the Workplace, Purpose and Challenge for Human Resources Management

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### Abstract

*Through this paper we aim to demonstrate that happiness at work is particularly relevant to our existence, just as for each of us individual happiness is a priority. Taking into account that we all spend most of the day at work, surrounded by our colleagues, locked at our workstations, getting happiness at work becomes imperative.*

*Considering that the phrase "happiness at work" is a relatively recent one, and that at present it is still considered a myth, the study and analysis of the concept represents a real mission and a special challenge both for the management of human resources, and for managerial psychology.*

*The concept of happiness at work will be studied, both from the manager's perspective and from the employees' perspective, especially that enthusiasm, devotion, fidelity and happiness cannot be "acquired" by organizations, as no true leader can be "bought" by to employees.*

**Key words:** Human resources management, job, happiness, satisfaction

**J.E.L. classification:** M12, M54, J53

### 1. Introduction

Happiness at work is closely linked to everyone's perception of prosperity (to prosper, but not in the material sense of the notion). When individuals engage in work so that they have more relational connections, more chances to try and learn new things, to support others, giving meaning to the work they are doing, they report higher levels of prosperity.

It is imperative to introduce in the equation of happiness at work, on the one hand the leadership (the process of directing individuals and / or their ideas) and on the other hand the employees, especially since on average at work, we spend 90,000 hours of our life, which is a significant part of our lives. (Sebastian, 2017) The internal and external challenges of any organization create unique, unique situations, and the manager is in a position to make decisions and initiate actions influencing the professional life of employees. Many situations generate dissatisfaction, frustration, even depression, "happiness at work" being limited, blocked or even forgotten.

Happiness at work is a relatively new concept, too little treated by human resources management specialists and more related to the component of managerial psychology or the psychology of the employer and the employee, so of the emotional dimension, the ability to reason with and about emotions.

From this perspective, happiness at work is different from work satisfaction (which, in a way, is a component of it). Assuming, categorically, the creation of an environment that allows employees to perform, an environment in which they feel valued and valued, feel comfortable, and determine their involvement "body and soul." The organization in which employees are happy at work must also allow an area of 'emotional development arena'. But it is not enough, at present, including the emotional intelligence of the organization, which derives from the relations between employees (working relationships, formed and under the influence of emotional skills).

Workplace climate determines job happiness or workplace stress. In this context, we cannot avoid talking about stress management, which refers to the ability to tolerate stress and to control momentum impulses.

Another key issue to be dealt with in the context of "happiness at work" is its performance and management, because obviously without performance management, work cannot be organized in such a way as to obtain optimum results.

Cultural differences also exert a major influence on the perception of happiness at work, just as it exerts a major influence on the employee rewarding process. The "money talk" principle is not always the equivalent of the principle of happiness at work. Each individual has their own perceptions about their professional career and their life as a whole. The individual goals at work are different, the perception of feedback differs, so that the subject of happiness at work, no matter how much we want it, cannot be an objective discussion.

## **2. Current Literature Review**

If, some 30 years ago, psychologists and economists rarely discussed each other, now more and more specialists in the field of economics have realized that psychologists can make an important contribution to solving economic problems (Bradshaw, 2013).

A particularly interesting article that distinguishes between work satisfaction and happiness at work and explains why the first term is included in the second is "The Right and Wrong of Pursuing Happiness in the Workplace "(Positive and Negative Practices in the Process of Making Happiness at Work) (Gomez, 2017). If satisfaction is measurable and objective, happiness is extremely subjective. This is why we need to be cautious when studying this phenomenon.

Thus, an employee may want a higher salary to be happy, while another may require projects to be remarked, to be recognized in public (including diplomas and promotions). An employee is attracted to a large workspace and equipped with minimalist furniture, unlike another who would like a sushi bar and office desk colleagues, while his colleagues would like loyalty programs offered by the company (excursions free, fitness subscriptions, vacation leave) and so on. From an article on workplace happiness by studying renowned Romanian companies (including Flanco, Telus International, Mandarine International), happiness at work is inevitable when you are appreciated and you are constantly given the opportunity to you learn, learn and be involved in new activities. (Anghel, 2016)

Things can be presented in another light, because they are superficial people, ignore the problems, it is very easy to say they are happy at work, while others claim to be dissatisfied with what happens to work, always seeking to find the negative aspects and exaggerate the problems.

A new concept is also that of a total employee. The total employee (manager or subordinate) is the individual involved in his work in all aspects (physical, intellectual, emotional and spiritual). He puts into play all the capabilities at his disposal. It has multiple abilities and assumes multiple responsibilities and roles (Câdea & Câdea, 2005, p. 32).

We do not have to treat indifferently the problem related to the type of activities carried out. We refer here to the different impact of routine activities on non-routine activities. "Formal structures deal with the routine extremely well, but not the change" (Kotter, 2009, p. 129), so all those involved in an organization, whether employed or employers, are spending more and more time trying to cope with disputes more and more vindictive. Certainly, there is a need for changes imposed by both the competitive environment and the natural evolutions that occur in any field of activity, requiring real changes in mentality in the rooted organizational cultures.

Motivation originates within the individual, and the employee is also motivated by the promised rewards. It is, therefore, recommended that organizations, through their leaders, communicate permanently the possible forms of rewards, so that employees can perceive the link between consequence, performance and effort in the clearest possible way. In this way, a strong motivating effect will be achieved, which will lead to job satisfaction and increased effort.

More and more organizations / companies / companies are investing in their employees to help them feel comfortable at work and even declare themselves happy because they are the ones who are more creative, more productive, and more loyal to the place and the likelihood that they leave the company is a very small one. This is why companies are late in providing additional financial

benefits for involved employees and delivering results. Some organizations open relaxation areas that employees can use, others offer free tolls to sports halls or health clinics, and so on.

However, we must not forget the reverse psychological component, namely: if the employee's needs are not satisfied, although he makes considerable efforts in his work, this will lead to internal tensions that no longer stimulate the individual to act on the organizational goals, him in a type of unwanted behavior. In order for an individual to be motivated at the workplace, he must be certain that performing certain activities will lead, in a natural chain to the satisfaction of his own needs, as a consequence.

In order to understand the employee's vision of work motivation, we must take into account Maslow's classification of pyramids in his work on individual development and motivation. Even if the years have passed and society has changed substantially, however, until the needs placed at the lower levels are satisfied, the higher ones do not appear as motivation. In this ample context, managers must also take into account the theory of expectations, as illustrated by Vroom. Though the ideas presented seem purely theoretical, in organizational practice, things are confirmed. Thus, the expectation theory starts from the premise that the intensity of an individual's effort in an activity depends on the value of the reward he expects to receive in return. In conclusion, motivation for work can be considered as the degree of availability of employees to involve in their work and make a sustained effort to achieve defined organizational goals, but also for them to earn the associated desirable rewards.

Managerial performance becomes a must-have in any organization, especially in a competitive environment. Achieving performance is becoming the reason for the concerns of managers and executors. A high-performance organization makes better use of the opportunities of the environment, goes beyond the obstacles it can put, satisfies quantitatively and qualitatively a certain segment of social needs, gains competitive advantage on the specific market they are operating. (Verboncu, 2005, p. 134). From the "general contextual of happiness in the organization" we inevitably get to the "happiness of the employer", who in turn has his own expectations and who believes that we should continue to focus on the goal of employment and strive to get more if we expect more from ourselves, we have more chances to get more (Laurence E. Lynn, 2004, p. 119).

In order to achieve so much coveted performance, it is necessary, on the one hand, employees to be happy and managers to be able to maintain the state of contentment, satisfaction, happiness at work, through special skills. In the end, it is about the happiness at work of both parties involved (both managers and subordinates), which means honesty assumed by both sides, each party desiring the respect of the other.

Exploring the nature of the employment relationship referred to above (the relationship between the employer and the employee) and investigating the formal or informal relations between the two sides, it is first and foremost necessary to create a climate of trust in this relationship so that possible formal happiness at work. The formal dimension includes rules and procedures, and the informal one covers opinions, expectations and assumptions (Armstrong, 2009, p. 177).

Promoting job happiness in recent years in big companies with large business figures is no longer optional. There is a growing desire for the confluence of what employees want and what employers are looking for. After all, the first holiday will not compensate for the toxic atmosphere in the office, the misunderstandings with the bosses, or the routine in activities that does not seem to lead anywhere. (Anghel, 2016).

### **3. Collection of Data**

In order to undertake a concrete analysis of the subject, we applied one a questionnaire of 50 respondents (of different professions and ages), belonging to both the public and the private environment (both middle and high school employees).

In this respect, we conceived a number of 13 questions, elaborated in a clear and accessible language (the form can be analyzed within a maximum of 10 minutes), all of which have the variants of answers presented in the questionnaire, for ease of completion, being drawn up in such a way that the probability of refusal to pass it is minimized and the applicants do not give up completing it on the way.



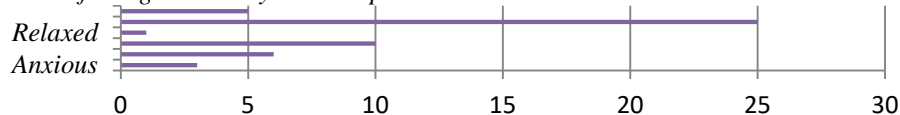
The questionnaires were handed over to the people concerned, with the possibility of completing them at the time of handing-in or at home, each of them being eighth. All respondents preferred to browse and complete the questionnaire in privacy, which is why they returned the next day.

#### 4. Data Analysis and Results

Taking into account all the aspects mentioned in the first part of the paper, and bearing in mind that, to date, worldwide, there is a study entitled The World Happiness Report (Helliwell, Layard, & Sachs, 2017), which does not include studies measuring happiness in the specific context of the workplace and only addressing the concept of professional satisfaction, which correlates with happiness and subjective well-being, we considered it particularly appropriate to carry out a case study exclusively on the subject. Thus, through the questionnaire we can determine to what extent it contributes to achieving happiness, job attractiveness, organizational climate, salary level, additional rewards, manager and team recognition, job stability and so on.

Thus, to the simple question, "How do you feel in the current workplace?" The options and answers expressed in percentage terms, as shown in chart no. 1.

Figure no. 1. The feeling created by the workplace



Source: Own research of the authors

In terms of job happiness, 34 of respondents consider that it has an important contribution to the general happiness of their lives, 12 say they do not think happiness at work affects the happiness of their lives, and the difference of 4 they did not even think that the two concepts would have any connection.

The questionnaire also included a question in which respondents had to arrange in order of importance, a number of possible benefits that they wanted from the workplace, so that the employees' preferences were classified as follows: a. a good salary; b. job security; c. a pleasant entourage; d. interesting and varied work; e. continuous professional development. This means that managers have to take these issues into account, and before offering opportunities for autonomy and advancement, they must provide stability to employees as soon as they offer them the possibility of having a satisfactory income.

Surprisingly, most of the respondents (34 answers from 50) said that, even if they inherit a lot of wealth or would win the lottery, they would continue to work.

Regarding the proportion of work done with pleasure, interviewees responded according to figure no. 2, it can be noticed that, in general, much of the work done is agreed by the employees.

Figure no. 2. Percentage of work done with pleasure by each employee



Source: Own research of the authors

The next question leads the respondents to balance the rewards received (salary and other benefits) to the work they have done, and the result found was a gratifying one, meaning that 62% of them said they were satisfied, only 34% believed that they make too much effort for salary and other compensations (the remaining 4% did not think about this and did not make a calculation in this sense).

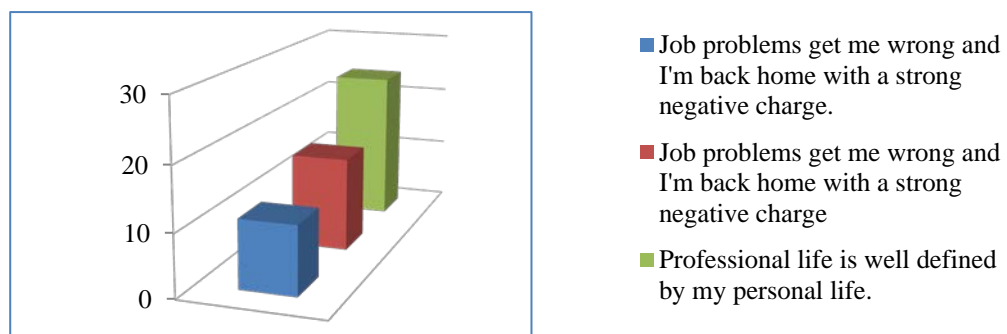
When asked whether outside the hours of the program they developed friendship with colleagues or bosses, the 50 people responded in the following way: 15 of them have friends from their colleagues and this helps to improve working relationships, 23 say they have developed friendships with just some of their colleagues, and the other 12 confess that their circle of friends is completely different and that they deliberately break the work environment to really relax.

The issues with which interviewed employees are confronted at work are the following, in order of their notation by respondents: lack of enough time to solve tasks, lack of future prospects, colleagues' misery, and lack of communication with hierarchical leaders.

Another issue addressed by our study was how each employee could contribute to the good work of his organization. The answers revealed the following aspects: by self-improvement, following participation in courses and seminars (18%), through innovative initiatives and ideas (32%), by becoming the best team partner, this being accomplished concurrently with finding harmony and inner balance (50%).

The last question deals with the correspondence between the professional career and the personal life of each employee, as well as the way one affects the other. From this perspective, the question "Do you sometimes have the impression that the problems in your personal life affect your ability to work or, on the contrary, that problems at work affect your personal life?" The answers were noted according to figure no. 3.

Figure no. 3. The way in which personal life problems affect work capacity



Source: Own research of the authors

Happiness at the workplace is the perception of each individual, his adaptability, resistance to change, the level of culture and training, and the influences from the family environment, as well as the social environment from which he comes.

## 5. Conclusions

Therefore, in a similar organizational environment, an employee can be satisfied or even happy, while another may feel unfulfilled or even stressed. At the same time, the employee must have the sense of reality and be able to realize his own value, so that he can negotiate his rewards.

In order to be truly happy at work, we need to contribute, as little as possible, to the happiness of others who work with us and who also want their state of well-being. In this sense, a natural consequence is the approach of empathy and, why not, juggling with social skills.

Team spirit is a very important component for an organization, because no matter how prepared and competent a member would be, it will certainly be able to improve its overall results, combining its skills and performance with others. That is why Steve Anderson's statement, "Alone we are smart. Together we are brilliant!", has become so famous. In the context of gaining happiness at work, we believe that the goal of team formation, beyond conjugating efforts to achieve optimal solutions, is to become more than teammates and build relationships that can be sustained beyond office. In order to be truly happy at work, we need to contribute, as little as possible, to the happiness of others who work with us and who also want their state of well-being. In this sense, a natural consequence is the approach of empathy (which is related to the awareness

of the feelings, needs, and experiences of others) and, why not, juggling with social skills (influencing others, persuasion, team spirit).

It is an organizational chain whose interrelationships are interdependent, and this is why "happiness at work" cannot be overlooked, but consciously assessed if it is to achieve organizational performance and profit.

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## **Working Capital Management and Firm Profitability. Empirical Evidence for the Romanian Industry**

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### **Abstract**

*The paper aims on empirically testing the connection between a firm's liquidity, or else a firm's ability to manage short-term liabilities, without undue stress and its profitability. We are using both a static and dynamic measure of firm liquidity: the traditional current liquidity ratio alongside one of the most frequent used working capital management indicator, the cash conversion cycle. An empirical analysis is performed based on 50 listed companies from Bucharest Stock Exchange, covering various industries. The empirical results are confirming the previous research that has confirmed the negative connection between the days sales outstanding (DSO), respectively the days inventory outstanding (DIO) and the profitability of the firm, while cash conversion cycle seems to be positively connected with the firm profitability, in contradiction with some of the previous empirical literature.*

**Key words:** ROA, cash conversion cycle, working capital, liquidity

**J.E.L. classification:** G30, G32

### **1. Introduction**

The connection between working capital and the profitability of the firm represents one of the most important financial management concerns. A great number of companies invest large amount of their money in financing working capital. However, there is a trade-off between liquidity and profitability, an excess of liquidity being able also to influence negatively the firm profitability. Cash conversion cycle represents one of the operational efficiency indicators of the firm, showing how well a company deals with paying its liabilities on time, not incurring penalties or even facing bankruptcy risks. Long time inventories or receivables, can put companies at risk, when not adequately capitalized. The small companies are usually the most affected ones, since their short-term financing is more difficult to achieve and often, more expensive.

The motivation of the research lies in the lack of empirical evidence that have focused on the management of the working capital subject and its impact on the firm profitability, with application on the Romanian industry. The remainder of the paper divides into: section 2, which makes a review of the main empirical research that has approached this subject, section 3, which outlines the used methodology and data, section 4, that presents the achieved results while in section 5 we can find some overall conclusions and further research proposals.

### **2. Theoretical framework**

Most of the empirical research that has outlined the relationship between working capital, cash conversion cycle and profitability having in consideration European samples have focused on the more developed European countries and less on the Romanian case. Although scarce, the empirical

papers that have approached the Romanian case can be depicted in the table below (Table no.1), alongside the methodology, time span and main results:

Table no. 1. Main empirical literature on European samples

Authors	Sample of companies	Time span	Methodological approach	Obtained results
Botoc (2013)	67 Romanian companies	2001-2011	OLS	Negative connection between cash conversion cycle and profitability, while there is found a positive relationship between cash and profitability
Miloş and Miloş (2014)	Romanian pharmaceutical sector	2002-2012	Pooled EGLS regression	Negative relation between CCC and profitability
Cristea and Cristea (2016)	17 Romanian companies	2011-2015	Pearson correlation	Negative relation between CCC and ROA
Vintilă and Nenu (2016)	50 Romanian companies	2005-2014	Panel data regression	Negative relation between liquidity ratio and ROA
Other European countries				
Authors	Sample of companies	Time span	Methodology	Results
Aytac et al. (2016)	France	2003-2014	GMM estimation	No optimal level for CCC, WCM did not impact profitability in a significant way
Chatterjee (2010)	UK	2006-2008	Pearson correlation	Negative relationship between working capital management and profitability
Garcia-Teruel and Martinez-Solano (2007)	Spain	1996-2002	Panel data	Negative relationship between working capital management and profitability
Lazaridis and Tryfonidis (2006)	Greece	2001-2004	Pearson correlation	Negative relationship between working capital management and profitability
Deloof (2003)	Belgium	1992-1996	Pearson correlation	Negative relationship between working capital management and profitability

Source: realized by authors, based also on Milos and Milos (2014)

### 3. Methodology and data

The method of selection of the variables in this study was influenced by the prior empirical research that has analyzed the connection between working capital management indicators and firm profitability. The relationship has been estimated using the following regression:

$$ROA = \alpha + \beta_1 \cdot CCC + \beta_2 \cdot DSO + \beta_3 \cdot DIO + \beta_4 \cdot DPO + \beta_5 \cdot CR + \beta_6 \cdot DR + \beta_6 \cdot SZ + \varepsilon_{i,t}$$

The *cash conversion cycle* is one of the most often used indicator to capture the efficiency of the working capital management. It measures how long an investment is locked up in the production before turning itself into cash, that is to say, the period of time necessary for the inventories to become sales and sales to be made cash, which is further used in order to manage a firm's liabilities. Longer term payables are considered a source for the working capital of a company, while shorter term receivables increase the working capital available to the firms. In the empirical literature, while we find mixed results for the connection between cash conversion cycle and the profitability, the majority of the papers find a negative relation between the two.

*Days sales outstanding* reflects the duration in days for a company to effectively collect the company account receivables. There is expected a negative connection with the profitability, since a larger days sales outstanding is putting pressure on the available working capital.

*Days inventories outstanding* reflects the period necessary for the inventories to be turned into cash. There is expected a negative connection with the profitability, since larger periods for transforming inventories into cash affect negatively the achieved profitability.

*Days payables outstanding* reflects the amount of time necessary for a company to pay its suppliers. The results are also mixed considering the fact that while, in most cases, firms would benefit from a prolonged period of payment, taking it as an interest-free financing period, there could also exist some financial disadvantages arising from the discounts or other incentives that suppliers might offer to earlier payments.

We used several control variables, such as the current liquidity ratio, the indebtedness ratio or the size of the company in order to increase the model consistency. The calculation of the variables can be depicted below (Table no.2):

Table no. 2. Variables used in the panel regressions

Variable		Description
<b>Dependent variable</b>		
Return on assets	ROA	Net income/Total assets
<b>Independent variables</b>		
Cash conversion cycle	CCC	DSO+DIO-DPO
Days sales outstanding	DSO	Accounts receivables/Sales x 365
Days inventory outstanding	DIO	Inventories/Sales x 365
Days payables outstanding	DPO	Total debt/Sales x 365
Current ratio	CR	Current assets/Current liabilities
Indebtedness ratio	DR	Total debt/Total assets
Size of the company	SZ	Ln (Sales)

Source: realized by authors, based on [www.investopedia.com](http://www.investopedia.com)

The analysis sample comprises 50 companies from various industries. The period taken into consideration was 2003-2014. The source of the data was provided by Tradeville, one of the main intermediaries on the Romanian stock market. The sample of companies was structured, by industry, as follows (Table no.3):

Table no. 3. Structure of the sample. Number of firms/industry

Sectors	Number of companies	Sectors	Number of companies
Metalurgy	2	Automotive	3
Real estate and constructions	6	Transport and logistics	4
Petroleum and gas	7	Industrial equipments	12
Pharmaceutical	5	Consumer goods	5
Quemical	3	Tourism	3
<b>TOTAL</b>			<b>50</b>

Source: realized by authors

#### 4. Results

A panel regression was first estimated with OLS-model and then with fixed and random effects models (we have performed Hausman test, and the null hypothesis, according to which there are no fixed effects in the model was rejected). Consequently, we present below the final estimation of the model:

Table no. 4. Econometric results

Panel EGLS (Cross-section weights) White Diagonal standard errors & covariance	
VARIABLES	
CCC	0.0000897*** (0.0000162)
DSO	-0.0000135*** (0.00000268)
DIO	-0.000103*** (0.0000194)
DR	0.034538*** (0.013904)
CR	0.0000865 (0.000189)
LNV	0.0000986 (0.003217)
Total observations	600
Number of companies	50
R-squared	0.4489
DW-stat	1.38

**Note: Standard errors in parantheses \*\*\*p<0.01, \*\*p<0.05, \*p<0.1**

Source: realized by authors

The econometric results show that from all the considered independent variables, the current liquidity ratio and the size of the company are not statistically relevant. As concerns the other independent variables, we can state that, for the analyzed sample of companies, the firm profitability is:

- positively influenced by the cash conversion cycle;
- negatively influenced by the *days sales outstanding* and *days inventory outstanding*;
- positively influenced by the *indebtedness ratio*.

#### 5. Conclusions and further research

The obtained results point to the fact that managers could improve firm profitability by diminishing the days sales outstanding or the days inventories outstanding, result which is in line with the previous empirical analyses. However, the firm profitability is positively influenced by the cash conversion cycle, as well as by the indebtedness ratio (the latter one might have to do with a positive leverage situation). Our study is limited by the relative small number of companies listed on Bucharest Stock Exchange and by the structure of the Romanian listed companies, some industries having more issuers than others on the Bucharest Stock Exchange. Further research could comparatively analyze the situation within the industries, or could take into account larger time spans or larger samples. Furthermore, larger samples belonging to the same industry, but from different countries could also provide an interesting insight on the matter.

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# The Public Urban Transport and The Tourism Marketing

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## Abstract

*A distinct activity within the transport services supply, the urban public transport is both a consequence and a cause of urban development. Through its functions, the urban public transport service allows the movement to and from various places of interest within an area not only of local residents, but also of different non-residents. In addition to this, if that locality is also a tourist destination, the urban public transport service gives tourists the possibility to travel to the various points of tourist attractions. In this paper we aim to present a few aspects related to the importance of the urban public transport service in increasing the attractiveness of the urban localities regarded as tourist attractions.*

**Key words:** urban transport, tourism, marketing

**J.E.L. classification:** M31

## 1. Introduction

The transport service is a component part of the tertiary sector; it has a major influence on the economic development of a country and contributes significantly to the quality of life of its inhabitants.

Through its specificity, the urban public transport provides the traffic of different people to certain points of interest within a locality, based on their needs (professional activity, personal needs, specific preoccupations etc.). Related to the tourism activity, through its structure, capacity, safety and speed, the transport ensures the traffic of tourists and allows satisfying their needs as much as possible.

Through its specific features and the manner in which it allows the appropriation and the application of the marketing principles and efforts within the public services' activities, the transport marketing holds a privileged place within the services marketing. Approaching the transport activity from a marketing point of view is very important. Through the size and structure of the transport infrastructure, through the quality and diversity of the activities included in the transport service, through the size and professionalism of the staff involved, the transport service contributes directly to the dynamism of the economic and social life of different localities, regions, countries or more extensive geographical areas, and represents an important element of the urban marketing approach and a major reference point in tourism marketing.

Based on the opinions from the specialized literature on multicriteria classification of services (Kotler, Ph., 1997, pp. 583-584; Lovelock, Ch., H., 1983, pp. 9-20; Olteanu, V. Cetina, I., 1994, pp. 36-47; Olteanu, V., 2005, , p.78-82), the passenger transport service can be generally viewed as holding certain specific characteristics, such as: being a service with a tangible action, acting on the human body, being supplied discontinuously through an unformalized relationship, having a low level of customization through the supplier-client contact, the features of the supplying system allow customization only to a small extent, having a high demand fluctuation, the peak of the demand exceeds the capacity of the offer, the client moves towards the supply location, the service being supplied in several locations.

There are however certain situations in which the passenger transport services are approached from a specific perspective in relation to the general perspective of the transport services marketing, situations which are determined by certain goals, interests and specific activities. Thus,

certain passenger transport services are a part of the public passenger transport services, so they represent activities that are aimed at the general interest of the members of a larger or smaller community, and are supplied by local or central institutions of public administration.

## **2. Few Aspects Regarding the Marketing of Urban Public Transport Services**

Consisting of activities of public utility, the local public passenger transport service aims to satisfy the need to transport people between different points of interest within the area of a locality. The public transport service is a part of the urban services and thus contributes to ensuring decent living conditions (Cetina, I. et al, 2009, pp. 232-236).

On the other hand, through its functions, the passenger transport service can contribute significantly to increasing the visitors' satisfaction, whether they are in the locality for a day or for longer periods of time, as tourists.

The public urban transport service has certain specific characteristics, mostly based on the specific manner in which it is founded, organized and works. Thus, according to specialists' views on the characteristics of public services, especially public utilities (Cetina, I. et al, 2009, pp. 247-248), the public transport service is organized and works under the control of an executive authority of the public administration (the representatives of the local town hall). Even though private companies can exist alongside the public supplier of the urban transport service, the main decisions regarding the authorization, the endorsement and the functioning of the local transport means and lines are taken by the representatives of the local authorities within the range of that locality. Included among the users of the urban public transport services are students traveling to and from schools, high schools, universities, employed people on their commute to and from work (each of them being able to travel by public transport on other occasions, related to satisfying certain specific personal needs, such as: solving personal issues, shopping, strolls, recreational and leisure activities etc.), pensioners, tourists and one-day visitors, freelancers, unemployed people, businessmen using public transport for various reasons (for instance, in order to avoid issues caused by the shortage of parking spaces or the high parking rates) etc. Due to the fact that the public transport services are organized and work based on rules set by the representatives of the public authorities, and that they are mainly funded from the town halls' public budget (although there are many cases of successful public-private partnerships), the marketing policy is generally formulated with certain difficulties.

Taking into consideration all these specific characteristics, the product policy in public transport services is outlined in accordance with the approaches from the services marketing literature (Lejeune, M., 1989, p. 24, Olteanu, V., 2005, pp. 167-169; Cetina, I. et al, p. 156). Thus, one can consider that in public passenger transport services, the product also consists of basic services (the actual transport of people during the journey by transport means on a certain route and during a time interval), auxiliary services (for example, the possibility to acquire a ticket from the driver, devices and equipment that facilitate access and luggage storage, providing information about the next stops, connections with other routes or transport services supplying units etc.) and additional services (air conditioning, music, providing travelers with various useful pieces of information etc.). In regards to the product strategy, the deciding authorities should channel their efforts into resolving the issues generated by the clients' needs: high quality, high rate of renewal, a range of services according to their needs. The answer to these expectations can be represented by providing a variety of modes, networks and means of transport which, at an appropriate frequency, through the technology used and the connections made, allow travelling fast and comfortably. As far as the price policy is concerned, it depends on the budget allocated by the local authorities and is closely linked to the number and structure of the travelers (traveling subventions can be granted to certain types of travelers, under different forms: free rides, discounts etc.). Tickets, passes and traveling cards distribution can be both direct (from the drivers of the transport means, from the vending machines or ticket booths of the transport companies, or from the transport companies' websites etc.), and indirect (through tourist agencies, press kiosks etc.).

Regarding the activity of promoting public transport services, it becomes more visible when a new transport mean, route, operator etc. is promoted, and is usually made through mass-media publicity (advertisements in the local press or radio), outdoor publicity (posters, panels etc., placed in large, urban agglomerations, subway stations etc.), direct marketing etc.

### **3. The Public Urban Transport and the Mix of Tourism Marketing**

In tourism marketing, the tourism product consists of several elements (Balaure, V. et al, 2005, p. 270): tangible elements (including the heritage of resources that represent tourist attractions, the general infrastructure of tourist destinations, tourist equipment), intangible elements (including not only the ensemble of services through which the tourism offer is materialized, such as the transport service, but also the elements of psychological nature that can contribute to the product's definition), communications related to the tourism product (information provided to tourists by the suppliers through promotional efforts) and product image (how tourists view the product). Based on the opinions above mentioned, one can notice that both the transport infrastructure, as well as the transport service itself, are elements with an important contribution to the definition of the tourism product, thus directly contributing to the structuring of the offer that will most appropriately meet the tourists' needs.

The importance of urban transport for our country is also emphasized in the Romania National Tourism Development Master Plan, outlined for 2007-2026, in which several factors that generate tourism issues are mentioned, such as the overcrowding of the urban roads and in the vicinity of tourist attractions, the setting of network roads, the placement and capacity of parking zones, the reduction of road capacity and the lack of discipline in urban traffic (Master Planul pentru Dezvoltarea Turismului National, 2007,p. 43).

Based on the above mentioned aspects, one can notice that among the other transport services that facilitate the tourists' transport from and towards tourist destinations, if these destinations are urban settlements, the public urban transport has an important role in tourists' satisfaction. What is more, in certain cases the tourism product image can be outlined through urban transport services and equipment, which can be considered as symbols of certain tourist destinations, such as, for instance, the San Francisco Cable Car, the Montmartre-Paris Funicular, the Polybahn or Riggiblick in Zurich, the Lycabettus Funicular in Athens, the London Underground or Double-decker bus etc. The London Underground (The Tube) is one of the oldest transport means of this kind in the world and nowadays it is a notable tourist attraction. Rides can be planned on-line and the access is facilitated through the official site of the society that administrates the transport in London (Mayor of London, Transport for London, Plan a Journey, Site-ul TfL, 2018). The integration of such transport means in the urban transport system of big cities represents one of the most successful solutions for fluidizing traffic, providing a civilized and efficient way to travel for their inhabitants and visitors, and at the same time, represents a way to gain tourists' attention and to satisfy their needs as far as transport service is concerned.

Therefore, under certain conditions, the public transport service can contribute to the representation of a complex tourism product. In collaboration with the representatives of the local or regional public authorities, the tourism agencies can include certain transport facilities in their offers. For the tourists visiting cities that are tourist destinations, the quality of the tourism product can be increased by offering various facilities through the transport services within those areas, that can cover longer periods of time (it is very important for tourists to be able to use means of transport during night or late hours, so that they can visit more tourist attractions, including the leisure and entertainment ones) and more extensive areas (metropolitan, vast areas). For instance, in Bucharest, the RATB-Metrorex unique ticket can be used for both surface transport (bus, trolleybus, and tram), and underground transport (subway), and is valid to use for 60 minutes (Regia Autonoma de Transport Bucuresti, Transport Public Integrat, Site-ul RATB, 2018). Although integrating the cost of different means of transport is an important step in increasing the client's satisfaction, a more efficient way to increase the quality of the transport service could also be by using a single integrated payment document not only for a day, but for several days, such as, for example, two, three, seven or more days, so that tourists can benefit not only from discounts, but also from less time and worries with the purchase of the travel passes.

One of the most important problems concerning the quality increase in tourism product is represented by the connections between the different means of transport within a locality, as well as the links between the lines and means of transport from a larger, metropolitan area, so that different kinds of transport passes can be included in an offer proposed to tourists. In London, for instance, from a variety of transport cards available, visitors can choose to use the Oyster Card pass, which gives the possibility to travel by multiple means of transport, to the extent of the sum of money loaded. This card can be purchased from vending machines placed in traffic points (airports, train stations, Underground stations etc.), and if its limit of money is not reached, the rest is returned to the user through these vending machines. In addition to this, another possible attractive feature in a tourism offer can be the combination of services offered by different types of suppliers, especially by the suppliers of urban passenger transport services. Very popular are the variety of passes that can be used by tourists in big cities, for instance The London Pass, The Paris Pass, Paris Visite Travel Card etc. (The Leisure Pass Group Limited WebSite, 2018; Paris Convention and Visitors Bureau WebSite) etc. By using these transport cards, and depending on the type chosen, tourists can benefit from free travels with certain means of transport in these cities (bus, tour-bus, subway, regional train, funicular etc.), and at the same time, they can visit various tourist attractions (museums, castles, cathedrals, cruises, restaurants, clubs, aquariums) in advantageous conditions. The acquisition of these travel passes through the tourism agencies represents a method of content enrichment of the tourism product. Moreover, if tourists benefit from these service discounts, as opposed to the integral costs of individual travels, the tourism agencies can take different approaches in the price policy. Although in most cases the tourists purchase these travel cards directly (through the sites of the town halls or the public transport societies, from the transport administration ticket booths, from the vending machines situated in various traffic points etc.), by including and selling these cards (under public-private partnerships) within a tourism product, the comfort of the tourists counseled in this area by the agencies' specialists could increase (even though this represents an indirect distribution from the point of view of the authorities responsible with the public transport). The main methods to promote the tourism products that include urban transport cards are specific to on-line marketing (agencies' sites, social networks), outdoor publicity (posters, panels etc.), tourism prints (leaflets, catalogues), sales promotion (special offers, gratuities, price discounts etc.).

Communicational approaches can be initiated and developed through the combined efforts of the responsible public authorities and tourism operators, but also at the tourism agencies level and, depending on the goals set, can aim to inform and raise not only the tourists' interest, but also other various categories of public (mass-media representatives, business partners etc.) that can influence the tourism activity, thus contributing, through different means, to the development of the socio-economic activity of those localities or regions.

#### **4. Conclusions**

As a basis factor in conducting the personal, social and professional life of numerous people, the public urban passenger transport can also represent an important key in providing successful tourism activities. Numerous benefits can be achieved by including this transport service, under various combinations, in different tourism products (especially those that include visiting big cities) provided by tourism operators. On the one hand, for tourists, the financial costs are reduced, as well as the time dedicated for traveling to the various points of interest within the cities that are also tourist destinations (the time spent on documenting and choosing the most advantageous transport means and routes is reduced, multiple trips can be made at a better price, different means of transport can be taken, so as to cover as many tourist attraction points as possible, optimizing the travelling time and space etc.). On the other hand, by including these transport services and by offering access to the public urban transport means under various advantageous forms (cards, passes, tickets and subscriptions for a number of days or hours etc.) in the tourism product (products such as city breaks, for instance), the tour-operators and the suppliers of tourism products can differentiate their offers and increase the tourists' interest in certain tourist destinations. Moreover, the local transport services suppliers and, implicitly, the authorities that administrate the local transport activity, can also have various benefits, such as: the possibility to plan their activity

more rigorously and to make better use of their offer, transport service payment in advance, and consequently, the possibility to benefit from the financial resources in advance, the revenue growth for the transport societies and local budgets, and moreover, the possibility to promote the services and the destination itself through tourism operators.

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# The Influence of Organizational Culture on Company Performance

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## Abstract

*Organizational culture is a matter of management, which currently is receiving much attention. Organizational culture carriers are men. However, organizations with an organizational culture already made it abstracting the people and become an attribute of the company, a part of her that has a strong impact on team members, making their behavior according to the norms and values that constitute its foundation.*

*The purpose of this paper is to highlight the role of organizational culture on firm performance.*

*Organizational culture provides a framework in which managers can implement motivational tools that influence how employees are comport. The companies with a strong organizational culture are much better able to improve their performance by involving members of the organization in a very intense way.*

*Organizational culture is a significant predictor of organizational performance as an employee satisfied and will return to work.*

**Key words:** culture, organization, management

**J.E.L. classification:** J52

## 1. Introduction

Worldwide interest in organizational culture began in the seventh decade of the twentieth century. The main reason was an indirect Japanese companies explained in performance to an appreciable extent by their specific culture.

The term "organizational culture" was introduced in literature Pettigrew in 1979, enjoying a rapid growth of popularization in the early 1980s 70% of articles published in magazines aimed at organizational behavior and human resource management include the concept of *culture* (Budean and Pitariu, 2008, p.85).

Culture is a collective phenomenon because people who live and work together in the same social environment where he was taught support it at least partly. In this context culture is understood by all the ideas, values, and traditions of a distinct group of people. Organizational culture is a set of values, beliefs, aspirations, expectations and behaviors shaped over time in each organization that prevails within it and it is directly and indirectly determines the functionality and performance. ( Nicolescu, and Verboncu, 2008, p.322).

Organizational culture carriers are men. However, the organization with an organizational culture already made it abstract the people and becomes an attribute of the company, a part of her that has a strong impact on team members, making their behavior according to the norms and values that constitute its foundation.

## 2. Features and functions of organizational culture

Human resource management in organizations requires understanding environmental influences both internal and external environment of organizations. From a cultural standpoint, the internal environment is the organizational culture, while the external environment is the culture branch and the socio-cultural.

Characteristics of organizational culture are as follows:

- Culture is a true "way of life" for its members, who consider its influence as often taken for granted. Culture of an organization is evident, frequently, only when compared with that of other organizations or when it is subject to change.
- Because culture involves assumptions, values and basic beliefs, it tends to be fairly stable over time. In addition, once a culture is well established, it can persist despite staff turnover, ensuring social continuity.
- The content of a culture may involve factors internal and external to the organization. Internally, a culture can support innovation, risk-taking or secret information. Externally, a culture can support the slogan "Customer above all" or unethical behavior from competitors.
- Culture can have a huge impact on organizational performance and satisfaction of its members.

Organizational culture is nothing more than trying to adapt companies through diversification, by forming their own cultural characteristics not so much to highlight its specificity and to oppose other companies as to withstand competition and develop positive.

Analysis of cultural factors is increasingly addressed in management literature as it contributes to a better understanding of individual and group behavior in an organization. The organizational culture is described as being a complicated set of beliefs, values, behaviors and artifacts. Also very important it is that organizational culture can change over time under the influence of external environment, but often that change can know barriers in the internal environment. Thus, we can say that organizational culture is complicated and uneven emerging.

If maintaining organizational culture is relatively easy approach for managing an organization more difficult it proves to be changing organizational culture. A preferred means of generating change is the conflict, seen as constructive process to stimulate organizational performance. Behaviors and attitudes are difficult to change which means that the dimensions of organizational culture are invariable over a long period of time. Therefore, organizational culture may be unable to evolve as new goals set by the economic environment, a frequent occurrence in our country firms. Management practice shows that organizations resist change by force rules, habits and structural rigidities, which leads to a powerful retardation to new market conditions. The one who can change this situation is the management culture.

Within an organization, organizational culture exerts several functions (Ganescu, 2011, p. 21) shown in Figure no. 1.

a) Organizational culture exerts an important function of integration of employees in the organization, adjusting the internal environment. This function does not manifest only be heated new employees but all employees because it requires maintenance doe their integration within the organization.

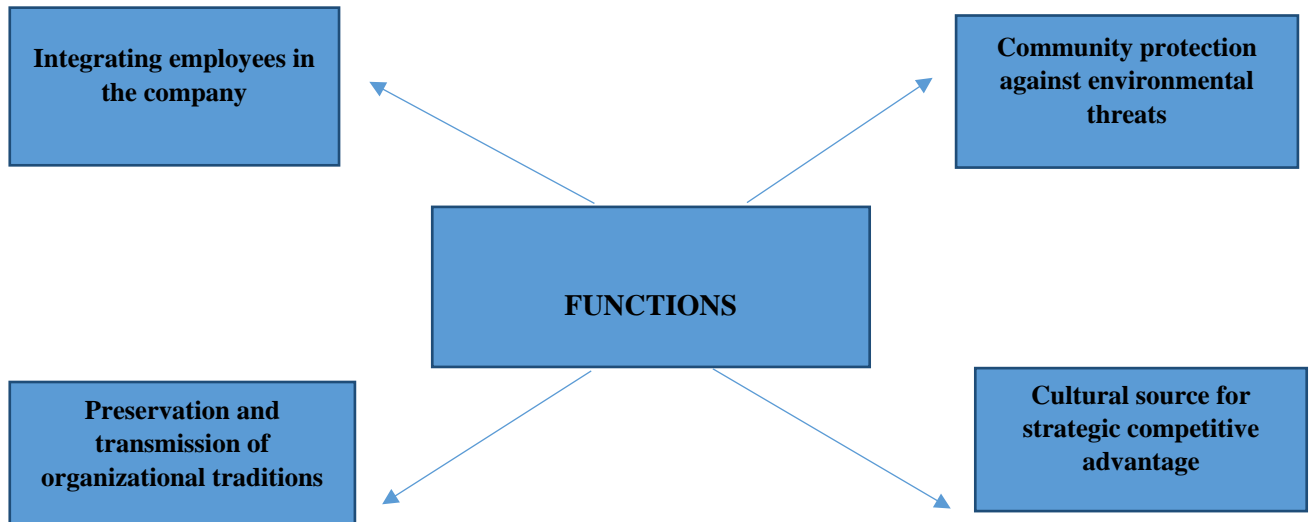
b) Due to its specific organizational culture has an important role to protect employees against potential threats in the external environment. Organizational culture is the basis of organizational behavior and actions of preventive or controls the direct negative consequences of the external environment company.

c) Through organizational culture are preserved and transmitted values and traditions enterprise. Changes in the management system must take account of specific values, concepts and organizational habits that must be perpetuated to give strength to the company. Without strong culture, valor traditions well preserved in time, we cannot talk about strong and successful companies.

d) Accordingly contemporary company's competitive bout mentions the dependence of increasingly high performance organizational capacity, which is essentially the integration expertise of employees. Organizational culture is what allows you to create an appropriate

framework for the development of organizational capacity. In the long run, organizational capacity main source of its competitive advantages.

Figure no.1. Functions of organizational culture



Source: (Ganescu, 2011,72)

Influence they can exert on management processes and organizational culture on organizational performance especially in an environment of increasingly turbulent is a huge one. (State, 2004, p.56)

### 3. The role of organizational culture in the company

Organizational culture influences formal and informal expectations of individuals who are part of an organization defines the type of people who will adapt the organization and affects how people interact with each other both in the internal and external environment. Rules imposed by corporate culture established what are desirable or undesirable or unwanted appropriate behaviors in an organization, the lack of which seriously affected the organization's optimal functioning.

Factors that can influence organizational culture are business, leadership, management practices and the social, formal and informal factors to be considered in any analysis, especially when it is necessary to change the organization. (figure no.2).

Figure no. 2. Factors influencing organizational culture



Source: (Ganescu, 2011, 139)

As stated by Schein, culture operates with a default set of beliefs that can not change unless they are brought to the surface and analyzed. Therefore reconsider convictions change can come from employees. The role of management is to identify and manage factors that influence culture and



motivate employees to re-examine and change its internal values and beliefs. In addition, managers are part of the culture of an organization and, therefore, their own values and beliefs should be reconsidered.

As stated by Schein, culture operates with a default set of beliefs that can not change unless they are brought to the surface and analyzed. Therefore reconsider convictions change can come from employees. The role of management is to identify and manage factors that influence culture and motivate employees to re-examine and change its internal values and beliefs. In addition, managers are part of the culture of an organization and, therefore, their own values and beliefs should be reconsidered.

Differences in cultural values reflects different conceptions of the nature of relations between employers and their employees and therefore lead to different interpretations and experiences of what "best practices" of human resource management.

Studying organizational culture is given by the valence practical presents this variable used increasingly in potentiation of organizational performance. Diagnosing organizational culture dimensions allow observation of human behavior in the organization and enhancement of the organization realities relevant to its operation. (Ganescu, 2011, p.75). Culture can contribute both to adapt to the external environment, and the need for internal integration by all staff adherence to the strategic objectives of the organization, cohesion group work is vital to the efficient functioning of the organization.

Organizational culture is a significant predictor of organizational performance as an employee satisfied and will return to work and the methods and techniques used in human resource management. Once cultural profiles "real" and "ideal" specified, they can be compared to see where there are differences and similarities. Then, managers can decide how they want to show the type of organizational culture and take specific actions to achieve this profile. Very relevant is the study of the connections and influences that may arise between national culture, organizational culture and practices in human resources management.

National cultural dimension is based more on values and beliefs, a common geographical space and organizational culture is based on work practices learned in the organization. The latter explicit connections with a number of specific organizational functions, and between national and organizational culture there are certain influences, but rather weak. However, the cultural dimension organizational researchers tried to prove extremely complicated influence they can exert national culture on organizational culture. Also, individuals who work in an organization influence and contribute to shaping and changing organizational culture by values, beliefs and habits learned from the family, educational and social, all these environments are influenced by the national dimension of the space in which a person lives and operates. So, we can not break the two dimensions and treat them separately linkages particularly complex and delicate, sometimes difficult to demonstrate and explain between national culture of a people and organizational culture and management practices used by organizations operating in that national framework.

Organizational culture provides a framework in which managers can implement motivational tools that influence how employees behave and thus performance organization. It is not easy to create a culture that fosters individual motivation (which is the ideal situation), because it takes time to understand the factors that motivate each employee. Currently, this problem becomes even more important and complex since employees orient their interest to other things besides money. Individuals, especially those qualified are also several possibilities about potential jobs. Therefore, the organization's motivational practices play a vital role in attracting employees and facilitate success in competitive markets. Moreover, innovative practices offer benefits for organizations, since it facilitates recruitment strengthens loyalty, enhance creativity and provide more employee satisfaction.

Moreover, organizational culture aims at developing cohesion. Companies with strong organizational culture are much better able to improve their performance by involving members of the organization in a very intense way. (Zlate, 2004, p.123). However and employees have an impact on the organization, bringing with them their own beliefs and values, and their level of commitment will depend very much on individual factors. If employees adopt values and beliefs chosen organizational culture will result in a high level of commitment and cohesion. Conversely, if personal values and beliefs that do not fit with the corporate culture, the difference may have a

negative impact on employees. Obviously, the best result is achieved when the organization's culture, beliefs and values fit employees.

#### **4. Conclusions**

In successful organizations corporate culture contribute to the smooth functioning markets, promoting communication, socialization of new members, establishing trust and common means adopted to achieve those objectives. The organizational culture supports economic efficiency and social adaptability in the competitive company. My guess is that a company has a strong culture, effective, can save the consequences of an unfavorable economic or social environment. Organizational culture has a significant role in supporting the profitable growth objectives of an organization. Organizational culture is very important because individuals act on their shared values, their behavior have a significant impact on the activities of the organization.

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## Is There a Positive Correlation between Promoting Communication at all Hierarchical Levels within the Organization and Organizational Performance ?

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### Abstract

*This paper continues the work carried out in a previous study published in “Ovidius University Annals, Economic Sciences Series, Vol. XVII, Issue 1/2017, pp. 336-339”, namely “Assessing Communication within Local Organizations”, where we have conducted a research regarding how Romanian companies develop communication at all hierarchical levels within the organization. The objective of this paper is to highlight the extent to which communication processes influence organizational performance.*

**Key words:** learning organizations, communication, organizational performance

**J.E.L. classification:** D22

### 1. Introduction

In order to obtain organizational performance, a partnership between all stakeholders it is required, also a trustful work environment characterized by, effective communication at all hierarchical levels, low bureaucracy, intense collaboration among team members for learning, research and innovation it is required. Dedicated employees can lead to satisfied customers which can conduct to financial performance in the end. This is a triangle of factors that can define the organizational performance.

In order to verify the correlation between communication and organizational performance, we assessed the communication process described in the study published in “Ovidius University Annals, Economic Sciences Series, Vol. XVII, Issue 1/2017, pp. 336-339”, namely “Assessing Communication within Local Organizations”. We achieved a total score of 0, 51 for communication. This score was obtained from the average of the statements allocated to asses communication. The main objective of these statements was to research within the questioned organizations the following key aspects: the respect received from the employees by the management system, the extent to which the management system involves them in the decision making process within the company, and how efficient is the communication process and information sharing system within the company, from both directions colleagues and bosses.

Table no. 1 Assessing communication within Romanian organizations

Statement	Average of the statements
3. “Top managers respect employees and trust them, and the employees are involved in the process of decision-making within the organization.”	0.886792
8. “You are provided with information (brochures, posters, websites, etc.) that let you know what is happening within the organization.”	0.886792
9. “You communicate openly and honestly with both subordinates and hierarchical heads within the organization.”	1.018868
10. “Communication between departments within the organization is difficult. “	-0.16981

11. "Within your organization, employees' opinions are heard and evaluated, regardless of their position in the organization hierarchy."	0.320755
12. "Employees receive feed-back for their performance"	0.54717
<b>FINAL SCORE OF THE COMMUNICATION VARIABLE</b>	<b>0.581761</b>

Source: own processing

The method used in order to assess organizational performance is similar with the one presented in a previous paper published in the Review- "Annals of Ovidius University of Constanta, Economic Sciences Series", entitled "*Is There a Positive Correlation between the Organizational Culture, Focused on Creating a Pleasant Working Environment and Organizational Performance?*", "Vol. XVI, Issue 1/2016, pp. 350-354". In order to understand the organizational performance measurement process, please refer to the item which can be accessed online, on the journal website: [stec.univ-ovidius.ro/html/anale/ro/text-integral/](http://stec.univ-ovidius.ro/html/anale/ro/text-integral/)

## 2. Research methodology

As we have presented in introduction, we supposed in our research that organizational performance is obtained by the triangle - dedicated employees, satisfied customers, financial performance. In this direction we have conducted a survey among Romanian companies from the South-Est. region. The survey was based on several statements regarding employees' fulfillment and dedication at the workplace, customer satisfaction, and financial performance. There were allocated statements for each of this tree parameters. The respondent gave a score to each sentence (using the Likert skale) between -2-totally disagree and +2- totally agree. We had 318 respondents and calculated the mean of each statement, than we have calculated the mean score of the variable organizational performance.

The research conducted in order to assess the organizational performance within the questioned companies revealed a final score of 0,764 of a maximum desired of 2, as shown in table no. 2.

This result revealed medium performances within the analyzed companies. In order to increase performance, the companies have tree directions of actions: increasing respect received from the employees by the management system, involving the employees in the decision making process within the company, developing the communication process and information sharing system within the company.

Table no. 2 Assessing the performance of local organizations

Statement	Statement mean
43 "The organization offers its clients services of high quality standards, because their satisfaction is a major concern of the organization."	1.283019
44 "The organization carries out market research activities, in order to become acquainted with the clients' needs and to improve the quality of its services and products."	0.792453
45 "The organization manages rapidly and efficiently the customers' complaints."	0.962264
46 "The employees' satisfaction with their job, (activities, responsibilities, relationships, incentives) is a major concern of the organization."	0.301887
47 "All employees are concerned with the organization's profitability/ effectiveness, and cooperate in order to achieve the organization's objectives."	0.603774
48 "You feel fulfilled at your present workplace."	0.811321
49 "There is respect and trust between employees and managers."	1
50 "The company's financial evolution is positive."	0.849057
51 "The number of clients and contracts concluded with them is increasing."	0.773585
52 "Recently, the organization has made significant investments (e.g., renewing the portfolio of fixed tangible assets, - buildings, lands, equipment etc., and intangible assets, - patents, software, licenses etc.) ."	0.264151
<b>FINAL SCORE OF THE VARIABLE ORGANIZATIONAL PERFORMANCE</b>	<b>0.764151</b>

Source: own processing

### 3. "Is there a positive correlation between promoting communication at all hierarchical levels within the organization and organizational performance?"

The information flow within the organization is the first step in the journey towards performance and competitiveness. *"People who do not have information cannot make good business decisions and are not motivated to take the risk of making decisions if they lack. On the other hand, people who have information are almost forced to take the risk in business decision making, as well as possible, given their capabilities"* (Blanchard, 2007, p. 67).

In order to highlight the role of communication in achieving organizational performance, authors Ken Blanchard, John P. Carlos and Alan Randolph presented in their paper ways of information communication and sharing, *"[...] we believe that it is very important to send, every month, information on sales, profits and sustainability. Everyone in the company (working at the office or at home) can access – via the internet – the weekly sales figures on departments, areas and salesmen"* (Blanchard, 2007, p. 80).

Through this method of communication performance, people throughout the company can act responsibly and can help the company meet its objectives.

There are a number of ways whereby we can carry out the communication of the performance related to the company or to a department within the company. Such instances are: the presentation of enterprise performance through a poster in public places or handing newsletters, organizing meetings for the transmission of information on relevant statistics. The companies that are more concerned with new technologies ensure performance dissemination through electronic mail or discussion forums. Whatever the method, it is important to update the information provided about the organization's performance (Collins J., 2007).

The information circulating among employees through the communication process is the mechanism by which people can be held responsible for fulfilling their goals at high performance standards. When they are informed, people can change plans, they may know when to work harder or smarter, they may become aware of impending problems and they may know when to celebrate progress.

By capitalizing and practicing communication all the time, among the members at all hierarchical levels, people will continue to progress, to get better results than their competitors.

Communication is one of the main tools that foster continuous progress within the company. In other words, communication is the company's "fuel" on the way towards performance (Pfeffer, J., 2010).

Table no.3 Correlation coefficient (r) between communication and organizational performance

	<b>Organizational Performance</b>
<b>Communication</b>	<b>0,586</b>

Source: own processing

Communication is an essential component of knowledge-based organizations. The research conducted on the connection between organizational performance and communication processes among the organizations surveyed revealed a correlation coefficient of 0.586, as showed in the table above. This value indicates a strong relationship between the two variables.

A more thorough analysis of the correlations obtained between the statements on organizational performance and the statements on the variable "communication" (A3, A8-A12), reveals that the values of the correlation coefficient between statements A3, A8, A9, A11 and the statements on organizational performance are significant.

Table no. 4 R Correlations between statements regarding communication and organizational performance

Pearson Correlation	A43	A44	A45	A46	A47	A48	A49	A50	A51	A52
A3	0.439	0.181	0.220	0.415	0.258	0.423	0.323	0.369	0.219	0.156
A8	0.272	0.407	0.498	0.356	0.412	0.380	0.435	0.225	0.425	0.165
A9	0.389	0.151	0.348	0.221	0.325	0.466	0.320	0.135	0.120	-0.051
A10	-0.104	0.302	0.055	-0.151	-0.009	0.161	0.062	-0.018	0.152	-0.018
A11	0.222	0.353	0.271	0.436	0.205	0.219	0.229	0.318	0.363	0.056
A12	0.253	0.203	0.301	0.387	0.282	0.246	0.277	0.114	0.158	0.355

Source: own processing

Another important dimension of performance in the organizations studied is represented by vertical communication, i.e. between managers and subordinates. This is showed by the correlations obtained between statements 3, 9 and 11 and those related to performance.

The analysis of the correlations obtained between statements 10 and 12 and the group of statements on organizational performance reveals inter-departmental communication problems and the poor information of employees about the performance achieved. The employees from different departments communicate with difficulty. Thus, one of the means to increase staff cohesion and to intensify the interaction between members, with a beneficial effect on organization functionality and performance is not well developed among Romanian organizations, which requires appropriate management actions.

#### 4. Conclusions

The performance of the organizations participating in this study is influenced by the relationship between managers and employees and the means of informing the employees about the current situation of the company, as evidenced by the correlation coefficients between statement 8 and the group of the statements on performance.

By disseminating information on matters such as company financial information, sales strategies, management strategies, knowledge of the company's overall image, people are transmitted the message that the manager trusts them and that everybody works for the same purpose, namely for the welfare of the company.

No matter how motivated and trained the employees are, they cannot help increase performance if they are not provided with enough information on their objectives and tasks. In the absence of information, employees may perceive processes and organizational aspects in a deformed way, leading to a decrease in performance.

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## Using Business Etiquette Nowadays. Qualitative Research on Business Phoning, Emailing and Meetings

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### Abstract

*Business etiquette has a very important role in the business world, representing the image of a business. In this respect, this paper aims at identifying firstly its main constitutive parts and secondly, how emailing, phoning and meetings are used in practice by people of different origins who works internationally. Hence, the qualitative piece of research presented hereinafter approaches the significance of etiquettes. The results clearly show that appearance, actions as well as spoken and written words reflect the image of a person and its interests within the business environment. Therefore, we underline that employees shall benefit from specialized training on business etiquette and we clearly highlight that standardization with business etiquette has continuously changed with international businesses and globalization. We did conclude that, by providing good practice with business etiquette, communication, the so important process in the business world, is qualitatively developed enhancing interpersonal business relationships.*

**Key words:** business etiquette, business communication, cultural differences.

**J.E.L. classification:** M14, Z13.

### 1. Introduction

In the field of business, business etiquette plays nowadays a central role among the business skills necessary to any individual so as to properly operate professionally. The globally-independent economy strongly indicating business leaders and international entrepreneurs to provide opportunities for their managers to travel abroad to engage in cross-cultural communication determines such managers to acquire the necessary skills and orientation for coping with cultural differences (Okoro, 2013, p. 2).

Moore (1993) defines business etiquette as a set of rules allowing communication and interaction in a civilized manner, including rites and mores, forms and manners required in a society or profession. Such sets of rules, particular for every culture, are used by business people as behavioural codes.

In this regard, this paper approaches the subject of business etiquette and aims at identifying the diversity in the different cultural behaviours in terms of emailing, phoning and meeting for business purposes. It consists of two parts, a theoretical approach and a piece of qualitative research whose results are presented in detail.

### 2. Literature review

When it comes to the business world, verbal communication takes the main oral forms of phoning and business meetings and the written forms of emailing, business cards and business documents. These elements, together with the non-verbal ones, such as pitch, speed, tone and

volume of voice, gestures and facial expressions, body posture, stance and proximity to the listener, eye movements and contact as well as dressing and appearance shall guarantee to any business person a successful image on others. But, these shall be completed by the skill of knowing what to do and when, which in other words is called business etiquette (Sabath, 1993, p. 7).

Currently, knowing business etiquette of particular nations is a topic of study before business meetings occurring at international level, leading to fitting into an unknown foreign reality and to successful negotiation (Zator-Peljan, 2013, pp. 50-51). Moreover, not only working personnel shall successfully create a prosper working environment, but also managers shall identify strong sub-cultures and respond to the needs of their employees with so many different backgrounds and origins. Hence, the role of the etiquette in business expresses the real need of training of global managers in developing interpersonal relations and group communication and cross-cultural negotiation skills (Mukherjee and Ramos-Salazar, 2014, p.18).

Moreover, business etiquette increases the consciousness and knowledge of own and foreign culture and it is a good instrument to reduce and even eliminate stereotypes which may generate conflicts and bad working environments. Among other advantages of developing such skill, presented in previous pieces of research, etiquette training conflates displays of deference, kindness and demeanour, whereas training new employees in an interactional presentation of self shall be designed to promote a positive corporate image (Dunn, 2013, p. 225). Hence, the business etiquette serves to meeting larger strategic goals, too, being not only important at individual level.

Another study on etiquette, comparatively undertaken on three samples originating from Japan, Turkey and the USA, looks at the specific sets of cultural norms that every country developed and concludes that it is that company understanding core differences among nations that shall gain the power to succeed in the international market (Marchiori et al., 2014, p. 274). Hence, deviation to the etiquettes as well as strict adherence to it can testify the speaker's attitude to the hearer and his/her perception of a situation (Ryabova, 2015, p. 92).

In this respect, business etiquette should play an important role within ethical culture. The ethical culture is part of the organizational culture and it may be defined as one of the components which make up an institution, organisation, business or company penetrating all the other components of the institutional or business structure (Semradova and Hubackova, 2014, p. 56).

### **3. Research methodology**

The methodology consisted of a piece of qualitative research using a semi-directed interview aiming at analysing and designing the professional business etiquette used in the 21<sup>st</sup> century. Respondents were approached online whereas the questionnaire was applied in English giving the fact that we aimed at an international sample (the respondents were of different nationalities). Data were collected between June and July 2017 and the final sample size counted 40 respondents. The questionnaire contained a series of questions meant to determine the main important factors that determine the respondents' behaviour regarding the professional business etiquette. These factors referred to the main verbal communication channels used, but also to non-verbal communication. In this matter, all the communication means in business were analysed: emailing, phone calls and meetings.

### **4. Research outcomes**

The main purpose of our research was to determine the influence factors of the business etiquette. In this regard, the semi-directed interview had 25 open, semi-open or multiple-choice questions focused on four main topics, presented herein: general issues on business etiquette, business phoning, business emailing and business meetings. The questionnaire was posted on social media networks and out of 64 answers, there were 62.5% complete and reliable questionnaires to process. The 40 respondents were of different 19 nationalities, of which the most numerous were form Romania, the United States and Italy.



They were all working on top and middle management positions with different businesses. The average age of the sample was 33.6 years, whereas 48% were female.

### **General issues on business etiquette**

The first question demanded from the respondents to give their definition to the concept of business etiquette. The received answers presented this concept as the way one's external factors appear when engaged in formal meetings in a business environment. However this does not mean it has to mirror one's internal state, so business etiquette appears to be the correct manner in which to behave when it comes to socializing and carrying out tasks around the workplace. Furthermore, business etiquette refers to knowing what is possible and what is not possible within the business environment whereas it is about building relationship with other people, providing basic social comfort and creating an environment where the others feel comfortable. Hence, the way one presents itself in front of others in a work environment is the way of making a good impression on people working with. The acceptance and respectful behaviour towards business partners without losing the purpose and the aim of the business is also important, as business etiquette is perceived as the way to persuade people to pay for a product that they need or like.

In this regard, business etiquette defines the way people see others from a professional point of view, implying intelligence and high communication skills used within the organization, discipline and personal quality. In other words, it refers to good or bad impressions one deals with during business and it is a business instrument promoting trust. Whatsoever, there is a difference due to knowledge and education between workers and office staff (the simplest way to differentiate this is by appearing always as casual and always addressing them as Mister or Madam).

Moreover, respondents stated that dressing affects the way people see them, the way they talk to them and the way they responded to them, so in business, the attire creates charisma helping in building the relationships between people through mutual interests and respect. Even if respondents seem not to have cultivated or educated a business etiquette (not necessarily following rules and regulations), it implies providing basic social comfort and creating an environment where others feel comfortable and secure, so it improves communication. So business etiquette may be defined as a specific business style of acting with all different people in business regarding of their position or background whereas having a certain look, using specialized vocabulary, coherence in speech, healthy logic/thinking, straightforward and direct language, having a clear message in communication, consistency, physical cleanliness etc. Last, but not least, business etiquette refers to a personal image that is a starting point in making on others an image about the business we represent and about our approach to it and to the business environment. Attitudes, habits and behaviours convey a sense of respect and professionalism. How one interacts with colleagues, superiors, clients and vendors, the elegant attitude, personal verbal and non-verbal way of communication keeps the attention to the work, strengthening relationships between the people.

Having to state the usage importance given to phoning, emailing, meetings or business letters when it comes to working within business, the respondents considered that emailing, followed by business meetings are more used than phoning or business letters.

### **Business phoning**

When asked of the importance of phoning in business, 40% of the respondents stated that it is of high importance in solving tasks, spending from 2 minutes to 2-3 hours in a conversation. Regarding the major issues that bother them the most when it comes to phoning in business, the respondents stated that people's total disinterest in the message and the lack of tools one can use to persuade on points of view or products are the most important. Then, waiting on hold, not having face-to-face contact and lack of some information create difficult situations as misleading or losing customers, misunderstandings, answers not generated or lack of problem solving.

Hence, participants considered that business phoning often may interfere to one's personal life if the call time is not properly chosen which they really did not like (sometimes it is an issue of time zone difference), there are too many details given or talks are too long, people's rudeness or ignorance, long waiting times, not having clear objectives, not summarizing key points at the end of calls/action items or not focusing on the real topic of conversation. Moreover, respondents

mentioned also some external factors influencing the quality of communication by phone, such as noise, loss of signal or technology which changes too rapidly.

### **Business emailing**

About emailing, the participants stated that they spent from half an hour to 8 hours per day working with online written messages. The most important factors to analyse on business emailing were its clear subject, level of formality, addressing, fast response and vocabulary used. The major issues regarding business emailing that often disturb respondents were too many spam messages which may conduct to missing the necessary and important information and time, delaying or denying possible deals, losses of valuable time, poor connection on the Internet, mistrust on the sender and relevance to the business activity. All these make problem solving slower with emailing than with phoning. To conclude, the most important factors creating professional business etiquette with regard to online written messages used in business are the subject, followed by a fast response, addressing, vocabulary and email formality.

### **Business meetings**

The respondents spend from half an hour to 6 hours per day in business meetings, the punctuality being a very important factor for 73% of them. The majority answered that they were punctual at their meetings. However, approximately 13% had time management problems, so they had the habit of arriving late. Correlating the factor of being late with the nationality of the respondents, we can conclude that for Romanians, Mexicans and Syrians, this factor is not of high importance, some being late in meetings up to 15 minutes.

Regarding how the participants like to be titled, 78% of them responded that their first name should be used. But according to their opinion, titles are important as are part of the business etiquette which brings more politeness and formality within the business environment.

Moreover, religion and nationality are important factors when it comes to meeting new people in business only for Romanians and Syrians. The German, Dutch, Romanians, Italians and Turkish rated the tone of voice as being very important in business meetings whereas mimics and gestures are of high importance when related to business meetings for Romanians, Russians, Spanish, Dutch, Lithuanians, Turkish and Italians. Hand-shaking in business meetings are important, but not as important as attitude, highly rated for 88% of our respondents.

Dressing and appearance had always been important issues when it comes to business, 43% respondents considering this factor of being very important. When it comes to the dress code in business meetings, only 23% dress business formal, whilst the others dress either business casual, smart casual or simply casual. In correlation with the sex of the respondents, we can observe that only men dress formal in business meetings, women dress either business casual or just simply casual.

## **5. Conclusions**

Business etiquette (Hrevova and Bednafr, 2017, p. 174) provides a standard framework within which business people can operate as they communicate and collaborate. Professionalism and respect for business parties is shown with using a proper business etiquette, which from the first beginning, creates not only a strong first impression, but it also consolidates relations. A certain code of etiquette makes work relations more confident and strong, helping teams to understand others' cultural backgrounds. In this respect, we underline that etiquette plays a significant role in developing organisational cultures and business environment highly influenced by globalization. It also enhances productivity within multicultural businesses which operate nowadays on different markets, serve different customers and use resources of different origin.

As every country/nation has its own culture and sub-cultures, every company has too its own culture and sub-cultures. The more we research, the more we learn and gain experience in knowing how to deal with people with diverse backgrounds. So etiquette must be taken into consideration especially when it comes to business.

Business etiquette is not only about knowing what to say and how to say or how to address others. It is also about showing ourselves in such a way that we will look responsible and able to carry the business or the tasks given. Moreover, business etiquette relates to non-verbal

communication (mimics, gestures, attitude, tone of voice etc.) and we shall continue this research with a study on this topic. The first impression is a crucial part of business. As psychologists say, it takes somewhere in between 4 and 7 seconds to create the first impression and if we do not master business etiquette, this impression will be a bad one costing us the job, the deal or even the future of the company. It is considered that once the first impression is made, it is nearly impossible to be changed. Hence, the cultural differences when it comes to business, in the context of globalization, are being minimalized, but there are still some sensitive aspects that have to be taken into consideration when working with people from different cultures.

Nonetheless, the present verbal written communication has been under the changes of technology and the IT world. And so has business etiquette. The importance of digitalisation for the business world has to be taken into account. Digitalisation brought changes with regard to the use and aim of documents, the most important being social documents. Their features, like storage, accessibility, changeability, duplicability, originality, structure, content connectivity, metadata, format etc. have changed (Hausmann and Williams, 2015, p. 364-365) so that we shall live an era in which business etiquette will play a central role within organisational cultures.

## 6. Acknowledgement

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# The Impact of Life Coaching Sessions on the Behavior of Future Romanian Entrepreneurs - Pilot Study

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## Abstract

*The aim of this pilot study is to analyze the impact of life coaching sessions on the behavior of future entrepreneurs from Romania.*

*We conducted a qualitative research to which we applied a focus group, followed by a series of life coaching sessions.*

*Life coaching sessions helped the young Romanian entrepreneurs to alter their behavior in the sense that they gained confidence in themselves and took steps towards starting a business.*

*This study has the ambition of being a relevant contribution to this field, given that no such study has been conducted in Romania. The study sheds light on the way in which life coaching can alter the behavior of future entrepreneurs, helping them to better establish and attain business objectives.*

**Key words:** entrepreneurs, life coaching, focus groups, young people, business

**J.E.L. classification:** I25, J24, J28, L21, L26, L29, M13

## 1. Introduction – life coaching

Life coaching targets both the individual's autonomy and the increase of his or her well-being, in order to allow both the personal and the professional development of the individual (Angel et al., 2008). Another way to put it is that, through life coaching sessions, people learn to overcome the limitations or the barriers that come up, over the years, in either their personal or professional life, with the help of a life coaching specialist called life coach. This life coach guides people to look towards their future by means of the objectives they lay down for themselves and of the actions they choose to perform in order to achieve what they set out to do. In our case, the people in question are the future entrepreneurs, who need a certain degree of guidance with regard to their professional life.

## 2. Entrepreneurs and life coaching sessions

As far as entrepreneurs are concerned, they act in an uncertain present (Kalantaridis, 2004), which means that their actions are directed towards the future (Mises, 1998), with an outcome that is always uncertain (Idem). This is why entrepreneurs need a life coach to support them in their own lives and to help them move forward and get where they want to be. Nevertheless, we must not forget that there are always risks involved and that entrepreneurs should never act randomly. With the help of a life coach, they can learn to manage risk, as Gordon (2012) puts it, in such a way that an occasional failure will not throw them off the track for ever.

We note that Gunning (1997) suggested three features of entrepreneurial action. The first feature involves the assessment of the available means, the second refers to the decision for a course of action and the third deals with the fact that any decision may result in failure because of the difficulty in predicting the way others will react – since any action refers to an unknown future, as Mises (1998) points out. Life coaching sessions can help entrepreneurs visualise the future and

anticipate the way the market will react to their product or service, using the tools and scenarios built together with the life coach; these sessions can also assist entrepreneurs in establishing a concrete plan of action.

An interesting point is made by Ireland and Sirmon (2003), who claim that the new entrepreneur-driven companies are much more effective than the large corporations when it comes to identifying opportunities. This is, in part, due to the fact that these small companies are at the beginning of their life and they have a great appetite for new opportunities. This is all the more true given Gordon's (2012) assertion that opportunities abound amidst the turbulences caused by economic changes and dislocations. This means that, before an entrepreneur sets out to formalise their business, they need to design a concept, test it and check how it performs on the market. Therefore, testing the business concept is the first step in ensuring that the concept is feasible (Allen, 2002), especially considering that a feasibility analysis determines the entrepreneur to look upon opening a new business from a critical perspective.

### 3. Methodology

The aim of this pilot study is to analyze the impact of life coaching sessions on the behaviour of future entrepreneurs from Romania.

First, through a webinar subjects were helped to familiarise themselves with the concept of life coaching, as they had not heard about this approach before, nor had they participated in such sessions.

They were explained the reason why they were at that meeting and were told that, in the event that they did not want to participate in the focus group or in the life coaching sessions, they were free to quit at any time, without incurring any consequences.

In the months of October of 2016 – February 2017, we conducted a qualitative study using a 1-hour online focus group session with a group of young people interested in entrepreneurship, aged 21-35. We wanted to learn what they were planning to do from a professional standpoint in the near future – more specifically, if they were interested in starting their own business.

Using Google Adwords, the prospective subjects were invited in October 2016 to participate in a focus group followed by a series of life coaching sessions.

Following our announcement, seven subjects accepted our invitation and willingly participated in the meeting.

Of these seven participants, five claimed they wanted to start their own business, while two said they were not interested in starting a business, because they did not picture themselves as business owners, preferring to be employees. These two were removed from the focus group, since they did not belong to our target group.

The conversation went naturally and there were only a few times when the moderator was compelled to intervene in order to prevent the debate of topics that were of no interest to the study. During the interview, the conversation was guided in such a way as to determine the participation of all the members of the focus group. The discussion was centered around the following questions: Are you interested in starting a business? What type of business would you like to start? What services do you plan on providing? What is the target market for your business? What do you estimate the needs of your customers are? What are the resources required to start a business?

The survey effectively increased the subjects' entrepreneurial appetite, so each of them subsequently participated in a 40-minute life coaching session. In order to help them gain a better understanding of their career options, we asked the subjects to set a short-term working objective that they particularly want to achieve for their business.

The five young entrepreneurs chose the following objectives:

- (1) "I want to start an online business in the field of tourist services."
- (2) "In the following period, I want to start a retail business with my friend."
- (3) "I want to lay the foundation of an IT business."
- (4) "In the following period, I want to start a family business that will generate monthly income in excess of RON 10,000."
- (5) "Next summer, I want to start an online apparel business by building a website and contacting suppliers needed for me to secure my stock of merchandise."

During the life coaching sessions, we worked with each subject to help them clarify their objective as specifically as possible, so that it may become tangible. Using small steps with each subject, we guided them to define the objective and to build a clear vision of what they intend to achieve in life.

For each of the five subjects was allocated 10 minutes to define their objective in writing and to discuss it, then another 10 minutes to set, with our support, a plan of action containing the specific steps necessary to achieve their objective. Another 10 minutes were allocated to further discussing and clarifying the working objective. The last 10 minutes were allocated for feed-back and feed-forward.

After completing the first life coaching session, the interviewer informed each subject that they could choose to participate in further sessions if they wanted to obtain results from life coaching.

Thus, two more sessions followed, which included the monitoring and the assessment of the subjects, especially given that commitment and persistence in action are the basic processes in effecting real change (Prochaska et al., 1992, and Peterson, 1996). Thus, this is about more than just setting a plan of action with the individual – it is about the life coach's endeavor to motivate the individual to act towards attaining his or her objectives.

While the subjects received the life coaching sessions free of charge, all of them stated that this was not the reason why they chose to continue the sessions. The young entrepreneurs returned to the life coaching sessions voluntarily, because they felt motivated to do so. They wanted to be supported and encouraged to start a business by an experienced professional; also, they wanted to achieve things that made a difference both for themselves, by generating personal well-being, reputation and social status, and for the ones around them, by creating jobs that would benefit others and by getting involved in their community through various corporate social responsibility actions.

#### **4. Results**

From November 2016 to early February 2017, we worked together with the five subjects towards attaining their working objective. The initial life coaching session was followed by an additional two one-on-one sessions: the first was held in early November 2016, to do extra work on the objective, and the last was held in early February, to assess the subjects' results and to provide them with feedback and feedforward. The sessions were agreed upon with the subjects.

The breaks between the sessions allowed the subjects time to reflect upon what they wanted to achieve in the future and to decide whether they would pursue the road they had chosen. Throughout the duration of the study, subjects were monitored and assessed to analyze the direction they chose as far as their professional path was concerned.

Please note that, in the initial stage, the subjects' ideas are a mere starting point. Getting to an actual, working business requires a complex process of filtering and selection. Of the five subjects, four built a website and managed to file their documents with the Trade Register in order to start a business, while one subject needs more time because he does not have sufficient funds to start a business, but he fully intends to get the necessary funding to become an entrepreneur.

#### **5. Findings**

The main finding is that these life coaching sessions helped the young entrepreneurs to alter their behavior in the sense that they gained confidence in themselves and took steps towards starting a business. The fact that most of the subjects ended up starting a business indicates that they are willing to take chances.

As Gordon (2012) claims, it is very easy for us, human beings, to become confused about life, because we often get entangled in a variety of objectives; in the absence of some clear, concrete and specific objectives, entrepreneurs will achieve nothing in life.

In our case, we note that the participating subjects felt motivated to define a concrete working objective and to set the necessary activities and steps so that they may reach the intended result. Furthermore, the young entrepreneurs felt compelled to continue to attend the life coaching sessions even after the initial one, which means that they had a clear motivation: to build the life

they wanted for themselves and to provide their own material and social comfort. This determined them to obtain tangible results following these sessions. We can say that their success was influenced by the life coach: if the life coach inspires confidence and empathy to the people around him and radiates a positive energy that helps them overcome obstacles, then those people will be motivated to continue with the life coaching in order to fulfil their dream.

We should point out the fact that, in Romania – and elsewhere, for that matter –, young people starting businesses is a welcome infusion in the market, because young entrepreneurs, through their energy, ambition and creativity, generate new jobs and help increase the local standard of living by paying taxes. Moreover, as Kirzner (1982) puts it, through their entrepreneurial activity, they support the market's process of mutual discovery by paying constant attention to the opportunities of turning a profit.

The study concluded that all five young people wanted to become entrepreneurs and to start an online business, which goes to show that young people are aware of the importance of digital in the business environment and are up-to-date with the latest developments. On the one hand, as Mises (1998) states, any person is an entrepreneur, because any uncertainty of the future is involved into action. Moreover, as Gordon (2012) puts it, entrepreneurs turn ideas into reality through their own qualities, skills and ambition – traits that can be learnt and developed, for entrepreneurs are not born, but made.

On the other hand, Allen (2002) claims that entrepreneurs need to have a clear understanding of the type of business they want – there are too many entrepreneurs who can barely articulate a definition of their business because they are ignorant of market trends or changes in the economy. But we can argue that this is but an excuse for entrepreneurs' failure to build a functional business. They need to thoroughly research and analyze consumer trends and to deploy market research to assess what customer needs are being neglected by the competition, so that they may take them and turn them into business opportunities.

With regard to objectives, we found that, while the subjects initially failed to set SMART objectives (specific, measurable, achievable and time-based), following our step-by-step discussions with each of them, they ended up with a clear definition of where they wanted to get and of the result they wanted to achieve.

Thus, while the initial objectives set by the subjects were vague, they gradually turned into concrete objectives, as one can clearly see in the table no. 1, entitled "Vague Objectives vs. SMART Objectives set by future entrepreneurs".

*Table no. 1 Vague Objectives vs. SMART Objectives set by future entrepreneurs*

<b>Vague Objectives</b>	<b>SMART Objectives</b>
"I want to start an online business in the field of tourist services."	"As of this day, 23 November 2016, I want to start an online business on my own, in the field of tourist services, by building a booking website targeted to the niche of people who are interested in going on cruises on the Mediterranean and who have average to high income."
"In the following period, I want to start a retail business with my friend."	"In the period 24-30 November 2016, I want to launch an e-commerce website that retails electronics and home appliances, in partnership with my friend, by contacting suppliers in Romania and in China."
"I want to lay the foundation of an IT business."	"As of 24 November 2016, I want to start a business that involves designing consumer games for Android phones."
"In the following period, I want to start a family business that will generate monthly income in excess of RON 10,000."	"As of 25 November 2016, I intend to launch, together with my family (my husband, my sister and my sister-in-law), a website specialised in wedding planning that will generate a monthly income in excess of RON 10,000, by contacting suppliers for building the website and creating the materials needed to promote the business."

"Next summer, I want to start an online apparel business by building a website and contacting suppliers needed for me to secure my stock of merchandise."	"As of 15 July, I want to start an online apparel business (skirts, trousers and jackets) for businesswomen, by building a website and by contacting suppliers in Romania in order to secure a stock of 210 pieces of clothing every year."
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Source: The Author

In table no. 1 Vague Objectives vs. SMART Objectives set by future entrepreneurs is indicative of the young people's strong motivation to really develop their business idea and to implement it by means of a SMART working objective. We note that the objectives serve to reinforce the business idea and to shape the entrepreneur's vision of the way in which his or her business will look in the future. As one can clearly see – and as Zeus and Skiffington (2002) point out, too –, life coaching induces deep changes in both one's way of thinking and in one's behavior.

## 6. Conclusions

Life coaching sessions, as well as setting SMART objectives, helped young people to alter their behaviour in the sense that they chose to start new businesses. Moreover, these sessions guided subjects towards achieving a clearer vision of what they really wanted, which is all the more relevant given the fact that, after they set their objectives, entrepreneurs are supposed to design strategies to attain those objectives. As Gordon (2012) puts it, entrepreneurship is a personal journey in which entrepreneurs are more likely to be successful if they manage to understand themselves as human beings and to understand their objectives and the obstacles they may face. This is particularly true because, as Whitmore (2014) claims, life coaching sessions aim at achieving top performance by attitudinal, behavioral or organisational changes.

We also note that young people began to quickly adapt to the new trends in management and to realise the importance of attending life coaching sessions. While they begin by participating out of sheer curiosity, they gradually understand that these sessions are very useful, helping them to clearly define what they want to do next.

At the same time, these sessions can effect such a radical change in their path in life, that they begin to obtain top results in everything they do, both personally and professionally – especially given that the hardest part is the progression from an idea to the opportunity of creating a feasible business concept (Allen, 2002).

## 7. Limitations

Of the seven young people who accepted the invitation, five were interested in becoming entrepreneurs, which suggests that there is a positive trend among young people who wish to start a new business. Yet this data cannot be extrapolated, meaning that the study needs to be extended to cover a larger number of young people.

## 8. Originality/value

This pilot study has the ambition of being a relevant contribution to this field, given that no such study has been conducted in Romania. The study sheds light on the way in which life coaching can alter the behaviour of future entrepreneurs, helping them to better establish and attain business objectives.

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## Research Framework Used in Management and International Affairs Fields

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### Abstract

*This article aims to identify how the research framework in management and international affairs fields is used from the PPOR perspective (problem, goal, objective and research strategies), providing a framework for future research.*

*We selected the best articles as examples of good practice in the research framework in management and international affairs fields.*

*In this regard, we have made a systematic review of a specialized literature based on the research published in the ScienceDirect database.*

*The method of reviewing the literature used in this study includes six phases: identifying the time horizon, selecting the database, selecting the journals, selecting the articles, classifying the articles, and analyzing the process.*

**Key words:** management, international affairs, database, framework, research

**J.E.L classification:** B40, B41

### 1. Introduction

According to the Business Dictionary, a framework involves either a general presentation, or a draft or a frame of interconnected elements, which specifically accepts a specific approach to a specific purpose that serves as a guide that can be subsequently modified according to requirements by adding or deleting them. In other words, according to Collins Dictionary, a framework presents a special set of ideas, convictions, or rules that are used to solve certain problems or to decide what needs to be done.

Thus, research is a process that results from a problem to a reliable solution through systematic and planned collection, analysis and interpretation of data (Singh, 2006, pp.1).

At the same time, the research process involves a series of actions or steps needed to realise an efficiently achieve research: problem selection, hypothesis formulation, data collection and analysis, formulation and testing of conclusions to determine hypotheses (Kothari, 2004, pp.1 and Singh, 2006, pp.10-11).

In this context there are a set of phases to build a research in management and economy (Zaiț and Spalanzani, 2006, pp.97):

Phase 1 involves addresses the problem: Identifying and analyzing a research problem is the first and most important step in a research (Singh, 2006, pp.23).

Phase 2 involves solving the problem by clearly identifying the purpose and objectives of the research.

Phase 3 builds the theoretical framework and in phase 4, field test are being prepared and conducted.

Phase 5 involves data analysis and in phase 6 the first conclusions are made.

In Phases 7, 8, 9, and 10, the first conclusions are drawn with the theory and the new facts, which means that there is a preliminary test. Then follow the theoretical or practical test, which is final. Finally, the text is written and then the results are communicated (Zaiř and Spalanzani, 2006, pp.97).

In this regard, we aim to identify how the research framework in the management and international affairs is used from the perspective of PPOR (problem, purpose, objective, research strategies), providing a framework for future research.

## 2. Methodology

The purpose of this article is to identify how the research framework in the management and international affairs fields is used from a PPOR perspective (problem, purpose, objective, research strategies<sup>1</sup>). At the same time, for this purpose of this article, we selected the best articles as examples of good practice in management and international affairs fields.

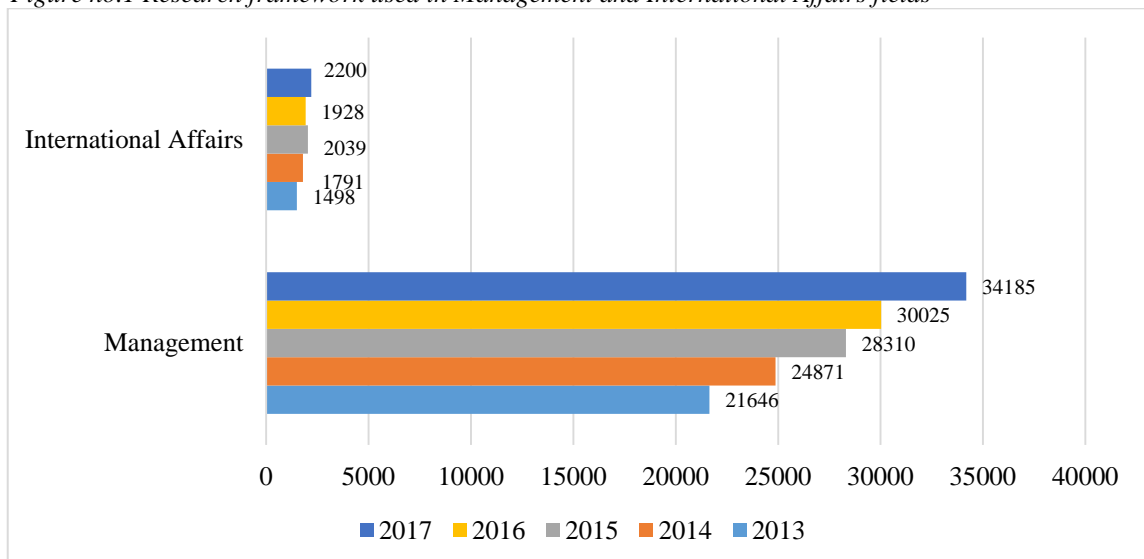
In this regard, we have conducted a systematic literature review, based on the research published in the ScienceDirect database.

The method of reviewing the literature used in this study includes six phases: identifying the time horizon, selecting the database, selecting the journals, selecting the articles, classifying the articles, and analyzing the process.

## 3. Results

Phase 1 - Time horizon: The analysis period covered the last 5 years between 2013-2017. In this case we have selected the most relevant and newest articles published in the last 5 years in the management and international affairs fields. In addition, from 2009 to 2017, there is an increase in the number of publications in management field dealing with this topic roughly 10%. In contrast, in the international affairs field we see an in the three years 2013-2015 roughly increase of 20%, in 2016 we see a roughly decrease of 10%, and in 2017 an roughly increase of 15%.

Figure no.1 Research framework used in Management and International Affairs fields



Source: Authors

Phase 2 - Database Selection: We used the ScienceDirect database as a source to identify the most relevant articles on international business and management fields because it allowed us to apply certain filters that we were interested in: time period, type of article, title of publication, author's name and journal name.

<sup>1</sup> Note: Research strategy refers to methods, tools and techniques (MTT) (Zaiř and Spalanzani, 2006).

Phase 3 - Journal Selection: The research framework used in management and international affairs fields is a subject of interest to researchers from both areas of expertise, whose publications are divided into different journals. Among the journals used: Journal of Cleaner Production, Industrial Marketing Management, Research Policy, International Journal of Information management, Human Resource Management Review, European Journal of Operational Research, Journal of World Business, International Business Review, International Journal of Educational Development and Journal of Cleaner Production.

Phase 4 - Selection of articles: The selection of articles was made by keywords, citations and content relevance. Keyword planner used for articles: research framework management and research framework international affairs.

Only reviewed articles were selected, and after a careful analysis of each article, the final number of items analyzed was 5 articles on management field and 5 articles on international affairs field.

Only articles related to the research framework in management and international affairs fields were included.

Thus, in a general search, we wanted to see how many of the articles published in ScienceDirect discuss the topic of the research framework in management and international affairs fields.

As we can see in the chart no.1 we surveyed the ScienceDirect database for the years 2013-2017 and we achieved: for the keyword research framework management, the database queried 139,006 results, and for the keyword research framework international affairs database queried 8,950 results.

Phase 5 - Classification of the article: For the purpose of this research, articles were classified into the following categories: research framework management 2013 which generated 21,646 articles, research framework management 2014 – 24,871 articles, research framework management 2015 – 28,310 articles, research framework management 2016 – 30,025 articles, research framework management 2017 – 34,185 articles, research framework international affairs 2013 which generated 1,498 articles, research framework international affairs 2,014 which generated 1,791 articles, research framework international affairs 2015 – 2,039 articles, research framework international affairs 2016 – 1,928 articles and research framework international affairs 2017 – 2,200 articles.

Out of these articles were excluded: press articles, viewpoint articles, books and articles presented in the conference. In addition, this research has focused on empirical studies that have a research framework.

Phase 6 - Analysis Process: The purpose of the analysis process was to understand in detail how the research framework has evolved in management and international affairs fields.

#### 4. Findings

*Table no. 1 Research framework in management and international affairs fields used from the PPOR perspective*

References	Problems	Purpose	Objectives	Research Strategies	Other observations
<b>International Affairs</b>					
Gahm,C., et al. (2015)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Empirical analysis of the LR - 87 EES articles - 1990-2014 (energy-efficient scheduling) - Case studies	Develop a research framework for energy-efficient scheduling
Barron et al. (2017)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Abductive approach - Case study of Toyota Motor Europe's European & Government Affairs Division and the Hyundai Motor Company Brussels Office - Semi-structured and in-depth interviews (2014-2016)	

Martineau, C et al. (2016)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Analysis of 121 specialized articles	
Wen, W et al. (2017)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Survey applied in 8 Chinese universities as follows: a total of 1674 students, of which 937 Asian students, 257 European students, 101 North American students, 207 South American students, 140 students from Africa and 20 Oceania students.	
Annarelli, A. et al. (2016)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Analysis of specialized articles selected by Product Service System keyword - 224 articles from 1988-2016 were analyzed	
<b>Information Management</b>					
Ngai, T. and Moon (2015)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- 46 articles on social media research were consolidated and analyzed, including empirical studies spanning from 2002 to 2011	Mediators and moderators variables.
<b>Key account management</b>					
Ivens, et al. (2016)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Case study - Develop a model of firm-internal KAM networks - Explore the fundamental structure of model empirically - 35 in depth interviews - Analysis of documents from a large international pharmaceutical firm	
<b>Supply chain Management</b>					
Dubey et al. (2015)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- The questionnaire was emailed to a total of 34 experts out of which 28 exploitable responses were considered for the study. Response rate of 82.4%.	Total Interpretive Structural Modeling
<b>Human Resource Management</b>					
Renkema et al. (2017)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Analysis of 88 empirical multilevel HRM studies.	
<b>Interdisciplinary research management</b>					
König et al. (2013)	The problem is clearly presented.	The purpose is clearly presented.	The objective is clearly presented.	- Case study - Content analysis of working documents and contracts - Team-reflected experience and documented action analysis - Review of the inter- and transdisciplinary management and organisation management literature.	The SENSOR management structure

Source: Authors

As can be seen in Table no.1, we have included only the specialized articles that respected the research framework related to: problem, purpose, objectives and research strategies because we wanted to provide examples of good practice on the research framework in management and international affairs fields to be used by other researchers in future publications.

What we have noted in both management and international affairs fields is that the research themes or topics come from a clear and concrete problem of an organization, institution, or business that needs some solutions to the problem or problems it faces. In addition to both fields, researchers need to be aware of the new trends in the field.

Regarding the research strategy from 5 articles on management and international affairs, we found 2 articles that had case studies both in the management and international affairs fields.

We have found an empirical analysis on the international affairs field and three empirical analyzes in management field, the interview we found in both fields (1 item per domain), the survey was found in both domains (1 item per domain), and one article in management field we found the content analysis.

Content analysis was found in three articles in the international affairs field and one article in management field. In a one article in management field we found the analysis of mediators and moderators variables and also in management field we found the development of a model or a modeling structure.

These research strategies are applied depending on what the researcher wants to find out in response to the problem he is embracing, but one can also consider a mix of methods, tools and techniques that will lead to the emergence of new unexpected solutions to problems, the development of new models, hypotheses or paradigms in the two management and international affairs fields.

## 5. Conclusions

The purpose of this research was to identify articles based on the methodological nature of the research. In this regard, the articles were grouped according to the problem, purpose, objectives and research strategies. In addition to the above analyzes, two descriptive details have been added, such as references and other observations.

As a result of the chart no.1, it was found that in the management field there are several specialized studies that deal with this topic as opposed to the international business field. This is because the management field includes several interest areas such as: human resource management, general management, information management, supply chain management, key account management and so on.

It is also very important that the problem, purpose, objectives and research strategies be clearly and concisely expressed in an article so that the reader can understand what the researcher meant. In addition, specialized studies should also be open to ordinary people and not just to researchers, academics, teachers and students. We believe that research should be easy to understand and implement by the people concerned in order for the economic society to develop at a rapid alert.

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## How Do Romanian Politicians Communicate Online ? An Emphasis on Facebook

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### Abstract

*The power of social networks and the internet as a channel of communication has established a radical change in the way people communicate. The field of politics is no exception. Over the last decade, politics has been one of the most changeable areas since the emergence of social networks, becoming the medium that most dramatically altered the meaning, scope and rhythm of media crises for political actors.*

*This article aims at describing the use and evolution of social networks, with a focus on the political field. In addition, this paper integrates a brief case study of the online campaigns of 2014 presidential elections and the 2016 parliamentary elections in Romania, in order to see how the political actors communicate and the online reactions generated by their messages. The results indicate that overall the 2016 online campaigns generated low interest from users, one of the reasons being that the parties used social networks as a way of disseminating information and did not truly engage with the voters.*

**Key words:** Social networks; Romania; online communication; political campaign; Facebook

**J.E.L. classification:** L1

### 1. Introduction

Without doubt, during the recent years, the internet and social networks have been changing how people communicate. According to Wearesocial.com (Wearesocial.com, 2017), in the year of 2017, 50% world's population uses the Internet and more than 50% of the traffic comes from mobile phones (an addition of 30% compared to 2016). The internet has known a rapid evolution, from 3 billion users in 2015 to 3.8 billion users in 2017. The United Arab Emirates is leader in internet penetration, with 99%, followed by Island – 98% and Norway – 97%. In Romania, the internet penetration rate is 60% (Eurostat, 2017).

The rapid evolution is also specific to social networks, nowadays 2.8 billion users being registered on social platforms (in comparison to 2 billion users in 2015). In the top of the most popular social networks Facebook is the leader, with 1.8 billion users, followed by YouTube - 1.3 billion users, Instagram – 600 million users, LinkedIn – 470 million users, Google + and Twitter – 300 million users.

When it comes to Romania, a report by Eurostat in 2016 shows that 70% of the people aged 16-74 used the Internet and social networks (Eurostat, 2017). In addition, 88,4% of the users live in Bucharest – Ilfov, 71,8% of the users in North-West regions and centre, 58% in Muntenia and 57% in the North-East regions.

Surprisingly enough, only 10% of Romanians use internet banking, whereas in Europe the percentage is 60%, while the most frequently used features in Romania are video calling and video chatting. In Romania, the most popular online platforms are Facebook, YouTube, LinkedIn, Twitter, Instagram and Google+. Facebook is the uncontested leader, with an impressive growth in the recent years, with 9 600 000 users registered in the territory of Romania in 2017



(Facebrands, 2017). The next one is YouTube, with 7 million users, LinkedIn - 1.8 million users, Instagram - 550 000 users, Twitter - 380 000 users, but only 30 000 active.

## **2. Social networks and political campaigns**

Social networks have become one of the most important means of communication during a political campaign, as more and more people gain access to the Internet and social networks every day. The so called web 2.0 platforms reduce the cost of stocking the information, overcome national borders and eliminate the intermediates between politicians and voters (Bakardjieva, 2009; Bode, 2012; Serazio, 2014; Dimitrova, Shehata, Strömbäck & Nord, 2014).

What is more, social networks enable users' freedom of movement and speech and horizontal communication - social networks allow politicians to listen to the voters and answer them back directly (Ellison et al., 2014; Matsa & Michell, 2014; Deters & Mehl, 2012; Burke, Kraut & Marlow, 2011).

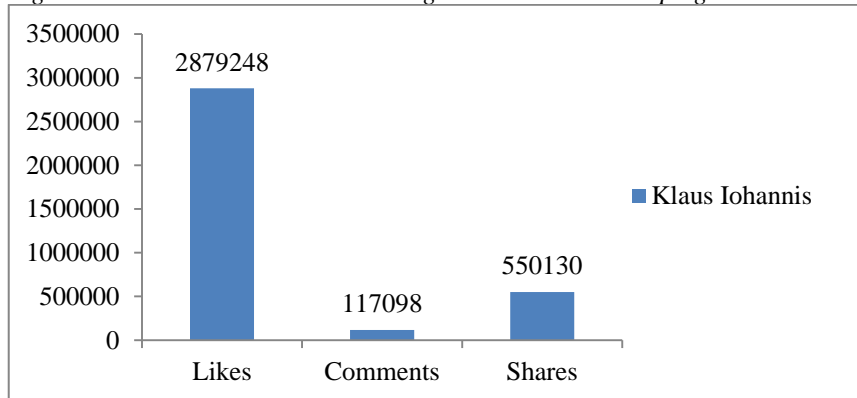
Moreover, social media allow custom treatment, as they give the chance to politicians of talking to each of the voters personally and enable the propagation of information (Klinger, 2013; Vaccari & Valeriani, 2013; Gil de Zúniga, Molyneux & Zheng, 2014). One of the characteristics of social networks is their ability to spread information and ideas. Thus, politicians make themselves known and their government plans quickly and easily. Of course, the easy dissemination is another advantage of using social networks, as they have become means of easy dissemination of information at lower costs, the attention and interest of citizens being captured with a relatively low budget (Duggan, Ellison, Lampe, Lenhart & Madden, 2015; Ellison, Steinfield & Lampe, 2011; Vergeer, Hermans & Sams, 2013).

President Barack Obama has been one of the politicians who most benefited from the 2.0 policy. Several journalists and analysts concluded that his digital strategy was a key element to achieve victory (Bronstein, 2013; Foley, 2013; Kienpointner, 2013). The excellent virtual marketing and his use of social networks such as Facebook, Twitter and YouTube changed the paradigm of digital campaigning (Hawthorne, Houston & McKinney, 2013; Enli & Skogerbo, 2013). Obama's campaign achieved higher income as a result of the proficient use of the Internet and raised more than 600 million dollars. Obama changed the rules of the game and focused much of his efforts on online new media. The objectives of his strategy were to carry his message to as many people as possible (especially young people), create as many direct communication channels as possible (email, online networks, text messages etc.), raise funds and provide people with tools that enabled them to spread the information (Hong & Nadler, 2012; Groshek & Al-Rawi, 2013; Jang, Lee & Park, 2014).

## **3. Using social networks in Romania**

In 2014 the current Romanian president Klaus Iohannis became the first politician in Europe to reach one million fans on Facebook, surpassing Merkel, Sarkozy and Hollande. Taking a closer look at the president's online campaign, we discover a pattern of communication used in both Obama's presidential campaigns: he actively sought user interactions by using intensive personalisation of the speech in an attempt to close the gap between the candidate and his supporters. As a result of his strategy and use of social network tools, candidate Iohannis became rapidly very popular on Facebook, his campaign leading to millions of reactions – almost 3000 000 likes, over 500 000 shares and 100 000 comments (see Figure no.1).

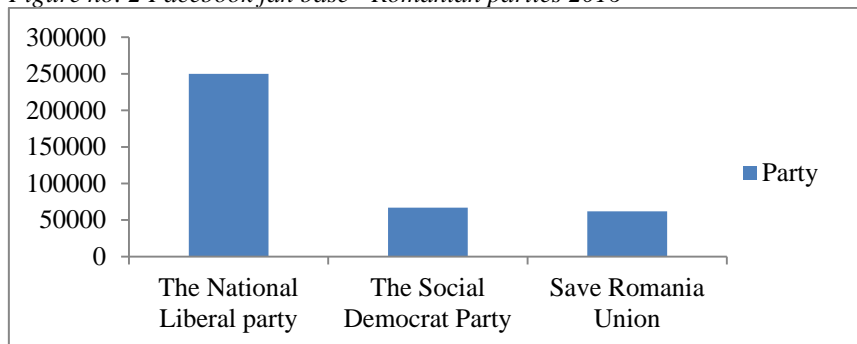
Figure no. 1 Facebook reactions during the 2014 online campaign: 17.10.2014 – 16.11. 2014



Source: Authors' construction, 2017

Currently, Klaus Iohannis continues to be the most popular Romanian politician on Facebook, with over 1 000 000 fans, followed by the former prime minister Victor Ponta (825 048 fan base), Gabriela Firea, general mayor of Bucharest, former president Traian Basescu, former Parliament member Elena Udrea and former prime minister Dacian Cioloş. As illustrated in Figure no.2, the political parties in the Romania, the most popular party on Facebook is the National Liberal Party (PNL) with approx. 250 000 fans, followed by the Social Democratic Party (PSD) - 67 000, Save Romania Union (USR) - 62 000 (Facebrands, 2017).

Figure no. 2 Facebook fan base - Romanian parties 2016



Source: Authors' construction, 2017

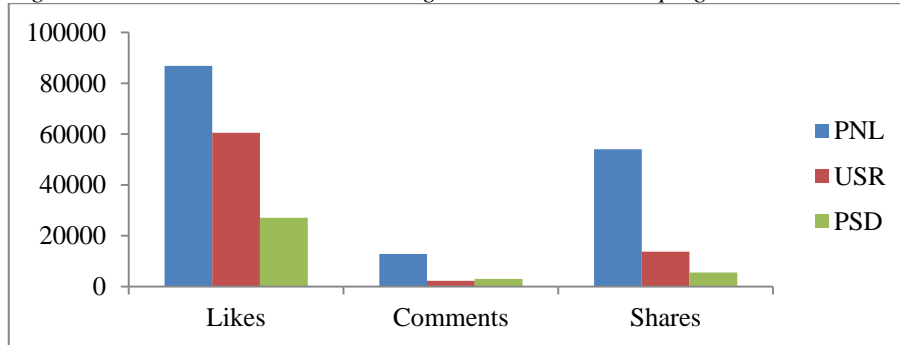
During the 2014 presidential campaign, candidate Klaus Iohannis run a very active and interactive campaign, published approximately 140 messages, with an average of 5 messages per day. His messages focused on getting closer to the users in order to gain their support. His attention was also directed towards his opponent, using predominantly emotion as an element of rhetoric. During the 2016 parliamentary campaign the strategy changed, the focus being on presenting the candidates. Therefore, the use of emotion is less notable and user interaction rather low. During the campaign, the three most popular parties published a total of 340 messages, the most active party being USR.

The 2014 presidential election triggered an alarm, demonstrating the importance of social networking in recent years. The 2016 parliamentary elections integrated social networks in the communication strategy, but they were only complementary means of disseminating the information and presenting the candidates, not focusing on truly interacting with the online voters.

In the case of parliamentary elections, posts that include pictures generate the most public reactions. A message containing a photo sums up approximately 1400 likes, is shared nearly 300 times and generates around 100 comments. Videos are shared in a proportion almost equal to the photos, but they receive fewer likes, an average of 700. The lowest response rate is generated by posts not containing multimedia elements. Overall, videos and photos generate the highest number of comments, likes and shares.

In the top of the most engaging parties PNL is the leader, with an average of nearly 2000 likes per message and a total over 85 000 likes (see Figure no. 3). The average of shares is 800 per message, with a total over 5000 shares during the campaign. PNL is also the party that generates the largest amount of discussion among online users, generating an average of 230 comments on the messages published during the November-December 2016 election campaign. It should be noted that in the case of PSD, user engagement on the page is also reduced due to the fact that some of the messages posted on the leader's page belong to other users, and these posts generate less user involvement. If these messages are eliminated, PSD obtains more likes on average than PNL, but fewer comments.

Figure no. 3 Facebook reactions during the 2016 online campaign: 12.11.2016 – 11.12.2016



Source: Authors' construction, 2017

If we turn our attention to the most popular posts, PNL is also the leader of the rankings, followed by USR. The most popular post - 32,186 likes, 3,425 shares and 4,256 comments - belongs to PNL as well and it endorses Dacian Ciolos as prime minister. For PSD, the messages that generate the most reactions from users feature party's leader, Liviu Dragnea, the case being the same for USR, its messages focusing on Nicusor Dan, the party's leader.

#### 4. Conclusions

Social networks have become one of the most important tools when it comes to exchanging ideas. In a world increasingly interconnected due to globalization and information technology advance, social networks and the internet have become the newest space of discourse between citizens and governments.

The case study shows that compared to the 2014 presidential campaign, the 2016 parliamentary elections generated a low interest from the online voters, one of the reasons being that the political actors used the online campaign mostly a channel of disseminating information in order to get voters acquainted with the candidates and less a tool for mobilizing voters. Therefore, the online voters did not spread the information or engage with the candidates, things reflected in the online campaign's results.

As for our limitations, although it is the first comparative case study integrating the 2014 online presidential campaign and 2016 online parliamentary campaign, this sample is still a partial snapshot in the context of a massive campaign that started months before Election Day. Despite our limitations, the study generates valuable insight into online Romanian campaigns, that can be used in future research.

All in all, even though social networks have started to prove their importance, this field has yet to be exploited and even more when it comes to the political scene. Certainly, future progress will take a better look at the integration of social media in citizens' daily lives and the way they could lead to user engagement.

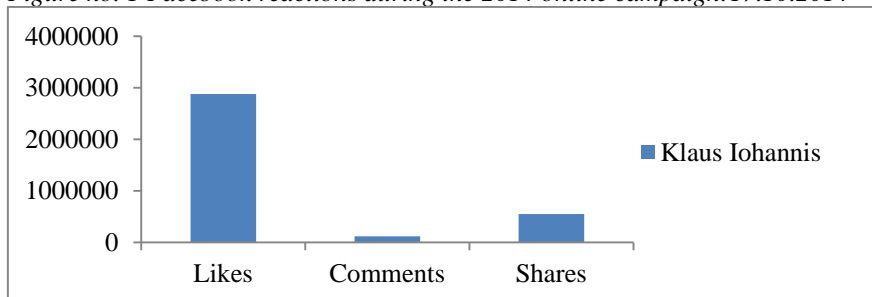
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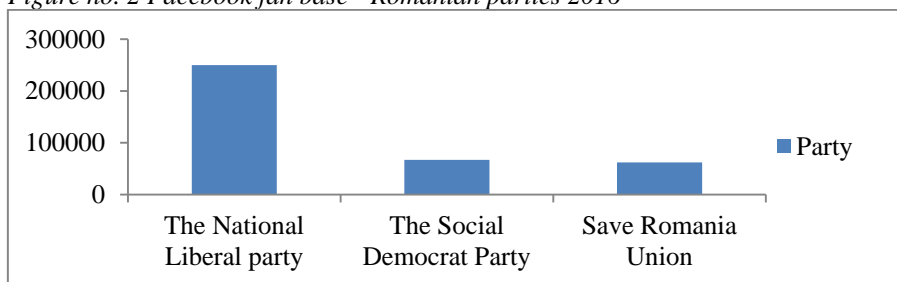
## Appendix A

Figure no. 1 Facebook reactions during the 2014 online campaign: 17.10.2014 – 16.11. 201



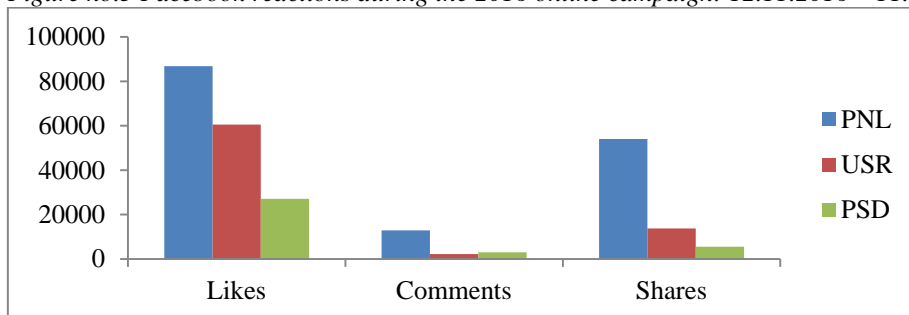
Source: Authors' construction, 2017

Figure no. 2 Facebook fan base - Romanian parties 2016



Source: Authors' construction, 2017

Figure no.3 Facebook reactions during the 2016 online campaign: 12.11.2016 – 11.12.2016



Source: Authors' construction, 2017

## Effects of Economic and Social Implications of Tourism on Economic Flows

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### Abstract

*The development of tourism at national level can also be influenced by the policies of other economic sectors or activities with which tourism interacts to a greater or lesser extent, such as: transport infrastructure, environmental protection, educational programs, land use planning, regional plan. The objective of this paper is to analyze the effects of economic and social implications of Romanian tourism on economic flows and tourism in balance of payments and investment position of Romania. Romania's receiving tourism is little represented in the tourist traffic, and the receipts in the field relative to GDP represent a smaller share even than the traditional EU tourist-issuing countries such as the UK, Germany or the Scandinavian countries.*

**Key words:** tourism, travel industry, marketing

**J.E.L. classification:** A1

### 1. Introduction

The current situation in the national context is crossed by two main aspects:

- Valuable tourism potential, but insufficiently capitalized.
- Poor results of economic performance, but moderate growth trend.

A simple representation of an economy shows the major flows of goods and services. Most of the value of the tourist and travel industry is derived from spending coming from leisure activities as well as from business tourism as a result of inflows and outflows from international tourism.

Expenditure in the tourism and travel industry is running within the same economy and this sector may also have important implications in other areas of activity. Revenues which come from tourism activity result in revenue growth for a country's economy as a result of tax collection by the state. Governments can stimulate the development of a tourism industry through subsidies and loans, but also by making their own investments, if the necessary capital is obtained and attracted from the capital markets, by governments or the private business environment, there will be a direct increase in investment. Different regions, countries or areas have identified the development of the tourism industry as a strategic policy objective at both microeconomic and macroeconomic level. These regions obviously expect the tourism industry to generate economic returns for the inhabitants (both households and local businesses) (Otgaar A.H.J, Klijs J., *The regional economic effects of industrial tourism development*, paper presented at the conference: European Congress of the Regional Science Association International, August 19-23, 2010, pg.3.).

### 2. Effects of Economic and Social Implications of Tourism on Economic Flows

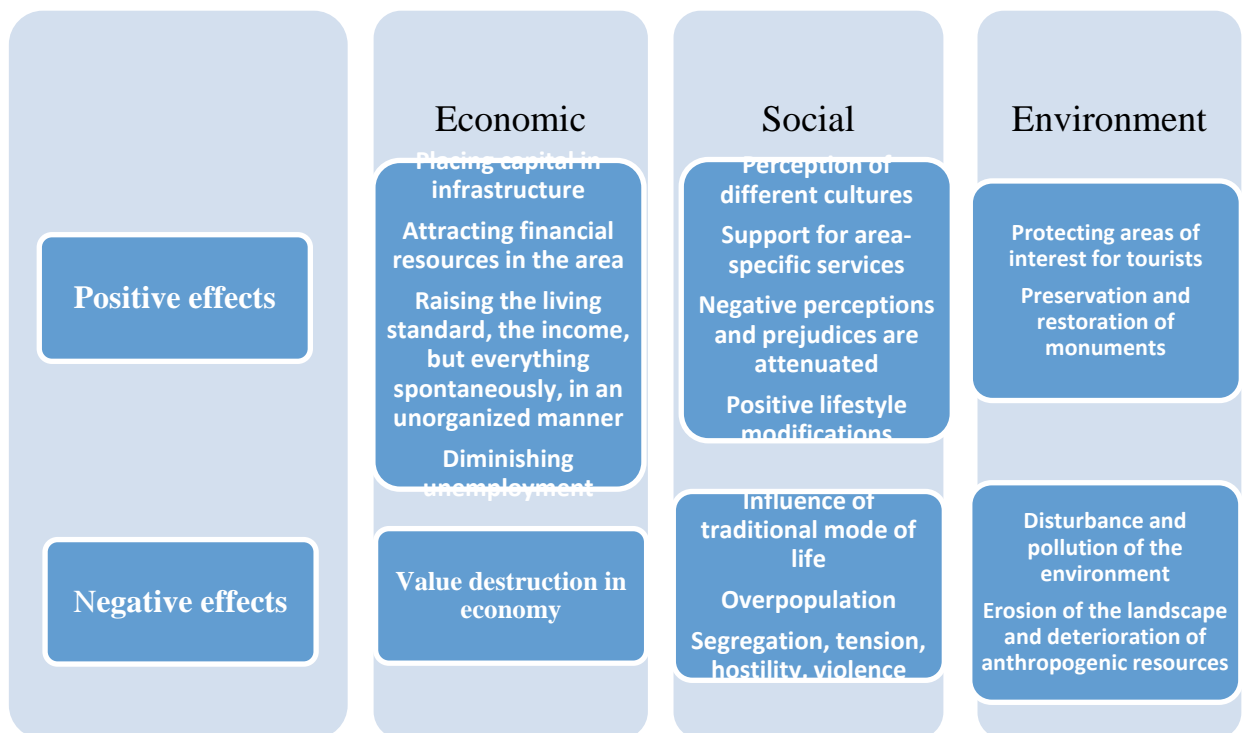
Over time, our country has been considered as an important tourist destination for the South East European market, supporting and promoting the image of Romania and, in particular, seaside tourism, spa resorts, cultural programs and monasteries in Bucovina. Current tourism statistics reveal a modest dimension of the tourist phenomenon in Romania, expressed through demand and supply-side indicators. The economic impact of tourism can be assessed from different perspectives, using a range of core indicators that highlight the contribution of the tourism and

travel industry to the economy in a broad sense. As a result of the increase in tourism, its effects influence the various flows in the economy according to the structure of the economy and the changes in tourism.

"The main aspects of the economic impact can be classified as follows" (Minciu R., *Tourism Growth And Its Effects in The Economy*, Amfiteatrul Economic, 2008, p.274):

- Income generation from foreign exchange operations and their contribution to Balance Payments account;
- The effect of multiplying and creating new jobs;
- Contribution to State's earnings from income tax;
- Improving the economic structure of a region / country;
- Tourism's contribution to GDP.

Figure no. 1 The impact of tourism on destination areas



Source: Adaptation after Evans N., Campbell D., Stonehouse G., *Strategic Management for Travel and Tourism*, Butterworth – Heinemann Ed., 2003

The magnitude of the economic impact depends on a relatively small number of factors, such as:

- The feature of the main facility and its attractiveness;
- Volume and intensity of expenditure
- The level of economic development in the country of destination;
- The extent to which travel expenses re-circulate in the destination country, etc.

The place and the role of tourism in the Romanian economy derive from the implications of this specific economic branch.

### 3. Tourism in Balance of Payments and Investment Position of Romania

The foreign trade activity of a country includes the entire economic import and export activity that is recorded over a period of time. The balance of payments accurately reflects the imports and exports undertaken as well as the correlation between the inputs and outputs of goods and services over a specified period of time. The Balance of Payments reflects the country's claims and debts as a whole in relation to foreign affairs, and the influence of tourism on it can be replicated through the currency balance of tourism which, depending on its nature - positive or negative - can offset,



reduce or widen a deficient balance of payments (Minciu R., *Economia turismului (Tourism Economy)*, Uranus Publishing House, Bucharest 2004, p.32).

The assessment of the impact of the results of the tourism activity on the balance of payments should take into account its meaning and its magnitude, so according to the balance sign, the countries can be divided into two distinct categories: countries with a positive balance representing the countries receiving tourists (France, Spain, Italy, USA) and countries with a negative balance, representing the sending countries (Germany, Japan, Great Britain, Russian Federation). Since intentional tourism is part of invisible trade and one of the traits of invisible trade is the stability of the balance of payments sign, it reflects both the degree of economic and social welfare of a country and the extent to which that country is specialized in tourism. A special place is occupied by the effects on the Balance of Payments, in close connection with the foreign exchange earnings in tourism, long seen as the main benefit of international tourism. In the simplest way, the expenses made by tourists become income (receipts) for economic units that offer goods and services. They, in turn, make different purchases from the proceeds obtained, which implies the existence of income for another group of producers. Tourism employees also make various purchases either locally or in another region. The structure of the tourism balance is complex compared to the balance of external payments. Thus, the "Tourism Exploitation Account" achieved through the involvement of the two international bodies, the World Tourism Organization and the OECD, reflects the payments and revenues generated by tourism, but for statistical reasons they are listed in other headings of the balance of payments, for example: trade balance, of services and capital.

Table no. 1 Balance of services for the period 2009 - October 2012

Indicators	Million Euro				Indices			Structure			
	2009	2010	2011	Oct. 2012	2011/2009	2010/2009	2011/2010	%			
Receipts	7,063	6,617	7,275	6,159	103,00	93.70	109.94	100	100	100	100
transport	2,077	1,926	2,272	1,829	109,39	92.70	117.96	29.41	29.10	31.23	29.70
tourism-travels	884	860	1,018	934	115,16	97.30	118.37	12.52	13.00	13.99	15.16
other services	4,102	3,831	3,985	3,396	97,15	93.40	104.02	58.08	57.90	54.78	55.14
Payments	7,357	7,168	6,893	5,676	93,69	97.40	96.16	100	100	100	100
transport	2,000	2,103	1,343	1,115	67,15	105.20	63.86	27.20	29.30	19.48	19.64
tourism-travel	1,051	1,239	1,407	1,201	133,87	117.90	113.56	14.30	17.30	20.41	21.16
Other services	4,306	3,826	4,143	3,359	96,21	88.90	108.29	58.50	53.40	60.10	59.18
Net	-294	-551	382	483	x	187.40	x				
transport	77	-177	929	714	1206,49	x	x				
tourism-travel	-167	-379	-389	-267	x	226.90	102.64				
Other services	-204	5	-158	37	x	x	x				

Source: Balance of Payments and International Investment Position of Romania, Annual Report 2011 NBR.

"The monetary and economic unification of Romania with the European Union will only be possible after the adoption of the Euro currency as its own currency. Once this realized, the importance of foreign exchange earnings and their contribution to the Balance of Payments will become much more limited, given that more than 50% of arrivals and an even higher percentage of revenue from total arrivals will be generated by EU members using the Euro currency, which will



become a national currency until then"( National Institute for Research and Development in Tourism - INDCT - 2010, published on [www.mdrl.ro](http://www.mdrl.ro)). The balance of services registered a deficit of 551 million Euro in 2010, up 87.4% as compared to the year before, amid higher commodity and business travel payments, along with the decrease of revenues from other transport services. Among the service balance components, the only surplus was the "other services" item. Revenue from services amounted to € 6.617 million, down with 6.3% as compared to 2009, from all components, and service payments amounted to €7.168 million, down with 2.6%, from the "other services" item (Balance of Payments and International Investment Position of Romania, *Annual Report 2010 NBR*, published on the website <http://www.bnro.ro/>).

Although there is no clear evidence of the causal relationship between foreign investment and tourism, it is widely accepted by specialists that tourism can attract direct foreign investment.

The WTO recommendation is for countries to organize their statistical system to obtain information on direct foreign investment in tourism or at least foreign investment in the tourism real estate sector (World Tourism Organization, *Tourism Satellite Account Implementation Project, Enzo Paci Papers on Measuring the Economic Significance of Tourism* (Volume 1), Madrid, Spain, 2001, p. 128).

Investments in tourism can be assessed from two perspectives: firstly, in terms of the value of the goods identified as capital goods in tourism, and secondly as an amount of investments made in each of the branches of activity characteristic of tourism. Capital goods in tourism can be represented by (World Tourism Organization, *Tourism Satellite Account (TSA) Implementation Project, Enzo Paci Papers on Measuring the Economic Significance of Tourism* (Volume 3), Madrid, Spain, p. 120-121):

- construction of hotels, restaurants or any type of accommodation including holiday houses;
- landscaping and infrastructure for the development of tourist areas;
- facilities for hotels and restaurants;
- the procurement (or leasing) of aircraft for the carriage of passengers;
- the purchase of leisure equipment for tourism;
- the purchase of coaches specially equipped for excursions, etc.

However, in macroeconomic practice these are very difficult to assess.

#### 4. Conclusions

In regard to tourism based income, after a very detailed analysis, we can see that it has a much lower level than the level of income reported by the other EU countries. The income reported in the sector shows low values, compared to the GDP. In order to complete the influence of tourism on the balance of payments in addition to analyzing the balance of the "tourism-travel" position, it is necessary to analyze the receipts from tourism transport, capital investments in the tourism industry, in the qualification and improvement of the tourism workforce.

I suggest a more active involvement by the government in the development and stimulation of the national tourism industry, so as the tourism industry can generate medium and long term positive economic effects.

Understanding the influence of tourism on the Balance of Payments should not be limited to the "Travels" item within the current account. All international transactions due to a certain extent to tourism, such as payments for goods and services needed for tourism investments, management costs in the tourism industry, etc. should be considered.

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- World Tourism Organization, *Tourism Satellite Account (TSA) Implementation Project, Enzo Paci Papers on Measuring the Economic Significance of Tourism* (Volume 3), Madrid, Spain, p. 120-121.

## SWOT Analysis of the Romanian Tourism Market Component of the Marketing Plan

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### Abstract

*Managing the marketing-related activity is all about the context assessment in which a company finds itself at a given time. The marketing specialist will perform a detailed analysis, i.e. a SWOT Analysis, through which he can pinpoint the company's strong points in correlation with the favourable opportunities that may be generated in the company's environment at a given time, and to weigh these assets and opportunities compared to the weaknesses and threats that may occur and create hazards in the company's activity. The company has to keep track of all the elements mentioned above by using a thoroughly executed study and to unearth its opportunities and advantages, but also threats and weaknesses and act accordingly in his upcoming marketing-related activities. This paper's objective is to perform a SWOT analysis in regard with the Romanian tourism market. The Romanian tourist market has great potential, but it is insufficiently valorified.*

**Key words:** SWOT analysis, tourism market, marketing plan

**J.E.L. classification:** A1

### 1. Introduction

The marketing strategies developed by the management structures are an important component in the elaboration and substantiation of the marketing plan. Materialized in forecasts, they establish the action lines of each enterprise, the effectiveness of the interface with the over-systems to which it belongs, the extent to which they maintain and amplify the busy market segment, the profitability gained often depending on their contribution.

In the marketing plan, marketing strategies are the core of the strategic management process and contain some defining features: they are based on an appreciable amount of aggregate information, they are subordinated to the objectives set, they are interchangeable with objectives, they define the major directions in which the enterprise concentrates its activity in the future and does not mark the beginning of its transposition into fact, they are the basis for the elaboration of strategic plans, require the existence of the strategic feed-back in order to obtain the competitive advantage. They target the market strategy according to its specificity and the strategies corresponding to the elements of the marketing mix: product, price, distribution and promotion.

For the SWOT analysis of the Romanian tourism market, we start from the premise that Romania is a country with a considerable experience in tourism and travel, but which needs to adapt as quickly as possible to the requirements of the 21<sup>st</sup> century. Whether urban or rural, mountainous or seaside, all tourist destinations are facing the same trends: an increasingly competitive market, increasingly demanding and exigent consumers, a sustained effort to put into practice a balanced development.

## 2. SWOT Analysis of the Romanian Tourism Market Component of the Marketing Plan

The adoption of strategic marketing decisions is based on a broad process of analysis and assessment of the company's business environment, its competitiveness and its ability to successfully meet the challenges and changes brought about by the company's external and internal environment which is achieved through marketing audit. *The synthesis of the marketing audit program* that highlights as a priority an enterprise analysis and which covers all dimensions of its business as well as all its specialized areas is the *SWOT analysis*. *SWOT analysis is a marketing plan approach* that allows a diagnosis to be made of the past and present state of the enterprise or of its functional domains as well as of its relationships to the micro and macro environment. In order to formulate the strategies of an enterprise, this will be achieved by presenting both strengths and weaknesses, as well as by analyzing the region's own resources and external circumstances that may affect favourably and unfavourably the achievement of the proposed goals. As a commonly used method SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), namely the analysis of strengths, weaknesses, opportunities and risks or threats of an enterprise, is based on six levels of analysis: legal, technical, commercial, management, human and financial resources. The SWOT name, which comes from English, represents the initials of the following words:

Strengths  
Weaknesses  
Opportunities  
Threats

When the enterprise owns a portfolio of activities or products, the SWOT analysis should be tailored to each activity or product. The SWOT analysis steps are:

1. Defining activities
2. Analyzing the external environment of the opportunities and constraints of the period,
3. Identifying the key factors of success
4. Assessing the company's internal capabilities, strengths and weaknesses.

"Ensuring success requires the touristic operator to identify differentiation elements that support the advantage in market competition, defining entities as losers and winners. Each market or industry has its own key success factors. Their correct identification plays a particularly important role, enabling companies to define their market strategy according to the relevant benchmarks of the sector in which they operate" (Petcu M., David-Sobolevschi I., *Demers Matricial de Poziționare Strategică a Entităților în Industria Ospitalității (Matrix Approach of Strategic Positioning in the Hospitality Industry)*, Revista Economie Teoretică și Aplicată, Supplement, May 2009, ISSN 1841-8678, p.137).

The marketing audit conclusions are summarized in a table of four quadrants containing the positive and negative characteristics of the analyzed enterprise and differentiating it from competing firms. *The strengths* that can be mentioned relate to the company's experience in distributing its products, the leading position in the target market, the variety and coverage of the target market, the development of an efficient marketing compartment and all other distinctive features or skills that the company holds compared to competing companies and ensuring it an advantage in the competitive environment.

*Weaknesses* are the company's weak areas that determine its location at a lower performance level in the competitive environment. We can mention: the decrease of the market share, the unfavourable image of the products on the target market, an inefficient and unorganized marketing policy, a mismanagement of the company's management with numerous hierarchical levels, the fluctuation of the human resources.

The synthesis of the marketing audit also captures the favourable aspects in the form of *opportunities*, of the positive factors from the external environment. The company can set a new strategy or reconsider its existing strategy for the profitable exploitation of opportunities.

*Threats* are the dangers of the external environment that the enterprise may face, represented by situations or events that will adversely affect the possibility of achieving the set objectives. Performing SWOT analysis is a strategic, flexible, and easy-to-use tool. It is the starting point that an enterprise or a project team uses to formulate action directions appropriate to the company's

situation and its relationships with the competitive environment. Its purpose is to enable a marketing plan to develop the strengths of the enterprise, to exploit the opportunities while finding solutions to eliminate or correct weaknesses issues, taking into account the marketing micro and macro-environment that threaten and condition the activity of the enterprise.

The tourism and travel industry has a great influence on countries, regions and, of course, on destinations. The size of tourism at national level has an economic, social, cultural and environmental influence on tourist destinations, and this influence may be positive or negative. The economic impact of tourism, following the conclusions highlighted in the research literature, demonstrates that not only tourism expenditure has direct effects on businesses from which tourists purchase products, but there are also indirect effects on businesses that supply goods within the tourism industry (Cooper C., Fletcher J., Fyall A., Gilbert D., Wanhill S., *Tourism: Principles and Practice*, Editura: FT Prentice Hall, capitoulul 5, 2005). This literature focuses on the value of production resulting from tourism spending, and is often summed up by the use of multipliers showing the impact on the dollar spent. These multipliers tend to be diminished when we analyze a local impact compared to regional or national impacts (Wanhill S., *The Measurement of Tourism Income Multipliers*, Tourism Management, 1994, pg.281-283).

The evolution of Romanian tourism must be guided by an appropriate national strategy that would make Romania an attractive international tourist destination. In order to understand the measures to be taken in the future for the recovery of tourism in Romania, it is necessary, among other things, to analyze the current situation and to draw the positive and negative characteristics that characterize the domestic tourism market.

Table no.1 Strengths, Weaknesses, Opportunities and Threats of Tourism in Romania

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• favourable geographic location at the intersection of the large Euro-Asian transport routes, opening to the Black Sea;</li> <li>• the existence of tourist culture and the possibility of developing all forms of tourism due to the diversity of the harmoniously distributed tourist potential;</li> <li>• the presence on the Romanian tourism market of world-famous hotel chains (Mariott, Hilton, HolidayInn, Best Western) guaranteeing the quality of services offered to tourists;</li> <li>• National Tourism Development Program ("Skiing in the Carpathians", "Ski area Predeal-Azuga", "Wine Road") and social programs ("Country holidays", "The seaside for all") initiated by the national tourism authority;</li> <li>• Possession of patents and / or technologies that give the tourism enterprises a competitive character;</li> <li>• Increasing tourist loyalty towards some of the products / services offered.</li> </ul>	<ul style="list-style-type: none"> <li>• the shady increase in the number of accommodation places in the tourist reception facilities;</li> <li>• the constantly low average index of use of the accommodation capacity, around 34.5%;</li> <li>• insufficiently developed and non-modernized tourism base (the large share of old accommodation structures);</li> <li>• shortcomings in the training of the workforce specialized in tourism;</li> <li>• poorly developed telecommunication networks;</li> <li>• the existence of an inadequate infrastructure, physically or morally worn off;</li> <li>• lack of cooperation between economic operators operating in tourism;</li> <li>• the quality level and the low degree of diversification of tourist services (emphasis is placed on accommodation and food);</li> <li>• reduced contribution of the tourism sector to GDP formation (below 3%);</li> <li>• very low investments in tourism of the total investments in the economy below 2%;</li> <li>• lack of an effective marketing policy;</li> <li>• insufficient tourist information and promotion (especially on the Internet);</li> <li>• the seasonal character of the mountain and seaside tourist market;</li> <li>• inappropriate cost strategies compared to the quality of the products offered;</li> <li>• poverty of the population;</li> <li>• competition of resorts in Bulgaria, Turkey, Greece;</li> <li>• significant deviations of the competitiveness and quality of tourism services, the consequences of this policy being manifested today by changing tourists'</li> </ul>

	<p>preferences to tourist destinations outside the borders;</p> <ul style="list-style-type: none"> <li>• unfriendly business environment for foreign investors;</li> <li>• lack of a good management policy at all levels;</li> <li>• the instability of the governmental institutional framework with a role and attributions in the elaboration of the tourism policy and strategy</li> </ul>
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OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>• tourism development by attracting structural funds from the European Union, allowing the support and financing of projects in this field;</li> <li>• freedom of movement of persons, services, goods, capital;</li> <li>• the single Euro currency, which has brought and will bring great benefits to tourism by simplicity (the tourist will have with him/her a single currency), transparency (the tourist will be familiar with the purchasing power of the currency), saving time and commissions;</li> <li>• recognition on the domestic and international tourism market as a result of Romania's accession to the European Union; thus, it is estimated that the number of foreign EU tourists visiting Romania will increase but not spectacularly; this increase rather joins the general trend in the European tourism industry;</li> <li>• elaboration and implementation of tourism development strategy by NTA; (several priorities of the strategy: creating and promoting the national tourist brand, developing a national network of Tourist Information and Promotion Centres);</li> <li>• ongoing projects - support for future tourist activity: highways, rail transport modernization, sea transport terminal for tourists, etc .;</li> <li>• attracting investors, especially foreign, with management input. Concession of land on advantageous conditions to investors, including for the setting up of new resorts.</li> <li>• providing tax incentives for new investments, depending on the size of investment in tourism enterprises;</li> <li>• diversification of tourists' pricing according to comfort and season in order to promote tourism for young people, for low-income tourists, for schoolchildren;</li> <li>• tourist attractions by diversifying tourism with packages up to personalization and taking into account the entire national potential;</li> <li>• interactive museums; interactive craft workshops; small industrial workshops that work on the tourist's command: glassware, ceramics, metal engraving, goblins.</li> </ul>	<ul style="list-style-type: none"> <li>• Migration of the highly skilled labour force and tourism to the European Union, especially due to the very low salaries paid in Romania, compared to the external offer;</li> <li>• entering the competition as a holiday destination with the new member states of the European Union; thus the quality of the products / services offered will become a decisive factor in the choice of a destination or operator by the tourist;</li> <li>• degradation of the natural environment through different types of pollution;</li> <li>• unattractive environment for foreign investors due to the fiscal policy of the state;</li> <li>• migration of Romanian tourists. Exit from European tourism flows;</li> <li>• deepening of the effects of the economic and financial crisis at national and international level;</li> <li>• changes in the preferences, needs, tastes of tourists;</li> <li>• entering of new competitors on the tourist market;</li> <li>• increasing competition pressure;</li> <li>• vulnerability to business environment fluctuations;</li> <li>• labour productivity within the tourism activity is strongly influenced by factors such as: the tourist attractiveness of the tourist area - the size and intensity of tourist flows - climatic conditions - conjunctural factors</li> <li>• enterprises that are located in low-attractiveness resorts will experience lower performance and will have to pursue an aggressive investment policy;</li> <li>terrorist acts, regional wars and other types of crisis situations;</li> <li>• expansion of viruses, which have had and still have devastating effects.</li> </ul>

Source: Author's own data processing

Romanian tourism has a valuable and diversified natural potential, but which suffers in some areas, due to pollution, the poor implementation of environmental legislation. Also, the existence of a rich cultural heritage is overshadowed by the state of degradation of many historical buildings and monuments. The insufficient involvement of the state in the development and promotion of cultural objectives, the lack of support for local traditions and folklore are some other shortcomings. Given that tourism involves first of all the movement of persons from the area of residence to the area in which they will benefit from tourism services, infrastructure, in particular the transport and communications one, plays an essential role. From this point of view, Romania faces many problems related to poor road quality, lack of motorways, ring roads around some localities, limited access for disabled people to many hotels and tourist attraction points, etc.

As far as the human resource is concerned, Romania is a country with welcoming, communicative people and traditional hospitality, yet with a poor awareness of the importance of tourism for the economy, with a lack of professional training in the territory with a massive migration of the workforce in the hotel industry.

The legal framework and organization have numerous shortcomings, starting with the rules for granting tourism authorizations, which require a review in order to meet current market requirements, the lack of integrated city / resort tourism development plans, the lack of incentives and support mechanisms for investors, and ending with the implementation of current legislation which is often inadequate.

Even with the expansion of the tourism promotion and tourist information network of the National Authority for Tourism abroad and the extensive program of tourism promotion abroad, Romania still faces great marketing difficulties. Thus, it is worth mentioning: the lack of a strong positive image of Romania abroad as a tourist destination, the insufficient market research, the uncoordinated network of tourist information centres in Romania, the insufficient use of IT means and Internet for information, marketing and reservation.

In a world that is undergoing change, it would be totally unreasonable to rely solely on the initial analysis or even on the analyses carried out in certain periods. The analysis system must offer the possibility of making alternative forecasts of future events. Thus, in an uncertain environment where the risk is present, we cannot know the future accurately, no matter how advanced the forecasting techniques are. The environmental analysis process must be an integral part of the enterprise's overall decision-making system.

### 3. Conclusions

The SWOT analysis reflects a "delicate" situation in which Romania finds itself currently. There are a lot of weaknesses faced by tourism, but also a number of important opportunities related primarily to Romania's recent integration into the European Union.

The analysis can be used to increase strengths, correct and diminish weaknesses, eliminate threats and capitalize on opportunities through rigorous strategic planning.

Therefore, we suggest rapid investments in infrastructure and in the promotional activities regarding cultural tourism, ecotourism, business tourism and i wouldn't stop here, because Romania has an infinite greater potential.

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# Particularities of Planning, Organizing and Managing Port Marketing

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## Abstract

*The study of planning and organizing activities starts from the knowledge of the port-specific characteristics of activities related to maritime and inland waterway transport that take place in or near the port. In this paper, the peculiarities of these activities were studied in order to be known by the marketing specialists, but also by the managers of the port operating companies, the administrations of the maritime and river ports. The result of the research is the systematization of the planning process, the organization of the port marketing activity and the deterioration of the particularities of the port marketing management.*

**Key words:** port, marketing, planning, organization, leadership..

**J.E.L. classification:** I 21, M 31, O 15.

## 1. Introduction

International Marketing specialists consider planning activity for (Sasu, 1998):

- Understanding the environment in which the company operates.
- Elaboration of the action strategy, on the market where it operates.

Planning in Portal Marketing should take into account the following, particularly important aspects:

- The port, in which the port operating company operates, the adjacent sea or river, the geographical region and the administrative area of the country.
- The port market and the maritime market as a whole and on segments (Iordanoaia, 2005).
- Independence or dependence of the firm on political factors in the country, area or city where it is based (Aaker, 1998).
- The Government policy, which, through regulations in the field of transport and port operation, influences decisions concerning port activities.
- International Legislation for Pollution, Labor and of the International Maritime Organization (IMO, 2017).
- Ease or difficulty in obtaining information about competition and potential customers.

These aspects directly influence planning ability, the level of complexity of this planning, and the number of variables that can influence marketing research. Detailed information is needed to make realistic, permanently adaptable plans, easy to understand by the Port commercial operators.

## 2. Planning methods used in Portal Marketing

The main planning methods known internationally, which can be adapted and used in Portal Marketing, are as follows: "Boston Consulting Group" method; "General Electric" method; "Ford" method; Profit impact method on marketing strategy; Scenario method; Combined method (Kotler et.al, 1999). The most common method of port marketing is BCG. The "Boston Consulting Group" (BCG) is the best known method of management and marketing planning. Under this method, planning is done by dividing a company's business into "strategic business units". This division can be done on a "country-based" or "land-based" basis as in the port operating range. The criteria used for this division are the following:



- Units must have a known number of competitors.
- Business leaders are responsible for developing and implementing their own strategies.
- Unit profitability may be measured in real income or net profit.

After dividing business into strategic business units, planning must classify companies according to their future potential. The BCG method classifies all strategic business units into a business portfolio matrix. In this matrix, they are considered as strategic business units: current, potential or timely. The BCG method classifies business by market growth and market share. The growth rate of the market refers to the increase in the total annual market demand separately, on a yearly basis. Market share is the relative share of the company compared to the largest competitor. Thus, a rate equal to 1 means that the strategic business unit has the same share as the next competing trading company and the value of 0.5 means that the strategic business unit has half the largest competitor it follows. The BCG method starts with the hypothesis that the company with the largest market share in relation to competitors must be able to produce at the lowest cost. For companies with a low market share compared to their competitors, they will be producers at high costs.

Using these dimensions, businesses were categorized by this method into four categories: "star", "milk cows", "question marks" and "dogs". Each type of business has different financial characteristics and offers different strategic possibilities. In order to be able to stay in business, such a company must balance the business in every area, because in the long run the positions can change, the company can move from one position to another. Appropriate planning can provide a set of business combinations in one area. Depending on this planning and its objectives, the port operating company must allocate new material and financial resources, employ high-performing staff to meet the imperatives of the moment. By using this method, the port operating company may adopt one of the strategies that correspond to its position.

The strategies that can be adopted for port activities are the following:

- Building, investing for the future, setting a short-term gain with improving market position.
- Keeping your current position.
- Harvesting, generating short-term cash flows.
- Removing, selling the business or liquidating the business.

The advantages of the BCG method are as follows:

- Provides a global view of business affairs.
  - Create an appropriate framework for analyzes and comparisons.
  - Represents a basis from which the company's marketing objectives can be formulated in specific markets.
  - Allows simple, easy-to-understand graphical representation.
- The disadvantages of this method are the following:
- It leads to a great simplification of the planning process.
  - The product or service and their market are not properly defined.
  - It does not solve the problem of measuring the market, how it grows.

### 3. Systematization of the planning process

The planning process in Port Marketing can be systematized as follows:

- Preliminary analysis and selection of planning criteria (Niculescu et.al, 2000).
- Adapting the marketing mix to the maritime market (Iordanoaia, 2012).
- Developing the marketing program (Prutianu, et.al, 2002).
- Implementation and control (Ansoff, 1984).

**a).Assessment of potential markets.** This is essential in the planning process, and their choice is based on a number of criteria as follows:

- The nature of the company. This involves: its objectives, the necessary resources, leadership style, philosophy, organization, financial limits, specializations in management and marketing of the personnel, the port service provided.
- Analysis of the strengths or weaknesses of the company, its limits and its potential.
- Objectives of the company, the advantages of entering a new market.
- Nature of restrictions in the country, which may be political, legislative, economic.

-Restrictions in the countries where the partners or ports of destination are of political, economic, cultural, technological and competitive nature.

-Evaluation criteria that refer to the minimum market potential, minimum profit, return on investment, competitive level of acceptance and standards of political stability.

-Complete analysis of the market segment where the company wants to enter, identifying problems and opportunities on these markets, starting the process of creating marketing programs.

**b).Adapt marketing mix.** Its adaptation to the port market begins with the detailed analysis of all the components of this mix. The end of this stage is to adapt this marketing mix, to the specificity of the market in the port in which commercial society operates, to the uncontrollable elements of the environment that effectively meet the objectives and goals of society. Depending on the results of this step, a selection of new services that can be introduced and delivered by the merchant company will remove some of them that are no longer of interest to customers and are no longer profitable.

**c).Developing the marketing program.** This is the stage of the actual development of the marketing plan. This program can be made for a single service, in a single port or in several directions. The program may include the following chapters:

*1.Analysis of the situation.* This involves analyzing all internal and external information such as:

-Economic forecasts in national and international affairs about the goods that is required on the national market, in the near area or within the continent.

-The business units' forecast, which refers to the targeted market segment and the profits to be gained.

-The time required for planning.

-Characteristics of customer behavior.

-Situation of competition on the maritime market.

-Mixed marketing including: the port service offered, the price or tariff used, the price level, the situation in the port, the links with the partners, the relations with customers, the use of intermediaries, the ways of promotion. Promotion must be based on cost planning, channels, and estimate the effectiveness of using the ad.

-Changes in the structure of the port market, restrictions of any kind that may occur.

-Strengths or weaknesses, threats and opportunities appearing in the port.

*2.Synthesis of "Key Issues" and Opportunities.* This has to be very carefully done by the marketing specialists of the commercial company.

*3.Setting goals. It is done in advance and explicitly.* These may be general, specific; short, medium or long term. It is recommended that they be predicted for a minimum of 3-5 years.

*4.Elaborating the strategy.* This refers to the perspective of the commercial society, its general policies in the general social and economic context.

*5.Developing tactics.* It refers to a shorter time horizon and includes concrete actions at the department or marketing department level.

The budget calculations take into account all types of expenses that need to be made to implement marketing strategies. The definition of action programs refers to those concrete activities that need to be undertaken, i.e. the steps to be taken, the personnel involved in them, the way of implementation and the deadlines for solving them. At this stage, it may be decided to stop the activities if the marketing objectives of the port operating company can not be met.

**d).Implementation and control.** At this stage the implementation of the established plans is being implemented. Marketing plans require leadership and control over how they are achieved.

#### **4. Organization of new port marketing**

It aims to develop a proper organizational structure that should allow the commercial company to respond appropriately to market developments, harbors, using past managers' experience or other similar situations. The main problem is the determination of the "place" in which the responsibilities of the company as a whole and the staff employed in particular will be determined (Branch. 1986). The main factors influencing the organization of the Port Marketing activity are the following:

- The goals of the business, that is, the mission, goals and strategy.
- In-house forces, i.e. specialized personnel, the possibilities of providing port service, the level of employment and the number of contracts in progress.
- External forces, customers, routes and distances, government regulations.
- Business leadership style, leadership structure, and decision-making.

The types of organizational structures currently in use at the Port Operations Port of Maritime Ports are as follows:

- National companies with a specialized department in this field (MPA, 2017).
- Joint stock companies that have an international transaction office or service with multiple attributions, from marketing to public relations (NCA, 2017).
- Joint stock companies or limited liability companies that have hired a marketing or public relations specialist (OT, 2013).
- Limited liability companies without marketing specialists, where marketing issues are resolved by a manager or a non-specialist employee.

## 5. Particularities of port marketing management

The term "Marketing Management" or Management of the Marketing is a "dual" concept (Kotler, 2000). From the perspective of marketing, the management of all the activities of the company takes into consideration the market and the permanent satisfaction of the clients' needs. Hence, marketing is a "central and guiding" concept of management. But from the perspective of management, marketing is a "main function" within a trading company that monitors the entire activity, especially the limit situations, which are given by the strengths, weaknesses, opportunities and threats to be solved in the process of marketing management. For this, management-specific activities are used, such as analysis, coordination and control.

Management of marketing activities should be understood as a "complex of activities that include the planning, coordination and control of all the activities of the company, oriented towards the potential markets, aiming at" achieving a permanent satisfaction of the clients' needs" (Olteanu, 2002). Since systematic planning, coordination and control are general management functions, management and marketing specialists consider that "the marketing management process consists of three main phases":

- The analysis, which includes the essential elements of the marketing system, i.e. demand, supply, customers, competitors, goods or services, and aspects of the company's own strengths, weaknesses, opportunities and threats (Iordanoaia, 2012).
- Coordination, which aims at setting the main marketing objectives, adopting appropriate strategies and programming the concrete activities to achieve the proposed objectives (Olteanu, 2002).
- The control, which must ensure the implementation of the strategies and the marketing mix in the activity of the organization (Giligan, 2003).

Marketing of marketing is a concept whereby "marketing must improve its reputation as a provider of information in the field of markets and consumer needs and establish close links with other knowledge-generating disciplines" (Thomas, 1998). In this respect, marketing must act on three levels:

- The cultural plan, where specialists have to support the theories and guidelines that place the client "first in the commodity circulation chain".
- The strategic plan whereby marketing should have a set of internal and external market management techniques and a suite of strategic alternatives for each component of the marketing mix: product or service, price, distribution, promotion.
- The tactical plan, which takes into account all the practical, current implementation actions of the strategies.

Another modern concept is the "Managerial Marketing", which refers to ensuring the company with the most important factor of production, the human resource. It is also called "job-marketing" (Thomas, 1998). This concept develops the theory of organizing and conducting the selection, learning, training and launching of the best specialists for the business activity of the company. According to this concept and considering the marketing side, the generations of employees as

managers must be constantly aware of the current and future requirements of the company and the market, in order to take the right measures to satisfy the clients, under conditions maximum efficiency. Hence, the role of marketing specialists who specialize or even over-specialize in this field, who constantly work on modern marketing principles, methods and techniques, must be very well understood.

## 6. Conclusions

Port marketing has a number of peculiarities. Port operating companies have a distinct specificity, different from that of producers, close to those of land-based service companies, but with other orientations and, in particular, outside (CIMR, 2015). An important aspect of the orientation and specific port marketing is the social and economic context, which has the greatest impact on sea and river transport. The port operation is in a transit position, linking maritime or river navigation companies with road, rail, or pipeline. Hence, the design of port marketing, from carrier orientation, as intermediaries of goods transition from producers to traders distributing them to end customers, must be started.

At present, Romania's port marketing is still at an early stage, it is tributary to the one practiced by state-owned companies, such as National Company "Maritime Port Administration" SpA. Constanta or National Company "Administration of Navigable Canals" SpA. Constanta. The two major companies have an important role in the development of port marketing, they have the financial capacity to organize all the necessary activities to attract customers to the port of Constanta and to the Danube-Black Sea Canal. They organize conferences, symposiums, "Days of Constanta Port", in the country and abroad. The organization of these events is a great opportunity for port operating companies, to promote their activities, to make themselves known and to attract new customers.

But these are not enough, they can not cover the whole range of modern services provided in the port, they can not direct the customers to all port companies. The role of maritime port administration is very important in order to boost commercial relations, to make connections between port operators and customers. However, the port administration can not cover all aspects, all situations and especially, it can not handle the marketing of the port operators strictly to the market segment where they are interested. The general approach of marketing by the port administration needs to be complemented by each port operator, with a customer-oriented approach and, in particular, potential customers, to attract them into the business.

The port operating companies in Romania in general and those in Constanta port, in particular, do not currently have a modern marketing system, customer search, customer orientation. They do not have any special programs to find and attract potential clients to business in Constanta port. It can be said that business in port is taking place after a certain national economic context. If the national economy is on the increase, the volume of the activity carried out in the port increases. If the national economy falls, so will the port companies. This means that these companies are very dependent on the overall economic situation, which means they do not have spare options, they do not have strong links with companies within Central Europe. In recent years, there have been a number of changes in customer search outside of Romania in order to reduce the dependence of port businesses on the economic power of national economic operators. But the future is unsafe for port businesses and this marketing activity needs to be developed and targeted to expanding markets.

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## Information as Object of Computer Science in Maritime Transport

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### Abstract

*In our paper we make a connection between the notion of information and the economic, strategic, and security value that it have in the maritime domain.*

*In the last decades increasing the degree of computerization of industrial processes and increasing the use of information in solving human problems has made information considered as an economic resource.*

*The sea is a resource for the transport of goods and people to its real capacity. The transport policy aims at transferring the quantities of goods in efficient forms, which can be accomplished by using informatics means such as: optimized databases, algorithms aimed at smart routes, data encoding for a good communication between actors.*

*The use of Information Technology infrastructures and the Internet, in addition to economic, social and political benefits, may also lead to tensions. The issue of cyber security can be addressed by promoting international maritime cyber security interests in international alliances.*

**Key words:** information, economic resource, maritime transport, Information Technology, cyber security

**J.E.L. classification:** A00

### 1. Introduction

The word information -taken from Latin (informatio) through the French language (information) - is polysemantic, and it can get more meaning (sometimes totally different or even contradictory) that are determined by the very varied domains (Benamati *et al*, 2007, p.48) and contexts in which it is used. Apart from the meanings of common language, he also has other meanings, attributed either to his definition as a term (scientific or technical) or as a concept within branches of philosophy or of sciences and technologies whose subject matter is information. The term "information" is also related to an informational process (the sequence of actions to be informed), but also to the outcome of this process (volume, variety of information obtained) as well as specific phenomena (information phenomenon, information explosion, etc.). Information has also begun to be considered as the primordial ontological factor that is at the origin of the universe, together with matter and energy.

None of the existing definitions or concepts for information are unanimously accepted, which creates confusion, ambiguity, and sometimes even economic loss.

Lately, more and more scientists and scientists have questioned whether it is possible to build a single, generally valid theory of information. On the other hand, due to the pressure exerted by the breakdown of research in some areas (cognition, biology, psychology, robotics, artificial intelligence, etc.), there is a growing number of attempts to combine and overlap the various

meanings and interpretations in a single universally accepted concept.

The apparent contradiction between the various concepts of information (Wallace, 1968, p.187) existing today is due to the fact that most of them are developed only for a certain domain, and to be defined, information must always be reported to a system specific to the domain, such as DNA, spoken language, computers and so on.

What is the information? In a definition - as brief as informal and therefore inaccurate - it can be said that information is a representation of reality, but also of reflection and projection - which are typical to the human intellect - through a well-defined and structured set of symbols - usually accessible to human senses and reason, but also to some devices, such as automatic computing (computers). Information is neither content (but the state of a system can be assimilated to it), nor an agent (but the signals transmitted through a channel can be assimilated to it), neither ownership, nor instruction, nor process nor method, it is constituted in a stand-alone category, having an abstract and subtle existence - that is, immaterial - a category which is reflected by states, signals, etc. and is an essential element in the knowledge process.

Shannonian information - Claude Shannon, in his work published in 1948, "A Mathematical Theory of Communications", gave a new meaning to the term "information". Shannon highlighted the objective, quantitative aspect of information, (Shannon, 2001, p. 21) considered completely independent of the transmitter and receiver, as a natural reflection of the structure and ordering of the real world. To him, information is a mathematical term, abstract, which designates a magnitude that can be measured and treated mathematically just like mass, energy or other physical size. The term is related to the intuitive idea of predictability and choice.

In this theory, the semantic aspect of communication is irrelevant, it does not matter the meaning of the message, but the fact that it has been selected from a set of possible messages. What is important to evaluate is the amount of information emitted and received.

Initially, the term was defined in the Theory of Information as a size that expresses the uncertainty removed by realizing an event from a set of possible events. This definition is currently used in the statistical theory of communication to express the uncertainty of the occurrence of a set of symbols defining a multi-possible state of an element in a communication network.

Subsequently, the meaning of the term extended to knowledge in general, to the appearance - either for man or for a computing system - of every new element, previously unknown on the surrounding reality, contained in the meaning of a symbol or a group of symbols (written text, message spoken, plastic images, musical portative, indication of a tool etc.).

The unit of measure of the amount of information is 1 bit, (which comes from the words: Binary digIT). An 8-bit group forms a byte (or 1 bait, a name that comes from the English byte). A current personal computer can include in its quick work memory a quantity of information of the order of gigabytes.

## **2. Information - economic resource and service of first necessity**

In the last decades of the XX century, increasing the degree of computerization of industrial processes and increasing the use of information in solving human problems has made information considered as an economic resource, somewhat equal to other resources such as labor, raw material and capital. This perspective highlights that possession, manipulation and use of information can improve cost-effectiveness in many physical or cognitive processes. As an individual and social resource, information has some characteristics that distinguish it from the traditional notion of economic resource. Unlike other economic resources, information is virtually unlimited, with apparently time-bound limits and human cognitive capability. This feature comes from the fact that information as an economic resource diffuses naturally (it can propagate itself), the rate of reproduction of information is higher than the consumption rate, and the information does not undergo changes in the transactions (it can only be shared, used in common). At the same time, information is compressible, both syntactically and semantically. Her ability to substitute other economic resources, her transportability at a very high speed, and her ability to deliver an asset to her own, underpin the remodeling of social industries (such as research, education, editorial activity, trade) and even of politics. The social concern (Manole, 2015, p.58) about the management of information resources has expanded into the traditional field of libraries and

archives and has included organizational, institutional and governmental information in what has become the name of information resource management.

The second perception of information (dating back to the same period) is that of a prime necessity that has led to the development of a new segment of national economies worldwide: the Information Technology (IT) sector (Manole *et al*, 2016, p.85). Benefiting from the advantages of information assets and building a perception of its utility and individual and social value, this sector provides a wide range of IT products and services.

Classification of information (Wallace, 1968, p.190) by its nature:

a) Information in the form of data: numerical, alphanumeric, participating in the execution of a wide range of mathematical and logical operations with wide applicability in economic activities, scientific research, technological design, statistics, administration;

b) Information in the form of texts - that information organized in the form of documents, pages of texts, paragraphs, phrases, words, characters. This type of information is intended for processing with appropriate text editing and editing programs, grammatical and semantic control of words, putting into shape and then in the page of the text to be edited;

c) Information in the form of graphic documents - intended for human perception by displaying on the computer's electronic monitor by writing to the printer or the plotter. A document may contain graphically processed images, data in the form of reports and situations, explanatory texts, graphic representations, drawings, technical drawings, photographed images;

d) Information in the form of audio sequences generated by the human voice, phenomena from reality, musical instruments or electronic synthesizing of voice and acoustics;

e) Information in the form of video sequences - of animated or film nature, perceived by specialized camera-type devices or generated by two-dimensional or three-dimensional graphics programs that are often accompanied by sound information: voice or sound.

### **3. Maritime transport**

The oceans connect large centers globally through a network of interdependent economic, financial, social and political relationships. The shipping environment (Utureanu *et al*, 2016, 399) includes trade routes, ports and infrastructures such as pipelines, oil platforms, natural gas, trans-ocean telecommunication cables.

The transport system currently in place will not be able to cope with predictable traffic increases, so it has become essential to develop informatized transport systems to eliminate bottlenecks that will harm the world economy.

Informatized transport provides a solution by combining different modes of transport for a single journey and by making the most efficient use of available infrastructure with generally low costs of society along the maritime coasts.

The sea is a resource (Purcel, 2016, p. 275) for the transport of goods and people to its real capacity. The transport policy aims at transferring the quantities of goods in efficient forms, which can be accomplished by using informatics means such as: optimized databases, algorithms aimed at smart routes, data encoding for a good communication between actors.

Transferring traffic waterways is an effective alternative to road transport, increasing the role of maritime ports as distribution chain nodes. Ensuring security is one side of the process of securing the entire distribution chain.

For Risk Management, (Mălescu, 2016, p.1) Critical Maritime Infrastructure Protection and Crisis Response, the primary objective is to enhance conflict prevention and crisis response capacity.

### **4. Data Encoding**

Information cannot be conceived outside an exchange process between two partners - one that generates it (the source) and another that receives it (the receiver). The exchange of information raises specific problems arising from the form of expression, i.e. the physical and formal expression of the content. The receiver can only retain and interpret the information received when it has access to the physical support and knows the code used by the transmitter.



Example: Although we live in a "big" wave of electromagnetic waves, the information they carry can be obtained only by those who have a radio or TV receiver and can decode the received signals. Additionally, in the case of verbal messages, it is necessary to know the language in which the message was made.

Information and encoding are inseparable entities. Information cannot exist without formal support, just as a coding that does not serve to record and transmit information is meaningless.

Running the automatic data processing cycle involves the existence of different types of data encoding.

1) External encoding of information - it occurs both in the process of collecting data when each information entity is put in correspondence with a symbol consisting of letters, numbers and special signs, as well as extracting the results.

The problem of encoding input data is particularly important on the one hand for increasing the yield of subsequent processing and on the other hand for a simpler manipulation by humans. If, from the point of view of man, it is preferable to associate symbols as close as possible to natural language, from the computer point of view, it is preferable for an "optimal" coding, that is, a minimum number of symbols chosen so as to allow processing with a minimum number of operations. Sometimes such encodings already exist in the industry where the data originates, being required in current business.

Example: In a collections of data on students of a faculty, it is possible to use in the coding of information not the name and surname of the students, but the identification number, given that each student corresponds to a unique identification number. Such coding has the advantage of eliminating any ambiguity in identifying students but involving the return to the natural form of human representation for human use.

Nowadays, given the possibilities offered by modern computer systems, it is preferable to introduce data using specially designed models or using languages as close as possible to natural ones. In addition, drawing formats are preferred, including multimedia elements that are easy to interpret, as much as possible encodings have been removed, making it possible to read documents only by specialists with experience in the field.

2) Internal coding of information - It is specific to the data processing process because the computer only works in binary representation. Coding can be done according to large circulation standards (ASCII, binary, binary-decimal, etc.) or based on local conventions that provide the best performance for a specific case. The quality of internal encoding depends on the processing time, the portability of the programs, the possibility of using the data by several categories of users.

3) Redundant coding- It is characteristic of the processes of transmission and storage of information on various internal or external media. In principle, redundancy coding implies that besides the useful symbols (also called informational symbols), which encode the information itself, a number of additional symbols (also called control symbols), which are in certain relations preset with the information symbols, are also introduced. Detecting reception of violation of one of these relationships allows detection and sometimes even correction of errors. The best-known example is the parity control bit, so chosen to provide the same parity type for all the bit groups composing a message. A particular case of internal data encoding is compression of data widely used, especially in archiving operations and the representation of images and sounds due to the large amount of information involved. The main objective of data compression is to reduce the amount of data memory occupied. The use of data compression has besides the definite advantages of much less memory and a number of drawbacks such as increasing the overall working time, decreasing the portability of application programs, lowering reliability, increasing processing complexity, etc. Despite these disadvantages, multimedia data collections cannot be designed without the use of data compression.

A special aspect of data encoding is the encryption of information, that is, its representation in a special form so that it can only be recognized by those who know the encryption rule. Encryption can be done at the external encoding (for example, when the operator should not know the meaning of the data he is handling) and in the internal encryption to prevent theft of information. Encryption should be used with care and only where it is really necessary, as it complicates the processing, increases working time and can lead to storable data loss in the event of accidents.

The use of Information Technology (IT) infrastructures and the Internet, in addition to economic, social and political benefits, may also lead to political or military tensions, misperceptions or even conflicts among actors of international society, thus becoming a new national and international security challenge.

In the context of technological development, the role of IT infrastructures has changed from tools that facilitate day-to-day operations to strategic foreign policy instruments, arguing that the cyber war would be one of the most important military issues (Williams, 2013, p. 365) developed in recent history. Increased Internet dependence and interdependence of maritime transport has prompted a process of increasing insecurity for states, (Euronaval, 2015, p.1) in terms of increasing vulnerabilities to unconventional threats of cybernetic nature.

## 5. Conclusions

As the share of unconventional threats (U.S. Transportation Dept., 2013, p.1) has increased over the last decade, cyber attacks are a growing threat (Roussouw, 2013, p.101) to national and international security, economy and maritime transport (of goods and persons), both quantitatively and qualitatively, cyber attacks being more sophisticated and more complex. Therefore, the new vision of security must also capture the aspects of the massive development of information and communication technology, which determines the widening of the maritime economic security agenda by including the cyber dimension of national and international security. Together with terrorism and the non-proliferation of nuclear weapons or mass destruction, cyber space is one of the unconventional areas of interest for international security.

Interdependence in international relations in general and in cyberspace, in particular, makes international society more accountable through international cooperation to identify a comprehensive approach to cyber security. The peculiarities of the cyberspace and the multinational impact of cyber attacks call for the adoption of a public policy with a strong international component. Due to the nature of the cyberspace, as well as the asymmetric and transnational character, we believe that the cyber threat poses for political leaders a similar challenge to terrorism in terms of the need for a diplomatic effort to regulate the field.

The development of international cooperation requires the first step to agree universally accepted definitions of terms that are circumscribed to the cyberspace, and at present there is no consensus at the level of the international society on specific terminology.

The issue of cyber security (Panc, 2017, p.251) can be addressed through the internal balancing process, which involves increasing its own technical capabilities and human resource competence to reduce vulnerabilities but also through external systemic balance, by promoting international maritime cyber security interests in international alliance formats that share perception on the issue.

Since cyber security is important for all the security areas (including maritime domain), defined by the new broad security concept, covering the economic, social, political and environmental sectors, and cyber incidents can have a major impact on stability in multiple security sectors, we appreciate the need for cross-sectorial security.

The involvement of states and international intergovernmental maritime organizations is essential, being strengthened by close collaboration with the private economic sector. In the process of minimizing cyber-security risks, the state can have a coordinating and assistance role, by creating an appropriate legislative framework, by participating in policy definition and implementation, by developing legal instruments and by undertaking specific actions and measures.

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## Management of Internal and External Factors of Decisive Policies in Agriculture in Macroeconomic Crisis Conditions

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### Abstract

*The management of internal and external factors directly influencing the decisions implemented by the managerial act at the macroeconomic analysis of the relations within this branch and sub-branches, of the disturbing factors with the implementation of some decisions to stop the phenomena of soil degradation and agricultural land and to preserve and develop their productive potential, a production surplus for ash consumption and ensuring a productive production for industrial consumption with the result of gaining added value and net profit as much as possible for the exploitation farms.*

**Key words:** Management, macroeconomic, agriculture, irrigation, decision.

**J.E.L. classification:** E61

### 1. Introduction

The agriculture in such a way as to meet the requirements determined by Romania's membership status. The current agricultural situation must also be interpreted in the light of deficiencies in the application of the Land Fund Law no. 18/1991

The conceptualization of decision-making policies has been a concern for field experts (Larkin et al, 2003, p.142) who have defined the internal and external factors of the policies in terms of the concept of crisis as an event that brings the company into the subject of general attention, potentially unfavorable from national and international media and other groups such as customers, shareholders, employees and their families, politicians, trade unions and pressure groups for environmental protection, which for one reason or another have a legitimate interest in terms of the organization's activities. There is no question as to whether a major crisis will occur, the question is when, how and why it will be. (Larkin et al, 2003, p.142)

From this point of view management as an art of driving is able to identify the procedural components of activities, and the laws that so that they can guarantee the achievement of the programmed objectives at the maximum level of the economic optimum. While economic efficiency and performance are two congruent sides of a process or economic objective, management gets a new dimension, initiated by planning or forecasting.

After 1990 the Romanian agriculture faced difficulties which manifested itself as the main factors of the declassification of the crisis in agriculture, as follows: - the mighty fragmentation of agricultural lands as a result of the 1991 restitution by the Land Fund Law nr.18/1991

The degradation phenomena occurred not only in the former cooperative sector but also in the state sector. State ownership in agriculture, reorganized on the principles of commercial companies, although benefiting from a superior technical and economic endowment of new associative forms or private sector companies, has failed to make a significant contribution to satisfying the needs of agrifood products. The lack of interest of the workers in this sector, but especially the lending and financing system has manifested a negative influence on the activity of the respective units.

## **2. Management of internal and external factors in decision-making policies in agriculture and irrigation systems**

The inventory of the potential effects of internal and external factors manifested as a result of events that could degenerate into crisis is very important in what constitutes the management of these factors through systemic crises, which will immediately induce from the point of view of the managerial act the need for crisis management, in fact, the potential effects of these factors, or what Bernard Dagenais calls the management of stakes (Dagenais, 2002, p.32), according to which every year an enterprise or organization sets its priorities, sets goals, adopts policies, meets certain challenges, leads battles, suffers crises and commits errors (Dagenais, 2002, p.32).

The management of the internal and external factors of the decisional policies presupposes the intuition of the degree of manifestation of these factors with major implications in the decisional policies of the system in order to establish a system of decisional policy objectives that diminish the negative effects and preserve their positive effects; in other words, the manifestation through the managerial act of the need for stakes management, which has a very close meaning to what specialists today considers to be the management of the decisional policies

They say that when a shock event occurs, if an organization is prepared with a simple plan, it can determine who will eventually win the game. On the other hand, as Jude Larkin mentions, in the end, the most important factor determining the course of a decision-making policy and its implications for an organization is luck, as in games that usually have stakes.

The effects of the internal and external factors of the crises are varied and can be as follows: - There are two types of crises effects: (Chiciudean et al, 2002, p.39) those related to the material component and the symbolic ones. If, in terms of material loss, things are clear, as to the symbolic or existential component, as it is called, the two authors are of the opinion that the effects of crises within the organization are (Chiciudean et al, 2002, p.39):

- The first effect is the threat to the whole industry (Chiciudean et al, 2002, p. 43, 44), the branch or branch of activity that is related to the crisis. A negative image left by a crisis can have repercussions on the whole field as the public will extrapolate the situation and believe that all those who have business in the field they can make the same mistakes, with the same consequences for them - --The second major effect of a crisis is the change of the strategic mission of an organization due to bipolar perception (good/bad) by public opinion (Chiciudean et al, 2002, p.44). The crisis has the power to cast a bad image on the whole activities of the organization.

Nothing of what the organization did before is considered good;

- The third effect takes place at the individual level (Chiciudean et al, 2002, p.44). The crisis disrupts the subjective world of the individual, the way he perceives the world and himself, the sense of self-evaluation, of power and of identity, internal balance (Chiciudean et al, 2002, p.44). In the light of these ideas, one may ask why a crisis management plan is needed.

From this point of view, some possible answers can be identified in a random order: • Because no institution / organization is free from crises • Because staying with the hands in the breast until the crisis is over is a solution but with whose help at most can endanger the very existence of the organization itself (Chiciudean et al, 2002, p.44); • because many examples have shown that out of a crisis one can go out with the pictureless image or even a better reputation (Chiciudean et al, 2002, p.44) than before the occurrence of undesirable events • because in the event of a crisis the events are so precipitated that there is no time actually for a plan (Chiciudean et al, 2002, p.44).

As for the internal and external factors policies of Romanian agriculture, their enumeration can be found in the following aspects:

- The agricultural area - having an agricultural area of 14,741 thousand hectares (or 61,8% of the total land area) in 2005. In July 2011, Romania's agricultural area was 14.7 million hectares, of which 9.4 million hectares of arable land (63.9%), 3.3 million hectares of grassland (22.4%), 1.5 million hectares of grassland (10.2%), 218.000 hectares of live (1.5%) and 206.000 hectares of orchards and nurseries, 4%).

Romania's agricultural area has fallen slightly from one year to the next. According to I.N.S., in 2006, 991,000 hectares of sunflower, 191,000 hectares of soybean and 110,000 hectares of rape were grown. In 2009, Romania cultivated cereals on an area of 5.3 million hectares, increasing by 145,000 ha. In 2008, at the national level, the area for cereals and technical plants increased by

15% compared to 2007, from 5.6 million hectares to 6.6 million hectares; - Agricultural land privatization - Until 2010, almost all of the agricultural area and over one third of the forest fund were privatized;

- Retrocessing and redistribution of agricultural and forest land began in 1991, taking place in several successive stages. As a result, up to 2005, 95.6% of the agricultural area of the country and about 33% of the forested land were returned to the former owners or their legal heirs. The state-owned land currently has a share of only 0,5% of the total arable land area (367.2 thousand ha), 0.7% of the total pasture area (231.2 thousand ha) and 0.2% of the total area of hay fields (32.4 thousand ha);

- Development of agricultural land-In 2005, of the total of 4,256,152 agricultural holdings, 4,121,247 used an agricultural area of 13,906.7 thousand ha. The average agricultural area of an agricultural holding in Romania is 3.37 ha. Individual holdings have an average of 2.15 hectares, divided into 3.7 plots, while holdings with legal personality operate on average 269 hectares, divided into about 9 plots.

The 2010 General Agricultural Census shows that in 31,000 farms with an average area of just over 190 ha. with a total of over 7,000,000 ha, 111,000 people work. On the other hand, over 3,800,000 farms with an average area of 3.45 ha, with a total of over 8,480,000 ha, work over 7,000,000 people. The number of agricultural holdings in Romania decreased by 14% in the period 2003-2010 to 3.86 million;

- Unfurnished agricultural area - In 2010, about three million hectares were left untreated (fallow). If this area were cultivated, the state would earn from taxes about 330 million euros.

Irrigation-In the irrigation chapter, the use of the irrigation system, the decommissioning of facilities from 2 million ha. (113 thousand ha - 4.2% of irrigated area),

The management of internal and external of making policies that are not in line with the realities of this branch.

After 1990, the Romanian agriculture faced difficulties which manifested itself as the main factors of the declassification of the crisis in agriculture, as follows: - the mighty fragmentation of the agricultural lands as a result of the 1991 restitutions by the Land Fund nr.18/1991, with agro-food products;

- The assessment of the current situation of agriculture allows real, tactical and strategic decisions to be discerned to ensure that agriculture can and fulfill the basic functions.

### 3. Conclusions

The management of internal and external factors directly influencing the decisions implemented by the managerial act by a profound analysis of relations at the level of this branch and sub-branches, the disturbing factors concomitantly with the implementation of decisions to stop the phenomena of soil degradation and agricultural land and to preserve and develop their productive potential, a production surplus for ash consumption and ensuring a productive production for industrial consumption with the result of obtaining extra value and net profit as high as for the exploitation farms.

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# **Section V**

## **Finance and Accounting**

## Premises and Limitations in Defining and Measuring Synergy from M&As

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### Abstract

*Mergers and acquisitions are performed worldwide mainly because of synergy. Although many invoke the term synergy as the key motivation of why they engage in M&As, research has led us to understand that it is not very clear in terms of what it actually is. In the scientific literature, synergy is mostly defined as being "2+2=5". Thus, we first thought that it can only be a positive effect. But, latter on, we found out that synergy is not only positive, it can be negative as well, known as negative synergy or dyssynergy. The purpose of this paper is to shed some light on what is synergy, how can we quantify and classify it and why acquiring firms tend to pay more for the target firm. We believe that there is a link between the amount of premium paid for a target firm and the expectations for synergy.*

**Key words:** synergy, mergers, acquisitions, dyssynergy.

**J.E.L. classification:** G34, G35, M21

### 1. Introduction

Reports show that the worldwide mergers and acquisitions market grew last year by 3.7%. From 47,288 registred operations in 2015 to 49,039 registred in 2016. In Europe, it grew by almost 3%, and in Romania by 6% (IMAA, 2017).

Most of the times merger operations are associated with acquisition operations. It is true that they are known in the scientific literature as mergers and acquisitions, with the acronyme M&As. But, as Qudaiby (2013, p. 181) points out, there is a big difference between merger and acquisition operations. A merger is a transaction involving two or more economic entities in which stock is exchanged and where only one corporation survives and the merged ones cease to exist (Gaughan, 2010; Wheelen and Hunger, 2011; Qudaiby and Khan, 2013). In most of the cases, when a merger occurs, the two companies become one, the name for the corporation becomes composite, and its derived from the two original names. An acquisition is the purchase of a company that is completely absorbed as an operating subsidiary or division of the acquiring corporation (Wheelen and Hunger, 2011, p. 256). Because the main topic of this paper is to present synergy, from now on we will refer to both operations, as causes that conduct to this effect.

As many researchers point out, the main reason of why firms engage into M&As is to grow, and companies grow in order to survive (DePamphilis, 2010; Gaughan, 2010; Qudaiby and Khan, 2013). Mergers and acquisitions are performed with the main purpose of obtaining an economic gain, in the form of synergy. The reasons of why companies engage in M&As can be many. Among them, we hold: increasing domination and influence; acquiring specific resources; gaining a position on a new market; consolidating the position in mature sectors; adapting to technological developments; eliminating an inconvenient competitor; expanding the scale production; limiting the possibility of entering a specific sector. The presented reasons can be related either to an offensive strategy, or to a defensive one.

When two or more companies decide to call on M&A operations, this decision can be seen from two perspectives: strategic and financial. The differences between the two stances lay in the attitude of the buyer. While a strategy-based decision is usually recognized by the higher



price paid for the acquiree by the buyer because the latter feels it can achieve cash flow improvements through a variety of synergies where the combined entity can be more profitable than if they operated separately (Bragg, 2008, p. 186), a financial decision, on the other hand, is simply based on the conviction that a business will gain appreciation value from its internal growth over time.

## 2. A step forward in understanding synergy

Synergy is defined in the literature as the reaction that occurs when two or more entities, factors, agents, processes, substances or systems function together in a particularly fruitful way, producing a greater effect than the sum of the individual effects could explain (Chatterjee, 1986; Gaughan, 2010; Qudaiby and Khan, 2013).

The concept of synergy has a long history of use in science, especially in several disciplines related to medicine. In psychology, for example, it describes the coordinated action of two or more muscles that work together to produce the same effect on the same joint. In endocrinology, on the other hand, synergy is used either in the additive or complementary sense to describe the combined effect of hormones. Also, in pharmacology, synergy is primarily used in a multiplicative sense (Marieb, 2004). In strong contrast to its use in medicine, the term synergy is not often used in economic literature. Synergy is frequently invoked as a key motivation factor for companies engaging in M&As.

From a mathematical point of view, synergy can be rendered, at least at the theoretical level, by equations of the form: „ $1+1>2$ ” or „ $2+2=5$ ”. Besides, this mathematical representation is also the most common explanation of the synergy effect in the literature. However, a mathematical equation is a sentence which states that two mathematical expressions are equal, and that they form an identity. Synergy is different in this respect: the value of the whole is higher than the sum of the individual values. Returning to the previous mathematical equation,  $2 + 2$  is not equal to 4 (the sum of individual values), but equals 5 (we have obtained a higher value due to the synergy effect).

The etymology of the term synergy derives from the Greek prefix „syn” and the word „ergin”. Therefore, „synergos” can be translated as „working together” (Hoffman and Woehr, 2006, p. 483). In business literature, the synergy term was first introduced by Ansoff in 1965 in his book *Corporate Strategy*. Two decades later, the discussion about synergistic effects was resumed by Porter in *Competitive Advantage*, in 1985 (Karenfort, 2011).

In order to better explain the concept of synergy, let's take as an example a group of participants who have participated in a very successful group effort. The persons in question can use the term synergy as a way of expressing excitement, motivation, or a high level of cohesiveness that they felt while working together. Outside observers, on the other hand, tend to use the term synergy more directly in connection with the group's performance. Synergy is a gain in performance that is attributable in some way to group interaction (Larson, 2010, p. 13). A group is said to exhibit synergy when it is able to accomplish collectively something that could not reasonably have been achieved by any simple combination of individual member efforts. According to Larson (2010), synergy is an emergent phenomenon, rooted in group interaction.

Going forward, in order to approach the economic field, Sirower (1997) discussed synergy in terms of management, which means competing on a specific market better than anyone ever expected. From this point of view, obtaining economic benefits is a consequence of a competitive advantage over and above what firms already need to survive in their competitive markets. Basically, we can see that, by associating several economic entities, their effectiveness, the quality of achieving the expected positive effect is greater, in some cases, than by looking at each entity individually. On the other hand, synergy, by its effects, implies increasing the economic, financial or commercial efficiency of the new entity as a result of the merger or acquisition (Meier and Schier, 2012, p. 16). By efficiency we understand the ability to maximize the results obtained from a quantity of resources or to minimize the amount of resources for a certain predetermined result. M&As represent a strategic way for enterprises to develop in an external manner (to grow, shrink, change the nature of their business or their competitive position). But, as Meier & Oliver (2012) noted, mergers and acquisitions are not the only external growth strategies, as they can also aim at internal reorganization of a group of companies (e.g. the merger between two companies within the

same group).

As a motive of why companies engage in M&As, the most common argument in the literature is the increase of shareholders' wealth. But who are the shareholders? At a first glance, we may be talking of an increase in the wealth of the shareholders of the absorbing/acquiring company, but studies show that an increase in the wealth of the shareholders of the absorbed/target company is much more probable (Sirower, 1997; Garzella, 2015; Mazzariol and Thomas, 2016).

In addition to positive synergistic effects, the combination of two previously independent entities might also result in negative effects on the income and cost situation, which are commonly referred to as *dyssynergy* or negative synergy (Hoffman and Woehr, 2006). Negative synergy can appear in two ways: first, it generates direct costs, such as legal costs, relocation costs, and costs for integrating and harmonizing IT infrastructure, as well as indirect costs, and has detrimental effects on the income statement (Lechner and Meyer, 2003, p. 315).

Therefore, although the concept of synergy seems to be positive at a first glance, encompassing optimistic premises and promising better results and a growth of stockholders' wealth, many forget that it can also hold a negative side. This may explain why many lose the acquisition game (Sirower, 1997, p. 20). Kaplan (1997) shows in a study that acquiring firms lose an average of 10% of their investment on announcement and, over time, waiting for synergy, perhaps they will end up losing even more (Magenheim and Mueller, 1988; Sirower, 1997). According to Sirower (1997, p. 24), a bad acquisition is when the acquiring firm does not earn back its cost of capital.

In order to detail the concept of synergy, next we will present two different definitions of synergy, along with the arguments of the authors. We consider them relevant, because they are noted as the first mentions of synergy in economic literature. What makes them even more relevant is the fact that, while they target the same concept, fundamentally they propose two antagonistic approaches of synergy.

### **2.1 The synergy concept, according to Ansoff**

The concept of synergy has been defined by Ansoff as joint effects resulting from the addition of new a product/market (Ansoff and McDonnell, 1988, p. 28). The starting point of Ansoff's train of thought is the return on investment (ROI), which describes the firm's annual return as a function of sales, operating costs and investment. Ansoff argues that a firm resulting from M&A operations can realize scale effects leading to a lower level of operating costs and investment as compared to a firm with independent operating units while maintaining the same level of sales (Karenfort, 2011). Hence, synergy effect creates a combined return on the firm's resources which is greater than the sum of its independent parts (Ansoff and McDonnell, 1988, p. 75). Based on ROI formula, Ansoff distinguishes three types of synergy, namely sales, operating and investment synergy. The sales synergy can occur as a result of common use of distribution channels, sales administration and warehousing as well as shared marketing activities for a complete range of related products. The operating synergy results from the joint use of labor, production factors, learning curve advantages, and bulk purchasing. The latter one, investment synergy, on the other hand, can be achieved from the joint utilization of machinery, raw materials and the transfer of research and development intelligence (Karenfort, 2011). In addition, although not directly apparent from the ROI formula, Ansoff introduces management synergy as a fourth synergy type which denotes the capability of the management to apply their capabilities and knowledge in a new industry (Ansoff and McDonnell, 1988, p. 75).

Sales synergies are much more difficult to achieve than cost savings, because the newly-combined companies must now rely on third parties (customers) to boost sales (Bragg, 2008, p. 190).

### **2.2 The synergy concept of Porter**

In contrast to Ansoff, who views synergy in the context of new product/market ventures, Porter considers synergy in the context of business strategy, specifically horizontal strategy which addresses policies and objectives across interrelated business units within the firm's existing portfolio (Karenfort, 2011). Thus, he takes a critical stance on corporate strategy and the notion of creating value through diversification.

Porter has the opinion that synergy can be realized through the identification and exploitation of interrelationships between related business units. Interrelationships are defined by the author as "tangible opportunities to reduce costs or enhance differentiation in virtually any activity in the value chain" (Porter and Millar, 1985, p. 318). He sees the value chain as a tool to identify and analyze synergistic opportunities. „The value chain disaggregates a firm into its strategically relevant activities, in order to understand the behavior of costs, and also the existing and potential source of differentiation" (Porter and Millar, 1985, p. 33).

The author does not see the failure to achieve the expected value gains in fundamental flaws of the concept but in a poor understanding of synergy, as well as a lack of appropriate tools and improper implementation (Karenfort, 2011). "Ill-defined notions of what constituted synergy underlay many companies' acquisition strategies" (Porter and Millar, 1985, p. 138).

### **3. Can entities experience different types of synergy?**

According to Bragg (2008, p. 186), the most important part of the integration plan centers around the realization of synergies. In his opinion, synergies justify the price paid for the acquiree. The author identifies some synergies that can appear due to M&As and categorized them as resulting from cost savings, revenue increases, capital spending, financial engineering and tax benefits. He also states that the most reliable ones to be achieved are cost savings, because, in his opinion, they are entirely within the control of the buyer (Bragg, 2008, p. 187).

Synergy is often classified as operating synergy, financial synergy, and managerial synergy (Damodaran, 2005; DePamphilis, 2010; Gaughan, 2010).

Operating synergies can be achieved as increases in economic benefits, in the form of enhanced revenues or lower costs (Gaughan, 2010, p. 138). Of the two, Bragg (2008, p. 138) has the opinion that revenue enhancements can be more difficult to achieve. In a survey made by McKinsey (Christofferson, McNish and Sias, 2004), results showed that 70% of mergers failed to achieve their expected revenue synergies. When talking about revenue-enhancing synergies, Bragg (2008, p. 139) refers to pricing power, combination of functional strengths and growth from faster-growing markets or new markets.

A combination of two companies may lead either to greater pricing power, with an impact on revenues, or purchasing power, with an influence on costs and their optimization. Operating synergy comprises both economies of scale and of scope, which can be important determinants of shareholder wealth creation (Houston, James and Ryngaert, 2001; DeLong, 2003).

Financial synergy refers to the impact of mergers and acquisitions on the cost of capital of the acquiring firm or newly formed firm, resulting from a merger or acquisition. The cost of capital is the minimum return on equity required by investors and lenders to induce them to buy a firm's stock or to lend to the firm (DePamphilis, 2010, p. 5). Financial synergies can take different forms and, compared to operational ones, are more focused (Meier and Schier, 2012, p. 14). They refer to the possibility of tax optimization, increasing the leverage capacity of the new entity, diminishing the cost of capital as well as the cost of access to capital markets (Damodaran, 2005; Meier and Schier, 2012). Damodaran (2005, p. 3) has the opinion that financial synergies sometimes show up in the form of higher cash-flows and sometimes take the form of lower discount rates.

Managerial synergy refers to the transfer of knowledge and know-how of the acquirer to the target entity and vice-versa (Meier and Schier, 2012). Such synergies can be particularly important in areas such as research, technological innovation or business. The importance of such synergies can also be felt in the case of the target entity's activity, for example the internationalization of the activity. In this case, they can benefit from the acquirer's experience.

### **4. A brick stone in how to quantify synergy**

Both when referring to synergy and to the execution of M&A operations, we should take into account the value of the entities that come into the latter processes, and different valuation methods can be used for this purpose. Supposing we have two pre-merger enterprises,  $V_A$  and  $V_B$ , and their individual values combined is lower than their value after the merger, the  $V_{AB}$  enterprise. For assessment of an enterprise, market approach and income approach can be applied as evaluation

methods, according to the Valuation Standards. According to ANEVAR (2017), the cost approach cannot normally be applied in this situation, except for start-ups. We use this last method for assessing enterprises when the profit and/or cash flow cannot be reliably determined and if there is adequate market information about the entity's assets. The value of certain types of enterprises (eg investment or holding enterprises) can be obtained by assessing the assets and the liabilities. This is sometimes referred to as the „net asset value approach” or „asset approach” (ANEVAR, 2017).

The market approach provides an indication of the value and involves comparing the value of the enterprise, subject to valuation process, with the value of other enterprises that have been traded on the market.

The income approach also provides an indication of the value of an enterprise by converting future cash flows into a single current value of equity. This approach takes into account the revenues that the enterprise will generate over its useful life and indicates the value through a capitalization process. By capitalization we understand the transformation of income into a capital value by applying an appropriate discount rate of capitalization (ANEVAR, 2017).

The anticipation of synergy allows the acquiring economic entities to bear the costs involved in the acquisition/merger process and to be able to pay the shareholders of the target/absorbed entity a premium for their shares (Gaughan, 2010).

In M&A related operations, the notion of a premium usually appears. A premium is the difference between the estimated real value of a company and the actual price paid to obtain it. The acquiring entity records a premium when there is a difference between the accounting value and the nominal value of a share issued by the acquiring entity to remunerate the intake equity brought by the acquired entity. There is no requirement that a company should pay a premium for acquiring another company and no obligation in calculating it, unless there is a difference between the value of the intake resulting from the merger or acquisition and the value with which the share capital of the company acquired has increased. According to Gaughan (2010, p. 136), the following equation should help in better understanding synergy:

$$NV = [V_{AB} - (V_A + V_B)] - (P + E)$$

Where as:

NV – net merger/acquisition value;  $V_{AB}$  – entity value after merger/acquisition;  $V_A$  – value of entity A;  $V_B$  – value of entity B; P – the paid premium for B; E – the value of the expenses involved by the process.

In Gaughan's opinion (p.136), synergy may allow the combined firm to appear to have a positive net value (NV).

The equation between square brackets stands for the value of synergy. This effect must be higher than the value of the premium paid for the target firm (entity B) and the expenses related to the process in order to justify forwarding the merger and acquisition process. If the value of the synergy effect is not higher than the sum (P + E), then the acquiring/absorbing entity has overpaid for the target/absorbed entity (Gaughan, 2010).

## 5. Conclusions

When two or more companies decide to enter in M&A operations, this step is both a challenge and an expectation for future economic benefits. But only the future will say if the bid was right to be made and the answer is the synergistic effect. As presented in the paper, this effect can be positive, but also negative, due to a series of factors, which can influence the result in both directions: windows of opportunity, choice of employees and managers, products range, the match between the expenses and the expected revenues, etc.

Bottom line, synergy can translate into an increase in performance, seen from different points of view: financial, operational, or managerial. Synergy realization is a function of similarity and complementarity between the buyer and the acquiree, which lays in the extent of interaction and coordination post-M&A, in the degree of acceptance from the employees, and in the accounting figures, described either by expected costs, revenues and income, or by target ratios. The real challenge is to quantify this increase into numbers, and the accounting figures could be a possible answer in this direction and a topic for further research.

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## Factor Analysis of Credit Risk in Romania

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### Abstract

*All lending institution is confronted with credit risk and therefore assumes it. So it is necessary to analyze the dynamics of credit risk, the effects on profitability, capital adequacy and, very important, but also difficult to quantify, the general trust in the institution (Berríos M.R., 2013).*

*In order to assess the correlations between credit risk and other financial variables, a database was created in SPSS program packages and the factor analysis was performed. The analysed variables are: Credit Risk Rate, Economic Profitability, Non-performing Loans, Rate of Return, Leverage Effect, Solvency Ratio and Return on Equity (Pinches, 1973).*

*It was established that for Romania for the analysed period are strong correlations between all variables analyzed.*

**Key words:** credit risk, solvency, equity, leverage, principal component analysis

**J.E.L. classification:** C58, E51

### 1. Introduction

All lending institution is confronted with credit risk and therefore assumes it. So it is necessary to analyze the dynamics of credit risk, the effects on profitability, capital adequacy and, very important, but also difficult to quantify, the general trust in the institution (Berríos, 2013).

The credit risk is quantified as the credit risk rate. A credit risk analysis starts with a description of the existing lending situation, of the main financial phenomena, based on available information, in a statistical form. This description is one of the premises of the statistical analysis carried out in the present paper through factor analysis, so that the aspects of the use of credit risk in Romania can be highlighted.

The analysis is aimed to outline a picture of the current credit risk situation in Romania, from the perspective of the most comprehensive indicator that characterizes them: the credit risk rate.

For credit risk analysis, it is important to know the effect and the influence of other financial variables. This problem can be addressed by factor analysis, i.e., principal component analysis.

### 2. Data and method

In the analysis were used the variables: Credit Risk Rate, Non-performing Loans Rate, Rate of Return, Leverage Effect, Solvency Ratio and Return on Equity.

As method was used the factor analysis. Principal Component Analysis is a descriptive multidimensional analysis method used to the study of centered and reduced numeric variables.

Principal Component Analysis is a method of factorial analysis that reduces a complex system of variables correlated to a small number of latent variables (Pintilescu, 2007)

The objectives pursued by an analysis of the principal components are (Baccini, 2005):

- the "optimal" graphical representation of individuals, minimizing the deformation of the cloud of points, in a sub-space  $E_q$  of dimensions  $q$  ( $q < p$ );
- graphical representation of variables in a sub-space  $F_q$ , best explaining the initial links between these variables;
- reduction of size, i.e. approximation of table  $X$  through a table  $q$  ( $q < p$ ).

### 3. Results

The principal component analysis highlights the correlations between the registered statistical variables.

After processing the data in SPSS, is obtained the correlation matrix (Table no. 1). This is a symmetric matrix to the principal diagonal and presents the values of the correlation coefficients between variables, considered two by two.

The values of the coefficients resulting from the correlation table between variables show that there are statistically significant relationships between the variables considered, so the analysis of the principal components can be applied (Pintilescu, 2007).

Table no. 1 Matrix of correlations between variables

		Correlation Matrix <sup>a</sup>						
		rata riscului de creditare	rata creditelor neperformante	rata rentabilitatii activitatii de baza	efectul de parghie	indicatorul de solvabilitate	rentabilitatea economica	rentabilitatea capitalului propriu
Correlation	rata riscului de creditare	1.000	.995	.592	.465	.427	.152	.106
	rata creditelor neperformante	.995	1.000	.593	.460	.419	.175	.126
	rata rentabilitatii activitatii de baza	.592	.593	1.000	.502	.458	.378	.357
	efectul de parghie	.465	.460	.502	1.000	.695	.031	.012
	indicatorul de solvabilitate	.427	.419	.458	.695	1.000	.238	.237
	rentabilitatea economica	.152	.175	.378	.031	.238	1.000	.996
	rentabilitatea capitalului propriu	.106	.126	.357	.012	.237	.996	1.000
	Sig. (1-tailed)							
rata riscului de creditare		.000	.004	.022	.034	.267	.333	
rata creditelor neperformante	.000		.004	.024	.037	.237	.303	
rata rentabilitatii activitatii de baza	.004	.004		.014	.024	.055	.067	
efectul de parghie	.022	.024	.014		.000	.449	.480	
indicatorul de solvabilitate	.034	.037	.024	.000		.163	.164	
rentabilitatea economica	.267	.237	.055	.449	.163		.000	
rentabilitatea capitalului propriu	.333	.303	.067	.480	.164	.000		

a. Determinant = 6.29E-006

Source: Own Projection, using SPSS

Table 1 shows the  $\chi^2$  statistic, which tests whether there is a statistical link between the statistical variables. The value of KMO statistics is 0.598, which means that exists a significant statistically link between the analyzed variables. This result is also confirmed by the value of sig, which is smaller than 0.05. The matrix of correlations is not a unit matrix, so there are significant links between the considered variables, in this case the analysis of the principal components can be applied (Timraz, 2012).

Table no. 2 Values of KMO test statistic and  $\chi^2$  statistics

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.598
Bartlett's Test of Sphericity	Approx. Chi-Square	177.654
	df	21
	Sig.	.000

Source: Own Projection, using SPSS

After standardize the variables, are obtained new variables with the mean 0 and variance 1. Variance of the variables considered in the analysis of the principal components are found in Table no. 3.

Table no. 3 Variance of statistical variables

Communalities		
	Initial	Extraction
rata riscului de creditare	1.000	.795
rata creditelor neperformante	1.000	.787
rata rentabilitatii activitatii de baza	1.000	.657
efectul de parghie	1.000	.603
indicatorul de solvabilitate	1.000	.526
rentabilitatea economica	1.000	.987
rentabilitatea capitalului propriu	1.000	.991

Extraction Method: Principal Component Analysis.

Source: Own Projection, using SPSS

If the values of the variance after extracting the factors are reduced, the respective variables are not correlated with the factorial axes, so can be removed from the analysis.

In this case for the considered variables (credit risk ratio, non-performing loans rate, rate of return, leverage effect, solvency ratio, economic profitability and return on equity), the values of the variance after factor extraction are bigger than 0.5, so the variable are correlated with the factorial axes.

Table no. 4 The values of the matrix of correlations and the variance explained by the factorial axes

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.481	49.732	49.732	3.481	49.732	49.732
2	1.866	26.663	76.395	1.866	26.663	76.395
3	.948	13.549	89.944			
4	.442	6.308	96.252			
5	.256	3.651	99.903			
6	.005	.070	99.974			
7	.002	.026	100.000			

Extraction Method: Principal Component Analysis.

Source: Own Projection, using SPSS

The values of the correlation matrix correspond to the inertia explained by the factorial axes. For the variables considered, the values are:  $\lambda_1 = 3.481$ ,  $\lambda_2 = 1.866$ ,  $\lambda_3 = 0.948$ ,  $\lambda_4 = 0.442$ ,  $\lambda_5 = 0.256$ ,  $\lambda_6 = 0.05$  and  $\lambda_7 = 0.02$ . The first factorial axis explains 49.73% of the total cloud variance. The second factorial axis explains 26.66%, and together with the first axis explains 76.39% of the total variance.

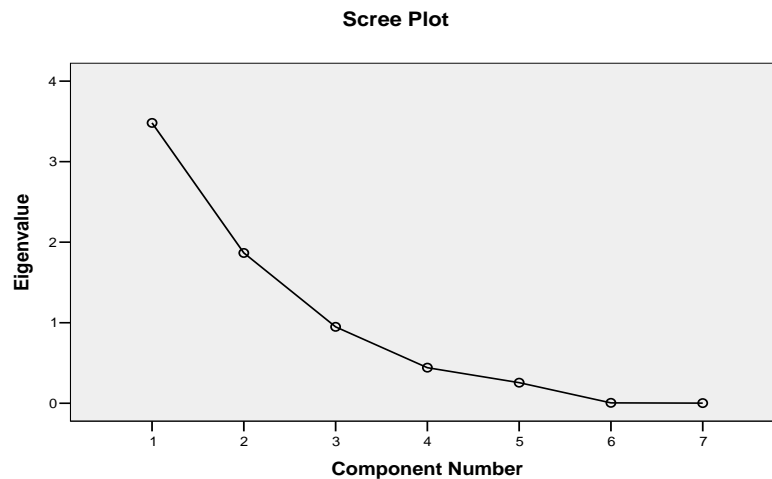
According to Kaiser's criterion, for principal component analysis it is chosen to interpret the first two factorial axes, since the two values are greater than 1.

According to Benzécri's criterion, the number of axes which explains over 70% of the total variance of the cloud point is chosen, so the first two factorial axes are chosen because together explain the largest differences between the statistical units, respectively 76.39% of the variance total.

According to Cattell criterion, we conclude the same (Figure no. 1). This involves pursuing the "sudden" fall of the inertia explained by the eigenvalues. After the first two axes, there is a sudden change in the slope of the graph of eigenvalues, there are significant differences between the first two values and the last five values, so it is chosen to interpret the first two factorial axes (Pintilescu, 2007).



Figure no. 1 Graphic representation of the correlation matrix own values



Source: Own Projection, using SPSS

The coordinates of the variables on the factorial axes show the value of the correlation coefficients between the variables  $x_j$  and the respective factorial axis (Table no. 5). For example, the credit risk rate variable has a high positive coordinate (0.829) on the first factorial axis and a negative coordinate on the second factorial axis (-0.328). The credit risk rate variable will be graphically represented in the positive quadrant of the first factorial axis and in the quadrant of the negative values of the second factorial axis (Pintilescu, 2007).

The variable rate of return has positive coordinates on both factorial axes, 0.81 on the first factorial axis and 0.029 on the second factorial axis. Since the value is greater for the first component, we conclude that this variable is better explained on the first axis

The credit risk rate variables, the non-performing loans rate and rate of return on core have high values close to 1, indicating that are strongly correlated with the first factorial axis and there are significant differences between the statistical units in terms of the values recorded for these variables.

Between these variables there are direct links because they are coordinated by the same sign, i.e. the statistical units that record high values for the credit risk rate variable, record high values for non-performing loans rate and rate of return on the core.

The second factorial axes is formed only by variables return on equity and economic profitability, as they only have higher values for the second axis.

Table no. 5 Coordinates of the variables on the first two factorial axis

	Component	
	1	2
rata riscului de creditare	.829	-.328
rata creditelor neperformante	.833	-.306
rata rentabilitatii activitatii de baza	.810	.029
efectul de parghie	.683	-.370
indicatorul de solvabilitate	.716	-.114
rentabilitatea economica	.497	.860
rentabilitatea capitalului propriu	.466	.880

Extraction Method: Principal Component Analysis.  
a. 2 components extracted.

Source: Own Projection, using SPSS

Table no. 6 Contributions of the variables to the inertia of the first two factorial axis

	Component	
	1	2
rata riscului de creditare	.238	-.176
rata creditelor neperformante	.239	-.164
rata rentabilitatii activitatii de baza	.233	.016
efectul de parghie	.196	-.198
indicatorul de solvabilitate	.206	-.061
rentabilitatea economica	.143	.461
rentabilitatea capitalului propriu	.134	.471

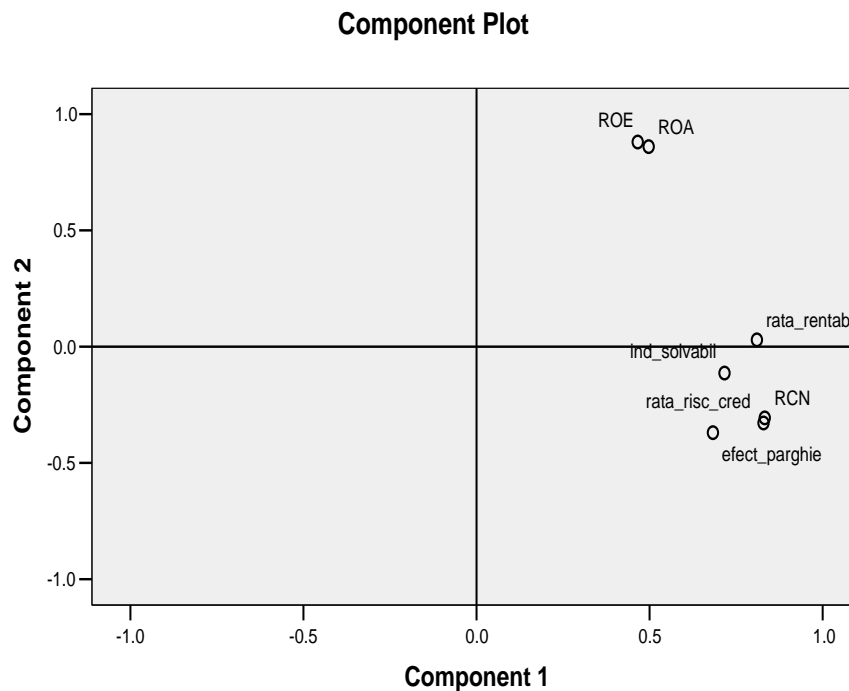
Extraction Method: Principal Component Analysis.  
 Component Scores.

Source: Own Projection, using SPSS

The values of the contributions of the variables to the inertia of the factorial axes show the importance of the respective variable in the differentiation of the considered statistical units. A high value shows a significant importance of the respective variable in differentiate the analyzed statistical units, so all variables contribute to the formation of the first factorial axis, instead only the returns on equity and the economic profitability contribute to the formation of the second axis (Pintilescu, 2007).

The graphical representation of the position of the credit risk rate variables, the non-performing loans ratio, the rate of return, the leverage effect, the solvency ratio, the economic profitability and return on equity in the first two axes (Figure no. 2) show a direct link, because are on both sides of the first factorial axis.

Figure no. 2 Representation of variables in the system of the first two factorial axis



Source: Own Projection, using SPSS

#### 4. Conclusions

Using the principal component analysis, it was established that for Romanian there are strong correlations between all variables analyzed: credit risk rate, return on equity, non-performing loans rate, rate of return, rate on profitability, leverage effect and solvency ratio.

Subsequent developments in the study should enlarge the sample, and should also include other economic factors. Moreover, depending on the possibilities of accessing the necessary specific data, the study can also be applied for EU's regions.

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# A VAR Analysis Regarding Tax Evasion and Tax Pressure in Romania

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## Abstract

*The tax burden is viewed, in both empirical and theoretical studies, as the main determinant of tax evasion and the shadow economy. There is an increasing fiscal pressure which suggest that taxpayers are affected by a stable over-burden of fiscal pressure due to tax evasion. Furthermore, the stability of the overburden gap could be considered a signal of the absence of a vicious circle between tax evasion and tax rates, through tax base erosion.*

*The main aim of the paper is to identify the relationship that exists between tax evasion and tax pressure in Romania, between 2000 and 2013, using an autoregressive vector type of analysis. The VAR model with 3 lags can be considered as representative in order to describe autoregressive links between tax evasion and fiscal pressure in Romania.*

**Key words:** tax evasion, tax pressure, economic growth, VAR

**J.E.L. classification:** H26, H71

## 1. Introduction

The economic and financial crisis in the EU has extremely unfavorable budgetary and social consequences in the Member States. According to the European Commission (2013), it is essential that in this context: "the public finance must be revised in order to support the social protection systems and public utilities, in order to restrict the refinancing costs borne by the state and by other public authorities, as well as in order to avoid the negative impact of contagion on the rest of the economy. By reducing the tax fraud and tax evasion, Member States can boost their revenues obtained from tax increment. It will provide them with a greater room of maneuver in order to restructure their tax systems in such a way to promote the sustainable economic growth more efficiently. At the same time, reducing the tax fraud and tax evasion may support the Member States' efforts, aimed to ease the fiscal burden on the people on a low-income and on the most vulnerable groups."

For the assessment of the tax burden on tax evasion, empirical findings highlight two economic issues. On the one hand, there is an increasing fiscal pressure in long run with high volatility of tax base concealment. Despite the time varying behavior, one can notice the constant gap between apparent and effective tax rate. This suggest that taxpayers are affected by a stable over-burden of fiscal pressure due to tax evasion (Chiarini et al., 2013). On the other hand, is the catchy interaction between tax evasion and tax rates, through tax base erosion. This issue is becoming more concerning in the cases of high public debt and deficit spending, as is for Romania too. Therefore, the stability of the overburden gap could be considered a signal of the absence of such a vicious circle (Bernasconi and Lapecorella, 2007).

The main aim of the paper is to identify the relationship that exists between tax evasion and tax pressure in Romania, between 2000 and 2013, using an autoregressive vector type of analysis. The VAR model with 3 lags can be considered as representative in order to describe autoregressive links between tax evasion and fiscal pressure in Romania.

The remainder of the paper is consist as follows. Next section briefly discuss the literature review with a focus on the latest developments of tax evasion in Romania. In section 3 are presented the methodology and data used to test the empirical VAR model. Section 4 report the

results for VAR estimations as well as impulse functions and Section 5 concludes.

## 2. Literature review

According to the Fiscal Council calculations based on the INS data, tax evasion has an extremely high rate in Romania, representing 16,2% of the GDP, in 2013. If Romania achieved a higher degree of tax collection of 100%, then its budgetary revenues, as percentage of the GDP, would exceed the European average, as long as the legal level (statutory) of the main charges and taxes in Romania is higher than the European average (at the European level, Romania has the third highest standard VAT rate and the seventh heaviest fiscal burden on the labor market – mostly generated by CAS (the health insurance home); at the same time, Romania has one of the lowest legal rate of taxation on profits and personal revenue in the EU, however they weigh less in the budgetary revenues). A thorough reform of the charges and taxes administration, targeted at the tax collection rate growth is absolutely necessary and might create the fiscal space necessary to reduce the fiscal burden on employment, which currently has a very high level.

Most of the tax evasion is centered on VAT (75%); the maximum level was experienced in 2012, 12,34% of the GDP respectively. An important aspect is that the standard VAT rate rise to 24%, in 2010, generated a tax evasion rise at VAT, from 8% of the GDP in 2009, to 9,6% of the GDP in 2010. This growing trend has also been maintained in the following years.

Of the total tax evasion, an approximate percentage of 15% is represented by social security contributions, mainly owing to the "undeclared work". In 2012, there were approximately 1.570.000 employees, employers and individual entrepreneurs in Romania, unregistered off the books, representing approximately 27,7% of the total employees, employers and individual entrepreneurs in the economy (Consiliul Fiscal, Raportul anual pe 2013).

Fisman and Wei (2004) quantified the effect of tax rates (in the case of customs duties) on tax evasion, examining the difference between Chinese exports to Honk Kong and Hong Kong imports declared in China: an increase in the tax rate by 1 percentage is associated with an increase in tax evasion by 3 percent. Moreover, the magnitude of tax evasion is strongly correlated with different tax rates for relatively similar products, suggesting that tax evasion takes place to a great extent by misleadingly declaring imports of goods in the categories for which high tax rates are used, falling into less harsh taxed categories.

The beneficial effect of tax cuts on tax evasion was highlighted in a study (Papp and Takats, 2008) conducted on the case of Russia, based on the idea that the reduction in taxation determines the diminishing of the taxpayer's motivation to hide the taxable matter and, as a consequence, an increase in tax revenues too. In the case of the USA, Slemrod (2007) calculated a tax non-compliance rate of 14% for the total federal tax and income tax.

Several empirical studies indirectly related to tax evasion are those that take into account the relationship between taxation and the underground economy. Davis and Henrekson (2004) have identified the conditions under which regressions by group of countries may highlight, among other things, the impact of taxation on the size of the underground economy. Using data from the last decade of the last century for a sample of developed countries, the two authors pointed out that an increase in the general tax rate by 12.8 percentage points leads to an increase in the underground economy by 3.8 percent of the GDP.

Another study assessing the impact of taxation on the size of the underground economy is represented by Peter (2009). It analyzes the effects of a tax reform aimed at moving to a proportional income tax or just a reduction in progress on the underground economy on a sample of 170 countries for a 25-year analysis period. The obtained results indicate that there is a direct positive relationship between income tax rates, progressive taxation and the complexity of income tax on the one hand and the size of the underground economy on the other. Introducing proportionally income taxation is likely to reduce the size of the underground economy in the short term, but the effect diminishes and disappears over the long term.

### 3. Methodology and data

In the empirical part, we perform an autoregressive vector type of analysis (AVT), in order to identify the relationship that exists between tax evasion and tax pressure, in Romania, in between 2000-2013.

The autoregressive vector type methodology (AVT) is a method used in the time series analysis, especially due to its flexibility and easy maneuver. In the case of this methodology, the dependent variables (resultatives) are lags of the explicative variables, but also of the simultaneous equations, because it simultaneously estimates a system of equations. Moreover, in each equation there are lags included from the other endogenous variables (Asteriou and Hall, 2011).

In order to check if there is a connection between tax evasion (EVAZ), and tax pressure (TP), we have taken into account the following hypothesis:

$$H_1: EVAZ = f(TP) \quad (1)$$

$$H_1: TP = f(EVAZ) \quad (2)$$

The demonstration will be made with the help of an AVT model, which can be written under the form of the following equations:

$$EVAZ_t = \alpha_1 + \sum_{j=1}^k \beta_j \times EVAZ_{t-j} + \sum_{j=1}^k \gamma_j \times TP_{t-j} + \varepsilon_{1t} \quad (3)$$

$$TP_t = \alpha_2 + \sum_{j=1}^k \delta_j \times TP_{t-j} + \sum_{j=1}^k \theta_j \times EVAZ_{t-j} + \varepsilon_{2t} \quad (4)$$

where  $\alpha_1$  and  $\alpha_2$  are coefficients of the free terms;  $\beta_j, \gamma_j, \delta_j, \theta_j$  are coefficients of the endogenous variables, and  $\varepsilon$  represents the residual errors.

In terms of methodology, the main steps of econometric analysis are:

- Applying stationary tests;
- Verification of the Granger causality from considered variables;
- Selection of VAR model and
- Checking the stability condition of the model;
- Identification of impulse functions.

### 4. Results

In the case of the studied variables, the stationarity on levels of the series was first tested, with the help of ADF tests (Augmented Dickey-Fuller) and PP (Phillips-Perron), resulting that time series are not stationary, or, in other words, have a unitary root. Thus, 1st order differentiations of series have undergone this, and the results indicate the fact that these integrated 1st order series are stationary (do not represent a unitary root or are I(1)).

The Pairwise Granger causality test suggests (for lag = 1) the fact that we can accept the null hypothesis in both cases, which means that tax evasion does not cause Granger fiscal pressure in Romania, and the other way around.

For the lag selection, the "VAR Lag Order Selection Criteria" test was considered, which shows the fact that, for 3 theoretical lags, four out of five criteria (FPE, AIC, SC and HQ) recommend a lag equal to 3 for the VAR model "EVAS-PRESSURE".

Given that VAR meets the stability condition too, the VAR estimations are reported in table no. 1

Table no. 1 Unrestricted autoregressive vector EVAS-PRESSURE" estimations

Autoregression vector estimations

Standard errors in ( ) and t-statistical [ ]

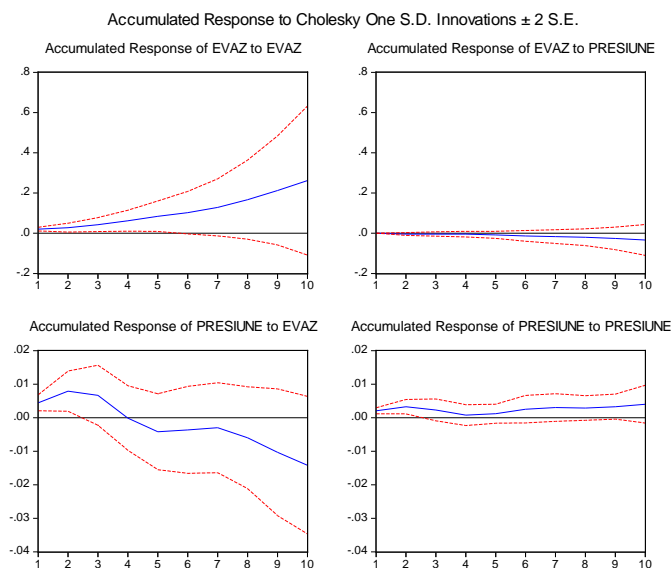
	EVAS	PRESSURE
EVAS(-1)	0.777379 (0.43014) [ 1.80725]	0.041567 (0.10291) [ 0.40393]
EVAS(-2)	0.234068 (0.47905) [ 0.48861]	-0.014118 (0.11461) [-0.12319]

EVAS(-3)	0.201027 (0.62097) [ 0.32373]	-0.184173 (0.14856) [-1.23974]
PRESSURE(-1)	-1.970576 (1.59310) [-1.23694]	0.589199 (0.38113) [ 1.54594]
PRESSURE(-2)	2.645560 (1.76224) [ 1.50125]	-0.736393 (0.42159) [-1.74669]
PRESSURE(-3)	-2.242771 (1.29791) [-1.72799]	-0.068907 (0.31051) [-0.22192]
C	0.441787 (0.46141) [ 0.95747]	0.360491 (0.11039) [ 3.26573]
R-squared	0.893441	0.840399
F-statistical	4.192223	2.632806
Log likelihood	30.74501	45.04805
Akaike AIC	-4.749002	-7.609609
Schwarz SC	-4.537192	-7.397800

Source: own processing with Eviews 6

Thus, the VAR "EVAS-PRESSURE" model can be considered as representative in order to describe autoregressive links between tax evasion and fiscal pressure in Romania. Based on these results, we can identify two impulse answers (represented in the Figure no. 1), which evaluates the effect of a shock upon current or future values variation of variables EVAS and PRESSURE.

Figure no. 1. Impulse functions



Source: own processing with Eviews 6

Several remarks could be drawn up. First, a +1% shock in the level of fiscal pressure (upper-right graphic) does not generate almost any effect upon the tax evasion in Romania in the first 5 years of the forecast. In the following 5 years, the same positive shock of the fiscal pressure can be observed to determine a slight decrease in tax evasion, so the link between the two variables will become negative. Second, a +1% shock in the level of tax evasion (lower-left graphic) will generate a slight growth of tax evasion in the first 4 years taken into consideration, after which the trend reverses, maintaining itself for all the remaining 6 years left in the forecast period.

## 5. Conclusions

Improving the fiscal administration is a hard task for a third of the Member States owing to the action of various factors, including: high administrative costs related to the net revenue collection; not using the information provided by third parties for pre-filling the self-assessment tax returns; using only to a small extent the electronic forms; and, finally, the considerable administrative burden on the medium sized businesses, generated by fiscal systems (European Commission, 2013).

At a national level, in the context of the European Semester, Member States must apply the specific recommendations made by the European Commission in order to improve the fiscal governance. Among the measures aimed to improve compliance with fiscal rules and the promotion of some more efficient fiscal administrations, there are (European Commission, 2013):

- “developing a compliance strategy and focusing the efforts on combating tax evasion;
- Making more use of the information provided by third parties;
- Developing pre-filled self-assessment tax returns;
- Making concerted efforts in order to downsize shadow economy, such as applying criminal sanctions for those hiring undocumented workers, using electronic means of payment, mandatory in the case of purchases exceeding a certain threshold, or using monetary incentives for revenue declaration (tax cuts).”

Member States must take into consideration and apply the Commission recommendations, concerning tax havens and aggressive tax planning, which mainly refer to identifying third countries which are not applying the minimum standards for a proper fiscal governance. The Commission is willing to provide specific support and technical assistance to any Member State which requests it in order to strengthen their fiscal system against tax evasion and in order to improve tax collection.

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## Internal Audit Role in Cybersecurity

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### Abstract

*In a changing world, with a massive exposure to risks on all levels, from nature climate change to violent cyber war attempts, the business environment needs to adapt its instruments in mitigating and responding to cyber-security risks on different stages: prevention, detection, disposal, improvement.*

*Internal audit function has a key role in assessing cyber disruptions as part of strategic risks and identifying the operational control gaps on the business level, working with management at developing and maintaining an adaptive capacity to different types of risks building and improving business continuity.*

**Key words:** cyber security, internal audit, cyber attacks, business continuity, cyber resilience

**J.E.L. classification:** F60, K24, M42, M48, O33.

### 1. Introduction

Technology surrounds us in every field and the risks on security got into a broader level. Therefore, apart from the existing risk exposure to global warming, nuclear war, political changes, terrorism, regulation changes, loss of well-prepared employees an important trigger consists in the cyber threats and security incidents.

Most of the big organizations have strong security protocols implemented to fulfil the cyber-security politics, like the three levels security, tunnel secure shell (SSH), telecom protocols, etc. This helps organizations develop appropriate tactics to determine how they can achieve continuity and recovery in the event of a data breach.

### 2. Current risk exposure

Deloitte (2015) conducted a study and the highest risks that can arise in a company disrupting the normal business are:

- cyber attacks, in terms of malware, denial of service, phishing,
- data breach (information theft, identity stealing, reputational damage, private/secure information public release)
- unplanned IT and telecom outages
- security incidents

According to Business Continuity Institute (2017), Horizon Scan Survey, top three challenges in cyber-security are the use of the internet for malicious attacks, the influence of social media, and on third place, the loss of the key employees.

## 2. Three lines of defense model

Forwards, we'll present the IIA three lines of defense model and we will explain how a business can fight against the cyber security risks

Deloitte adapts the Institute of Internal Auditors *Three lines of defense model* with a view to cyber risks, as it follows:

Figure no.1 Three lines of defense IIA model



Source: Authors visual projection the IIA model

*The first line of defense:* Management control is the responsibility of the operational management, ensuring the identification and control of operational risks on the business processes level. There are three functions on this level:

- Owning and managing risks
- Anticipating risks
- Ensuring independence and security

Teamwork with IT department on cyber risks security and reaction. Internal audit will assure the effectiveness of the response actions on IT risk. On the first line of defense level, the business and IT function include cyber risk management in daily operations.

Promoting communication and collaboration using the extensive image that internal audit has it on the organization level.

*The second line of defense* is represented by:

- a risk management function and supervising the risk management and internal control system completed by the operational management; at this level, governance gets settled and also policies, standards, processes; eventual risky situations are reported to management;
- a conformity function providing consultation, verification, monitoring specific risks and reports to superior management and even on the governance structures;
- a financial control function supervising the financial risks and financial reporting problems.

The independence on this level is limited.

*The third line of defense* is the internal audit function, which has higher independence, offering an objective opinion over the control carried by the operational management and the efficiency of the functions from the second line of defense.

The internal audit function reports to the executive management and governance responsibilities. Internal audit offers assurance over the risk management, internal controls, covering a large area of objectives. The result of the evaluation is further presented to top

management, to the Audit Committee and to the Board of Directors. Also, other stakeholders are interested in the evaluations of the internal audit, such as regulating authorities and the external auditor.

### **3. What should internal audit do in a proactive defense?**

The Institute of Internal Auditor's CEO, Mr Chambers presented in several steps the role of internal audit in cyber security.

- He admits one of the roles of internal audit function is testing and providing assurances on the cybersecurity and the planning on business continuity and recovery strategies from different threats.
- Efficient communication between internal audit and executive management is essential to the cyber-security risks levels at the organization level and counterveil or mitigate them.

#### *Protect*

- First of all, internal audit may provide help with developing adequate, IT governance program, including cybersecurity strategy and policy working together with the board of directors and management. Internal audit can also offer assurance on the IT governance.
- Furthermore, it needs to point out and evaluate the cybersecurity risks, assesses the tests and their effectiveness and works on diminishing them to a minimum by offering analysis reports and judgments on the execution plan.
- Getting the awareness that risks may occur both from outside and inside of the company, the internal audit function will carefully assess cybersecurity plans and work on mitigating risks.

#### *Detect*

- The internal audit needs to evaluate cyber risks, cybersecurity controls and inform the executive management and the Audit Committee about the vulnerabilities, threats, and effectiveness of the installed procedures and control systems solutions.
- The cybersecurity measures should be integrated into the internal audit plan. Also, the implemented organizational culture should support and encourage the cybersecurity endeavors.
- Should work on prevention in terms of cybersecurity, using sophisticated security and protocols, technology, and trained human resources. The internal audit can be externalized for an improved technical oriented audit aimed to widen the control over the cyber risks.
- With the use of data analysis and data mining IT security issues might be detected. Integrating data analysis in internal audit work leads to better risk monitoring and a wider control and fraud detection.

#### *Business continuity*

- Implementing a response program for cyber risks and a business continuity programme as a priority, in order to achieve cyber resilience.
- Cyber resilience can be a solution for the future, as cybersecurity without having implemented a business continuity program will not decrease too much the occurring risks.
- Companies need to pay greater importance and develop their own business continuity management (BCM) blueprint, by creating procedures on dealing and resolving different scenarios that might interrupt normal business activity, both on IT and physical security threats level.
- Business continuity brings value in organizations, as the existing risks tend to expand. Ex: terrorism, political moves, cybercrime, economic instability, climate change.
- It is a great strength for business to be able to foresight the darkest events that may occur and plan a strategy for managing to get out of it and continue their activity without being disrupted.

### *React*

- Companies need to prepare a crisis management program, part of the BCM in case of incidence. The first important step is assessing the breach and finds a way to respond it. The entire organization needs to be aware of the crisis management program (so everybody in the company should be trained so they know their specific role in case of an incident), working in cohesiveness, so communication will be in a single voice and transparent.
- Internal audit will independently act in surveillance and assess the response.

### *Improve*

- The internal audit function adds value to the business by expressing its opinions from the extensive activity.
- Security procedures, protocols, and strategies need to get continuous revising and improvements, to be always prepared for eventual attacks.

## **4. Conclusions**

Organizations can create cyber resilience plans for their businesses, following the presented model protect – detect – business continuity, react – improve/re-evaluate.

Companies need to introduce in their organizational culture the cyber defensive behaviour and train the employees' rules of conduct and the internal audit will assess the conformity.

They should take advantage of the existing standards and framework on improving infrastructure on cybersecurity and adapt their policies and strategies accordingly.

Using a continuous monitoring program for cyber risks, as they are dynamic and prevalent; internal audit function should work aside from the IT in getting recurring updates and amendments on strategy cybersecurity program. This will lead to a change in internal audit function, in terms of expertness, talent, and leadership.

In case of risk emergence, a crisis management program, part of a business continuity management is fundamental. The first step will be discovering the reason for the attack and a way of response, and then ensuring a transparent and comprehensive communication, so every employee would know his role and responsibilities. Specific procedures (adopting ISO 22301 organization security - BCM) and defensive systems should be carried on an internal audit will assess the responsiveness and effectiveness of the strategies for future improvement opinions. A global collaboration and support between internal audit, executive management, IT and every single player in the company will lead to cyber resilience and greater protection on all level risks.

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## Cybercurrencies

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### Abstract

*Cryptocurrencies appeared as a normal evolution of digital money. It is certain that cash is less used compared to twenty years ago, most transactions are made online or using digital money, such as banking transfers, credit cards payments, mobile applications, pay pal, etc.*

*Cryptocurrency became the second generation of digital money, in a improved form, using current technology, and is constantly growing, exceeding the most optimistic predictions, but is also challenging and unpredictable because of it is impossible to control it anyhow.*

**Key words:** cryptocurrency, digital cash, cyber currency, bitcoin, blockchain

**J.E.L. classification:** E31, E32, E42, G32, M48, O3

### 1. Introduction

Central banks, governments and other legal or financial institutions back a traditional currency.

Compared to fiat money, a cyber currency has no physical shape, it doesn't need to be issued by any central bank, has no surveillance authority, all transactions are made by the system users, it is not legal tender and it is safe because the technology uses asymmetric key cryptography.

Nine years ago, Satoshi Nakamoto released the Bitcoin white paper in November 2008 explaining what his currency was and how it works: "Bitcoin: A Peer-to-Peer Electronic Cash System". Later, in January 2009, he launched Bitcoin currency.

### 2. Cryptocurrency explained

The computer scientist created the bitcoin, meaning electronic cash, as a way to facilitate payments without involving a financial institution. The innovation consists mainly in the blockchain, which keeps the blueprint of all electronic transactions, using a peer-to-peer network, at worldwide level but that is not backed up by trust, but by a cryptographic proof. Deloitte explains in a 2017 study that the transactions are validated and registered in an assigned ledger, the blockchain, by the peers, meaning the miners. After validation, the new data block becomes a new part of the blockchain, which cannot get altered. The computers making up the network are called nodes and are the ones validating and keeping the records in a peer-to-peer network extending worldwide.

Protection is provided through cryptography. The system works not on the trust of a state authority but on the trust of its users. The currency gets accepted as way of payment because people recognize it. The blockchain is the security element that impedes the occurrence of double spending in digital transactions – the greatest fear of potential users of cryptocurrencies. The "blocks of chain" are linked blocks of information, which are not changing once fixed; it is impossible to lose or change the information once set.

The digital currency is mainly a chain of digital signatures (private keys) and can be exchanged for fiat currencies.

Transactions using cybercurrencies have small costs, the owners of the digital currency are not exposed, can't be tracked, since the sender and the receiver of the payment are anonymous.

The greatest and most accessible platform for trading, and storing digital currencies is Coindesk, has similar features with banking background for traditional currencies, but with no lending option. Even though is considered to be the safest, many cyber criminals acted their thefts on Coinbase, stealing hundreds of millions of dollars from users.

### **3. Risk exposure**

Of course that there are disadvantages for using virtual cash, for instance, it's a relatively new concept, so cyber currency is not historically credible if we were to compare it with other types of investments. On the other hand, an economic law says that higher the risk is associated with higher potential returns (investopedia.com).

Another risk comes from the online again, since the currency, being 100% digital, is vulnerable to hacking and malware. The person who has the key encryption code is the owner of the bitcoin, so if someone steals the private key, can transfer immediately the bitcoin into another account. The transactions are irreversible. So if a transaction was made incorrect, it cannot be cancelled, only the receiver of the money can opt to send the bitcoin back. There is no authority where you can send complains.

The least beautiful part of the cybercurrency fairy tail is that because of its anonymity, difficulty of being tracked and speed of transactions no matter the geographical distances, make them perfect instruments for cybercrime (ransomware), using for paying criminal activities, money laundering, avoiding taxes, financing the illegal arms trade, etc.

Governments started to conceive and implement regulations for cyber currencies transactions, since the greatest money thefts in human history were cyber robberies.

### **4. What makes it valuable?**

When a currency is exchanged for goods, its value is maintained. More and more people are attracted by cryptocurrencies, and as long as they make cyber capital acquisitions to store them and not speculating, like exchanging them for other currencies the cyber currency will, or at least preserve its value. Otherwise, the price may vertiginously collapse.

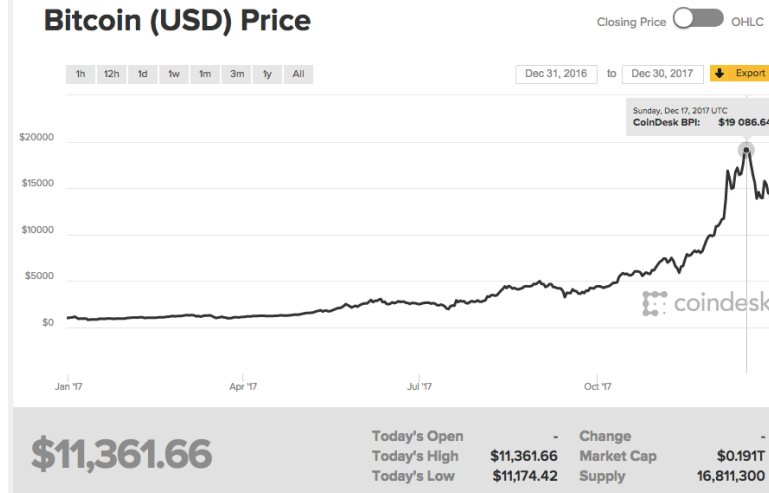
In terms of money, cryptocurrency is not money, as it doesn't have the typical characteristics:

- cannot be globally exchanged for goods and services;
- it is not transportable;
- it doesn't have a great intrinsic value compared to their volume and weight, as there is no weight, or physical form;
- it's not recognised,
- it can't be used as a standard to measure the value of the goods;
- it is not indispensable, one doesn't need to physically own the cryptocurrency in order to pay;
- one cannot consider it a value reserve, since it cannot be kept without losses, in a stable economy situation;

Bitcoin, Ethereum, Dash, Ripple, Litecoin, Monero, Dogecoin and other altcoins form together the monetary market of a more than other 1000 types of cybercurrencies. The future of money has started.

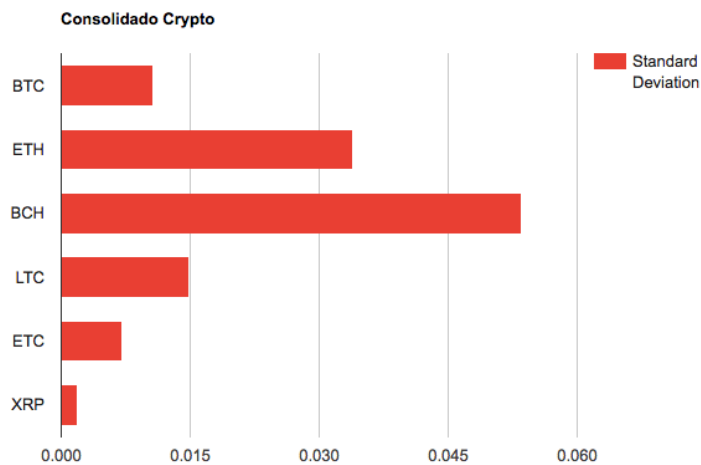
Although it has been on the market since almost a decade, in 2017, Bitcoin hugely rose from 1000\$ value at the beginning of the year, to 4000\$ in October and up to 19.000\$ by the end of the year (fig no.1). This variance of price means bitcoin had a huge volatility in 2017, even though is considered the slightest volatile cryptocurrency. The price deviation is proportional with volatility, meaning the smaller the price deviation, the lower the volatility.

Figure no. 1: Bitcoin price index, compared to USD



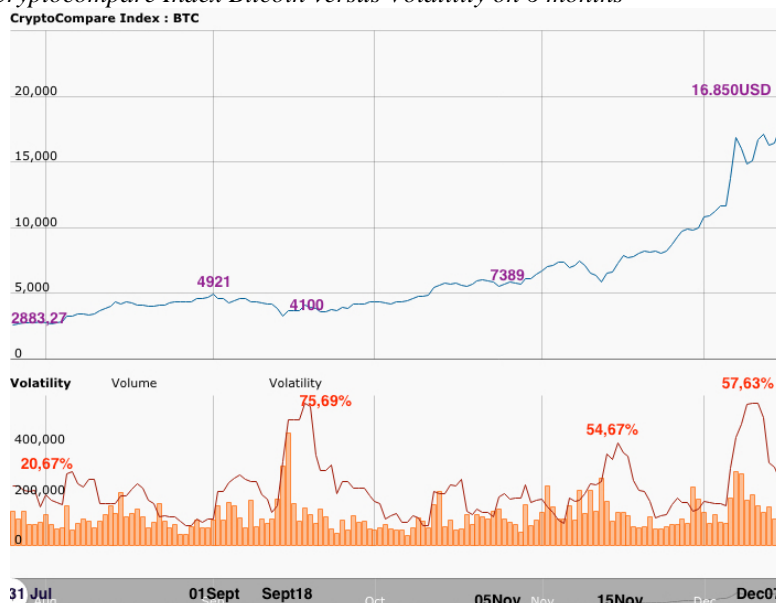
Source: data extraction from <https://www.coindesk.com/price/> (December 2017)

Figure no. 2 Standard deviation analysis of crypto currencies instant measure



Source: <https://forexstatistics.com> (accessed in November 17)

Figure no. 3 Cryptocompare Index Bitcoin versus Volatility on 6 months



Source: Author's selection and annotations extracted from [www.cryptocompare.com](http://www.cryptocompare.com)



## 5. Next step – state owned currencies

### *United States*

The United States stated since 2014 that wages paid in bitcoin and altcoins are taxable, both on payroll and as federal income for the employee. Cyber currencies are capital assets for the taxpayer, and are subject to taxation. The Internal Revenue Service (IRS) has access to track all records on transactions made on Coinbase surpassing \$20.000.

### *Russia*

Cryptocurrency laws are created and adopted, Russia being one of the first states to introduce crypto regulation in 2018. Russians also expressed their intention to introduce the cryptoruble, a state sponsored currency, at the initiative of president Putin. The Russian cyber currency will be totally distinguished from the existing currencies, since it will be issued by the government and not through mining, and the value will equal the existing ruble. Mainly, will be a digital encrypted ruble, subject to taxation and not a sibling of bitcoin. They also want to ban bitcoin transactions in the future. There are many cases of money laundry and arms trafficking using bitcoin.

### *Venezuela*

The hyperinflation in Venezuela brought the national currency, the bolivar in free fall (1\$ > 100.000 bolivars) and the economy in recession, lasting for more than five years now. Even the rising price of bitcoin was related with economic situation in Venezuela, where the electricity price is very low, and more than 100.000 Venezuelans work as miners. The official number is unknown, also the activity is considered illegal, and the government is chasing the miners and charge them on promoting cyber crime, extortion, money laundering, electricity theft and funding terrorism.

Anticipating the bitcoinisation of the country, the Venezuelan president, Nicolas Maduro, purposed a state-sponsored cryptocurrency, the *petro*, backed up by government and based on the oil, natural gases, gold and diamonds for taking the country out of the crisis. Its value will equal the price of a barrel. This kind of currency will be a tricky investment asset, since government is not trustworthy and will have direct control on the digital currency.

## 6. The path of cryptocurrency and conclusions

Deloitte (2015) made a comparison between bitcoin and state sponsored cryptocurrencies and we can conclude that in an existing crypto monetary system, based on innovation, competition is encouraged. Traditional finance institutions needs to lower the fees for their operations with fiat currencies, and create a friendly commission environment so they can still resist on the market and also they should come up with new products like digital wallets.

Bitcoin and other altcoins are a lot more volatile than traditional currencies and it takes time for the cryptocurrency market to settle. Lots of cryptocurrencies users are investors, they buy crypto currencies just to sell them after, to make a profit; less are the actual consumers. Perhaps when there will be more consumers than investors, the market will start to settle and the price volatility of bitcoin and other altcoins will get reliable.

Both consumers and organizations should see cryptocurrency as main option for the usual transactions, because of cheap commissions, speed of operations, security, and simple procedures. PwC (2015) conducted a study of the cryptocurrency evolution and asserts that banks will not be replaced but they have the opportunity to evolve in a competitive manner.

Governments and private sector also need to take measures and adopt regulations regarding the cyber security and compliance standards, working on the anti-money laundering, cybercrime downgrading and consumer protection.

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## Financial Contagion in the Recent Financial Crisis: Evidence from the Romanian Capital Market

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### Abstract

*We use the wavelet analysis in order to investigate if financial contagion occurred between the US and the Romanian capital market in the beginning of the recent economic crisis. Moreover, we test presence of pure and fundamental contagion between the two markets using wavelet coherency analysis and maximal overlap discrete wavelet transform methodology. We find evidence of pure financial contagion between the two markets: during the sub-primes crisis period, the Lehman Brothers collapse and at the beginning of sovereign debt crisis. Furthermore, we find a general short-term increase in interdependence between the two markets in the ex-ante and ex-post Lehman brothers period. Meanwhile, the capital market from Romania and US were in perfect sync during 2007-2009 for high trading time-windows. This implies that the Romanian market was sensitive to short-term shock from the US market, which lead to a long-term fundamental contagion.*

**Key words:** financial contagion, capital markets, financial crisis, wavelet analysis

**J.E.L. classification:** M42, M48, H83

### 1. Introduction

In the outbreak of the 2008 financial crisis, understanding stock markets' comovement and financial contagion mechanism has become a key focus of investors and risk managers, but also for national and international financial authorities. While investors and risk managers seek out a reduction in the risk associated with their portfolio by investing in different countries, national and international financial authorities need to take actions in order to protect the financial stability of a country or the international financial system. Therefore, most of the studies regarding financial markets comovement reveal the potential benefits of international portfolio diversification as measure of managing risks in an integrated global financial market. However, in period of crisis the true benefits of international diversification tend to diminish or even vanish, as investors tend to behave irrationally in an environment where financial contagion is present.

In the context of the recent financial crisis, there is an increasing interest towards understating the main factors that contribute to fundamental and pure based contagion. While, pure based contagion evolves around short-term shock in the financial markets (Forbes and Rigobon 2002) or long-term financial contagion due to macroeconomic factors. The recent financial crisis has brought into light the importance short-term contagion as it is the main factor that is responsible for speeding the crisis on a global scale. Many studies, like (Syllignakis and Kouretas 2011; Gallegati 2012; Kiviaho et al., 2014; Dewandaru et al., 2016) have emphasized the detrimental effect of shocks that originated from the US on the global financial scale. There is clear evidence of pure contagion between the US market and most developed capital markets (Gallegati 2012), from the US towards emerging markets (Kiviaho et al., 2014), or even between countries members of the European Union (Dewandaru et al., 2016).

Nevertheless, few studies try to emphasize the implications of the recent financial crisis that debuted with the Lehman Brothers bankruptcy on the Romanian capital market. Furthermore, fewer studies use a modern method of analyzing financial contagion: the wavelet methodology, which has

several advantages compared to traditional methods of testing financial contagion. One of the major advantages of the wavelet methodology involves around the ability to analyze at the same time both time and frequency domains, distinguishing pure contagion from fundamental contagion.

Therefore, the aim of this paper is to investigate if the Romanian capital market experienced pure financial contagion from the US capital market in the outbreak of the recent financial crisis. The rest of this paper is organized as follows: section 2 presents the data use in the analysis, section 3 presents the methodology, section 4 presents the empirical results while section 5 concludes.

## 2. Data

The aim of our paper is to test whether the Romanian capital market exhibited a contagion phenomenon in relation to the US capital market after the Lehman Brother collapse in 14 September 2008. In our analysis, we use the *BET* – index as a proxy for the Romanian capital market and the *S&P 500* index as a proxy for the US capital market. In order to capture the effect of the contagion phenomenon we will split our data in an ex-ante and ex-post periods, which consist of 256 trading days similar to (Dewandaru et al., 2016). In addition, in order to prevent the *non-synchronous trading effect* we will eliminate all non-trading days, legal holydays in each of these two countries. Therefore, our analysis period spans from 27 August 2007 – 2 October 2010. Furthermore, similar to (Gallegati 2012) we will align the daily *t* returns of the Romanian capital market with daily returns of the US market from the previous day *t-1* in order ensure that information from the US market is contemporaneous with data from the Romanian capital market.

The source of data is DataStream and it represent the stock market indices are transformed into daily returns by calculating the logarithmic differences of the daily end prices as in  $r_t = \ln(P_t/P_{t-1})$ , where  $P_t$  and  $P_{t-1}$  represent the stock price index at time *t* and *t-1*, respectively. We use local currencies for each country to calculate the raw indices as in previous studies like (Kiviahho et al. 2014) because Mink (2015) argues that only local currency captures the true effect of contagion. Table no 1 contains the descriptive statistics for all the data, including the two sub samples. The first sample contains data from 27 August 2007 until the Lehman Brothers collapse in 14 September 2008, while the second samples contain data from 15 September 2008 - 2 October 2010.

Table no. 1 Descriptive statistics

	BET1	BET2	BET	SP500-1	SP500-2	SP500
Mean	-0.002434	-0.000616	-0.001529	-0.000592	-0.000534	-0.000563
Median	-0.001803	0.000222	-0.000696	0.000244	0.000977	0.000381
Maximum	0.046109	0.100907	0.100907	0.041535	0.109572	0.109572
Minimum	-0.075649	-0.131168	-0.131168	-0.034734	-0.094695	-0.094695
Std. Dev.	0.018470	0.032120	0.026163	0.013298	0.027407	0.021520
Skewness	-0.275359	-0.445200	-0.404968	-0.014015	0.042239	0.044365
Kurtosis	3.762600	4.698128	5.717925	3.304523	5.254212	7.125197
Jarque-Bera	9.327788	38.44956	168.9053	0.997544	54.27850	363.2027
Probability	0.009430	0.000000	0.000000	0.607276	0.000000	0.000000
Observations	252	252	512	256	256	512

Source: Own computations by the authors on data provided by Datastream

## 3. Methodology

One of the most important contribution of our study evolves around using the wavelet analysis in order to test for the presence of financial contagion. We will use the methodology developed by Gallegati (2012) in order to test in a visual manner the presence of contagion.

### 3.1 Multiscale Analysis of Correlation

The multiscale analysis of correlation is a specific method of analysis in the wavelet methodology that uses the individual variance between two variables at a certain scale to test the presence of market contagion.

By computing the wavelet variance at scale  $j$ ,  $\sigma_X^2(\lambda_j)$  of a distinct stationary stochastic process  $\{X\}$ , with the variance of  $j$ -level wavelet coefficient and time  $t$ , we can compute wavelet coefficients from the MODWT (Maximal Overlap Discrete Wavelet Transform) filter as in formula (1):

$$\sigma_X^2(\lambda_j) = Var(\omega_{j,t}^X) \quad (1)$$

Furthermore, we can compute covariance between two process  $X$  and  $Y$  within the wavelet framework, but in scale dependent manor as in formula (2):

$$\gamma_{XY}(\lambda_j) = Cov(\omega_{j,t}^X, \omega_{j,t}^Y) \quad (2)$$

Where  $\omega_{j,t}^X$  – is the stochastic process obtained by filtering the  $X_t$  series with the MODWT filter.

In addition, we can compute wavelet correlation coefficient between two variables  $\rho_{XY}(\lambda_j)$  with the help of a unbiased estimators  $\tilde{\sigma}_X(\lambda_j)$ ,  $\tilde{\sigma}_Y(\lambda_j)$ , and the scale dependent covariance  $\tilde{\gamma}_{XY}(\lambda_j)$  as in formula (3):

$$\tilde{\rho}_{XY}(\lambda_j) = \frac{\tilde{\gamma}_{XY}(\lambda_j)}{\tilde{\sigma}_X(\lambda_j)\tilde{\sigma}_Y(\lambda_j)} \quad (3)$$

Following the indications of methodology employed by Gallegati (2012), we use the wavelet methodology in order to test for the presence of market contagion with the help of the confidence intervals of each individual estimator of the wavelet correlation for scale  $j$ ,  $\tilde{\rho}_{XY}(\lambda_j)$ . This involves plotting the wavelet cross-correlation coefficients at each scale of analysis alongside the upper and lower confidence interval for the coefficients. If there is evidence of market contagion, we will notice a shift downwards or upwards in the estimation of the wavelet coefficients of the two distinct periods of analysis. By plotting the random interval that forms  $100*(1-2p)$  % confidence interval, from the robust estimator MODWT we check if any of the confidence intervals are non-overlapping in order to detect market contagion. This involves plotting the estimated wavelet correlation coefficients for the ex-ante and the ex-post periods as  $\tilde{\rho}_{xy}^I(\lambda_j)$  and  $\tilde{\rho}_{xy}^{II}(\lambda_j)$ , respectively, and then issuing the null hypothesis of no market contagion as in Gallegati (2012) and in formula (4):

$$H_0: \tilde{\rho}_{xy}^I(\lambda_j) = \tilde{\rho}_{xy}^{II}(\lambda_j) \quad (4)$$

If any point of wavelet scale of the graph, the two confidence intervals are non-overlapping the null hypothesis of no-contagion is rejected and we accept the presence of market contagion at that scale, between the two markets. Consequently, if the wavelet confidence are overlapping we reject the presence of contagion between the two markets at a certain scale.

In estimating, the MODTW coefficients we will use the Daubechies compactly supported least asymmetric (LA) wavelet filter (Daubechies 1992) of length  $L = 8$ , noted by LA (8) for determining the  $\tilde{\rho}_{XY}(\lambda_j)$  on a scale-by-scale basis. We prefer to use this wavelet filter, because previous studies like (Gallegati 2012) have indicated that this filter is most adequate to handle high frequency data such as time series data.

### 3.2 The Continuous Wavelet Transform

The continuous wavelet transform (CWT), initially developed by Torrence and Compo (1998) allows testing synchronization and delays between two time series. The CWT  $W_n^X(s)$  of an individual time series  $x_n$  with a scale  $s$  is obtained by projecting a mother wavelet  $\psi_0$  on the existing series. If we use in the analysis the Morlet wavelet, the CWT becomes:

$$W_n^X(s) = \sqrt{\frac{\delta t}{s}} \sum_{n'=1}^N x_{n'} \psi_0 \left( (n' - n) \frac{\delta t}{s} \right), \quad n' = 1, 2, \dots, N \quad (5)$$

### 3.3 Wavelet coherence

The wavelet coherence analysis is a method that allows testing the interactions between two time series variables series X and Y. This involves comparing the cross-wavelet spectrum to the product of the spectrum of each individual series, which allows us to compare the interaction of the two variables in both time and the frequency domain. Torrence and Webster (1998) and Grinsted et al. (2004) argue that wavelet coherence between two variables  $R_n^2(s)$  can be calculated as in formula (6):

$$R_n^2(s) = \frac{|S(s^{-1}W_n^{XY}(s))|^2}{S(s^{-1}|W_n^X(s)|^2) \cdot S(s^{-1}|W_n^Y(s)|^2)} \quad (6)$$

where:  $W_n^X(s)$  and  $W_n^Y(s)$  are the wavelet transforms (WTC) of two time series,  $S(\cdot)$  is the smoothing operator and  $s$  is the wavelet scale.

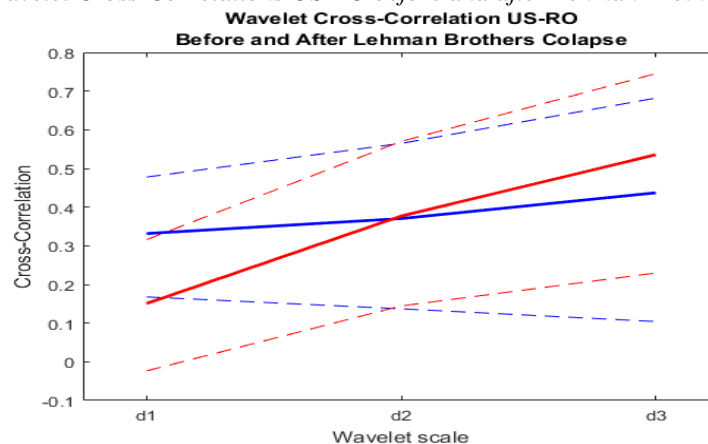
When testing market contagion, we interpret high values of coherence coefficients as high degrees of interactions between two variables. Furthermore, if the coherency coefficients are in the lower scale we interpret them as "pure" contagion, while high values for the coefficients in the high values can be attributed to the "fundamentals".

### 4. Empirical results

One of the major contribution of our analysis is the use of wavelet methodology in testing market contagion. Thus we test whether the Romanian capital market exhibited market contagion from the main driver of the recent financial crisis the US capital market.

Our results from figure no. 1 reveal some intrigued results. On a general note, we find that on average the wavelet coefficients for the second analysis period 15 September 2009 until 2 October 2010 are higher than the coefficients before the Lehman Brothers collapse 27 August 2007 - 14 September 2008. This increase in wavelet cross-correlation coefficients is expected, as in a period of crisis, the degree of interdependence between markets is higher. However, the increase in wavelet coefficients is not high enough to mark an actually contagion effect. Our results reveal that the confidence intervals are overlapping at all the scales, thus we accept the null hypothesis of no market contagion between the Romanian Capital market and the US market in the aftermath of the Lehman Brothers collapse.

Figure no. 1. Wavelet Cross-Correlations US-RO before and after Lehman Brothers Collapse



Source: Own computations by the author on data provided by Datastream

Note: Estimated wavelet correlation of US and RO countries stock market returns for before the Lehman Brothers collapse (blue line) and after the collapse (red line) periods. The dashed lines denote the upper and lower bounds for the 95 percent confidence interval before (blue dashed line) and after (red dashed line) Lehman. The null hypothesis of no contagion is rejected when the confidence intervals are not overlapping.

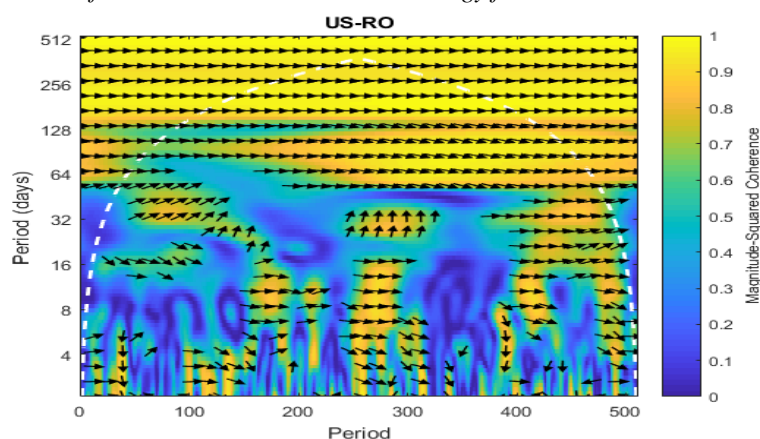
The changes in wavelet cross-correlation coefficients indicate a gradual increase in the degree of interdependence between the US and Romanian capital market, but the changes aren't significant enough to argue that only the Lehman Brothers collapse was the sole factor. Either way our results could indicate that the Romanian capital market wasn't affected by the Lehman Brother collapse, or there were more than one period of pure market contagion in our analysis period 27 August 2007 – 2 October 2010. We also note that the BET index was in a downwards trend in 2007-2008 long before the Lehman Brother collapse. In the same period, the US market proxied by the S&P 500 index suffered less severe losses. Nevertheless, we can conclude that the Romanian market reacted to the impulses from the US capital market in the aftermath of the Lehman Brother collapse, but there is no clear evidence of market contagion solely in this period.

Figure no. 2 represent additional testing for our initial results. We use a coherency analysis in order to validate our initial results and assumptions. One major advantage of the wavelet coherency analysis is the ability to plot simultaneously the frequency data and the time date. Thus, we can interpret on the vertical axis the frequency domain and in the horizontal axis the time domain. By using the coherency analysis, we can see not only periods of market contagion, but we can also pinpoint exactly the moments in time when they occurred.

In our analysis, we use a range of colors that varies from light blue (low coherency values) to yellow (high coherency values) in order to test the interdependence and contagion phenomenon on a scale-by-scale basis. Our results from the wavelet coherency analysis indicates the signs of market contagion around the date of the Lehman Brothers collapse in 14 September 2008, as we find high areas of yellow in the lower bands 1-8 trading days around the 250 days trading period (Lehman collapse is day 252). In addition, we find that there were also additional periods of contagion at the beginning of our analysis period in August - September 2007 and later on, at the start of the year 2008, or 2009. This indicates numerous moments of market contagion that relate to certain other external shocks such as the subprime crisis in the late 2007 and the beginning of 2008 or the sovereign debt crisis that started in the beginning of 2009. This validates our initial results, because we find periods of short-term market contagion before the Lehman Brothers collapse, while the periods are still present later on during the year 2009.

One of the benefits of the wavelet coherency analysis is that ability to distinguish between „pure” and „fundamental” contagion as figure no. 2 reveals. We find that in the short time window there are clear signs of pure contagion in the 1-8 days trading period and we find also clear evidence of fundamental based contagion in 128-512 trading days, where the US and Romanian capital markets were in almost perfect sync between 2007-2009.

Figure no. 2. Results of the wavelet coherence methodology for US vs. RO



Source: Own computations by the author on data provided by Datastream

Overall, our results from the MODTW analysis indicated that there were numerous periods of market contagion between the US and Romanian capital market, while the results from the coherency analysis validated our initial assumption pinpointing three different periods of contagion. We found clear evidence of market contagion during the subprime crisis, during the Lehman Brothers collapse and at the beginning of the sovereign debt crisis. In the end, our

estimates are in line with the results of (Syllignakis and Kouretas 2011) who found market contagion between the US and Romanian capital market during the recent economic crisis based upon a GARCH model. Similarly, (Kiviaho et al. 2014) found evidence of market contagion based upon wavelet coherency analysis on weakly returns.

## 5. Conclusions

In this study, we analyse whether the Lehman Brothers collapse in the year 2009 marked a contagion period in the Romanian capital market. We use the wavelet analysis in order to test whether, the Lehman Brother collapse was the sole period of market shock or if we can identify other significant periods. There are two important conclusions from our analysis. Firstly, we find that in the aftermath of the Lehman Brother collapse the degree of interdependence between the US and Romanian capital market increased, indicating potential signs of pure contagion. This increase, in market interlinkages poses a real threat to investors as these marks a reduction in the efficiency of international portfolio diversifications. Furthermore, the second conclusion of our study is that Romanian capital market was affected by pure contagion, not only in the aftermath of the Lehman Brothers collapse, but also in the aftermath of the sub-prime crisis in 2007 or at the beginning of the sovereign debt crisis in 2009. The presence of multiple periods of pure contagion pose a real threat to the Romanian national authorities as they need to take the adequate measure in order to protect the local capital market from external shocks.

Despite the abundant literature regarding pure and fundamental based contagion, the lack of an efficient mechanism of protection national capital markets from external shocks poses a real threat to national authorities. Therefore, national authorities need to monitor closely the evolution of interlinkages between international financial markets in order to take adequate measure to isolate the local capital markets from external shocks. An adequate, monetary policy and modern regulation could ensure a higher degree of protection for the national capital markets.

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## Motivations in Choosing Creative Accounting Techniques: A Managerial Perspective

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### Abstract

*The business world is a competitive one. Thus, managers tend to present their activity and of the company they represent in the best terms possible, so the stakeholders, present and potential, to have the best impression regarding that activity. Because numbers represent the main language of businesses, changing the accounting figures tends to be the easiest way by which managers present the most favorable situation of the company they represent, through the hands of the accountants. The temptation to resort to creative accounting techniques increases, managers being attracted by solutions to protect them in less favorable times. The desire to have better results and bigger bonuses outlines a starting point from which all other problem begins. Through this paper we aim to establish the boundaries of creative accounting and the reasons invoked by professionals.*

**Key words:** creative accounting, stakeholders, creative techniques, motivations.

**J.E.L. classification:** M21, M4, M42

### 1. Introduction

In the life of a business, as in a man's life, there are good days and bad days, periods of abundance and others of recession, conditions in which it is difficult to maintain investors' confidence in the business performance. The temptation to engage in creative accounting techniques increases, managers being attracted by solutions to protect themselves in less favorable times. The desire to have the best results and the highest bonuses outlines one point from which all the other problems begin.

Usually this term is associated with a good, positive thing, a feature that differentiates people and gives them an unique character. We are glad to see a shadow of creativity in our children and we'll do anything to develop it into something great. This doesn't apply for the accounting field where creativity is usually seen as an undesirable habit, as a negative technique. „Why we do not see creativity in accounting as something positive?”, “Why do we do anything to stop it?” are just few of the questions we are seeking to answer through this paper.

### 2. Creative Accounting, from motivations to objectives and strategies: a literature review

The expression „creative accounting” was introduced for the first time in Anglo-Saxon environment, being used by those who supervised and commented the activities of capital markets (journalists and financial analysts). Subsequently, it was taken over in the vocabulary of other countries, which led to the multitude of terms that describe it today (Ionaşcu 2003, p.161). We could say that the debates on this topic have intensified alongside the scandals that shook the business world and will continue to do so, given that the removal of the premises allowing the use of creative techniques is far from disappearing from the economic world.

Creativity is a red line in the evolution of accounting, and that can be seen from two different perspectives. One, the positive side, is the source of evolution in accounting and accounting profession. The complexity of the business world has always been a challenge for the professionals,



and only their creativity has allowed accounting to evolve to its present form. Second, the same business world has created competition, charts and wealth. These are sources of the grey side of the creative accounting. Later, these motives have evolved into objectives and strategies, which have led to different techniques, presented below.

Amat and Blake (1995, p.3) present creative accounting as a process by which accountants use knowledge about accounting rules to manipulate a company's accounts, and introduce in their paper four books, published on the subject, each from a different perspective:

- from the perspective of a business journalist: Ian Griffiths, in *Creative Accounting*, notes that all businesses in a country hide their benefits. The annual accounts are based on registers that were "finely cooked" or "completely fried" and the reports have been completely changed to protect the supposing guilty persons. The author claims that creative accounting is the biggest hoax since the Trojan horse and that, really, it is a completely legitimate fraud.
- from the perspective of a professional accountant: Michael Jameson argues, in *A practical guide to creative accounting*, that the accounting process involves working with different types of opinions and solving conflicts between different approaches to present financial results and transactions. The author believes that this flexibility facilitates manipulation and deception. These activities performed by unscrupulous members lead to what we call creative accounting.
- based on his experience in the field, Terry Smith, an investment analyst, states, in *Accounting for growth*, that much of the apparent growth in the 1980s was more of a "hands-on game" than real economic growth.
- from the point of view of an academician, Kamal Naser defines creative accounting, in *Creative financial accounting: its nature and use*, as a transformation of financial accounting information from what it really is, in what it wants to represent, taking advantage of existing rules or ignoring some of them.

There are four different interpretations, from four different perspectives. Yet, closely analyzed, there are two common elements: describing the incidence of creative accounting as common and seeing it as a lying and unwanted practice (Amat et al. 1995, pp.4–5)

Regarding creative accounting techniques, Amat and Gowthorpe (2004, pp.7–8) show that the potential to use creative accounting techniques lies in six areas: the flexibility of regulations, the lack of regulations, the existence of management opportunities for future prospects, the timing of certain transactions, the use of artificial transactions, and the reclassification and disclosure of financial information. Stolowy (Feleagă 1996, p.148) divides the creative accounting techniques, according to the pursued objectives, into three types: techniques with impact on the income measurement, techniques with impact on cash-flows, and techniques with impact on the balance sheet. Jones (2011a, pp.44–45) also proposes five *strategies* around which creative techniques revolve: revenue growth, expenditure reduction, asset value increase, debt reduction, and cash flow increase.

Whether we are talking about manipulating earnings (in the form of growth or minimizing them), smoothing them to eliminate fluctuations, or balancing financial statements, there is always a reason why managers choose this path (Ciocan 2017, p.453). Jones (2011, p.31) states that, in a perfect world, there is no reason to call for creative accounting or fraud: the results would be excellent, the bonuses and the price of the shares would be high, and the financial operations would be in line with both the managerial and users' expectations. But we are not perfect, the world we live in is far from perfection and accounting is not an exception to this rule.

The appeal to creative techniques must be justified and among the most often cited reasons found in the literature, we find: the possibility of obtaining certain tax benefits, the access to loans or other similar facilities, meeting the expectations of the stakeholders, maintaining the price of shares, thus reassuring investors of the well being of the entity, positioning the entity favorably in less favorable times, etc. (Ciocan 2017, p.453). As a rule, those who engage in these practices are expecting certain benefits, rewards from them. Mulford and Cominskey (2002, p.4) present a series of rewards that fall into four major categories:

- share price effects (higher share prices, reduced share price volatility, increased corporate valuation, lower cost of capital, increased value of stock options);

- borrowing cost effects (improved credit quality, higher debt rating, lower borrowing costs, less stringent financial covenants);
- bonus plan effects (increased profit-based bonuses);
- political cost effects (decreased regulations, avoidance of higher taxes).

Jones identifies three broad categories of reasons for managers to justify recourse to these techniques and detail them as presented in Table 1

*Table no. 1 Reasons that justify manager's recourse to creative accounting*

<b>Category</b>	<b>Motive</b>	<b>Explanation</b>
<b>Personal Reasons</b>	Increased salaries	In some cases, managers' salaries are conditioned by the achievement of certain goals or results, which causes them to resort to these techniques.
	Bonuses	Usually bonuses are conditioned on certain results, in which case managers are drawn to modify them for their own interest.
	Shares and Share Options	This reason is cited most often in countries with strong capital markets, like the United Kingdom or the United States. There is a directly proportional relationship between profit and the price of shares, which makes a high profit company to also have a good price for its shares and one with weak profits to be disadvantaged from this point of view. In this case, managers are attracted to use creative accounting to achieve a high profit and thus a good price for the shares.
	Job security	Managers also look for job security. The question which arises is: „Why should I be at risk of losing my job if there is a possibility of arranging the results according to the investors' expectations?“
	Personal satisfaction	In order to explain this reason, Jones brings into question human nature. It is in our nature to expect gratitude, honor, and appreciation. Managers are also people, and self-esteem often prevents them from reporting the real situation of a company and exposing them to criticism, thus resorting to creative accounting techniques.
<b>Market Expectations</b>	Compliance with the expectations of financial analysts	In addition to annual reports, there are quarterly reports and in some cases some additional information on future results. Based on past results, current information and some factors, financial analysts predict a certain level for future earnings, and if for some reason these projections do not occur, stock prices may be affected. For managers who are paid according to the share price it is a disadvantage that can be prevented by using creative accounting.
	Profit Smoothing	Long-term strategy to maintain consistent earnings is also a reason for applying creative accounting techniques. A company with fluctuating results will be considered more risky and will give the impression that is poorly managed, while one with consistent results will provide certainty to investors.
	Trends	Starting from the premise „if everybody does it so can I“, some managers use these techniques to be in trend with other managers who use them.
<b>Special Circumstances</b>	Manage Gearing and Borrowing	Companies often borrow money, for which loan contracts are concluded. Most of the times in these contracts there are clauses that imply the stability of some economic and financial indicators or results that, once violated, bring the company into the situation of paying penalties or even immediately reimbursing the credit. By maintaining contractual parameters within the limits, using creative accounting when it is not otherwise possible, managers keep the company away from possible penalties or even more severe cases of economic destabilization caused by reimbursement of a loan before the deadline set by contract.
	New situations	There are mainly two moments considered in this context: when a company is listed for the first time on the Stock Exchange and when a company wants to raise more money through a share issue. In both cases, creative accounting is used to make the company's results look better than they really are.

Category	Motive	Explanation
	Mergers and acquisitions	In this case there are two points of view: the one of the bidder and the one of the target. From the perspective of the bidder, a good set of results will allow the bid to be made from a position of strength with a high price of shares. Referring to the target company, the bidder will have to pay more, if the reported income reaches a certain level.
	New management team	When the leadership of a new company changes, management tends to blame old managers for all the poor results. A so-called "big bath" technique is adopted, whereby poor performance will be made even worse by allowing managers to start from a low performance and increase future results.
	Waiting for the good times	There are situations when a company is very weak, but has expectations for future periods. Through certain creative accounting techniques, these companies avoid delisting from the stock market.
	Believing that current regulations are incorrect	A fairly rare case is when the managers want to give a true and fair view, but believe that current regulations prevent this from happening. Thus, they believe that, by adopting a more liberal, more creative way of keeping the books, they will be able to deliver the fair view.
	Decrease regulatory visibility	Some companies such as those dealing with oil processing, water distribution, telecommunications, and other activities that could be subject to government intervention should not stand out with huge profits; the creative accounting techniques are used in this case to decrease the reported results.
	It is not illegal so why shouldn't we use creative accounting?	A final reason is that creative accounting is not illegal. This reason is more of an incentive than a purpose. Therefore, as managers are not doing anything wrong, why shouldn't they use creative accounting? This is a perfectly legitimate argument, even though it is not necessarily following the spirit of the regulations. The fact that they may believe others are also adopting creative accounting reinforces this argument.

Source: Own processing after Incentives for creative accounting and sometimes fraud, (M. Jones 2011b, p.33)

Analyzing the Table 1, we can observe that the reasons can be splitted in two: personal and the ones related to promoting the company. In the eyes of the accountants, creative accounting based on explicit motives of self-interest can attract more disapproval than where the motivation was to promote the company.

Following Jones's reasons, we can observe that these can be invoked especially in countries with a predominantly Anglo-Saxon culture, where the financing of companies' activities is mostly made through capital markets and are is „disconnected” from taxation. Because the accounting field is subject to normalization, there are differences when it comes to continental countries. The strong connection between accounting and taxation is one of the major differences that can be observed in this context. Taxation is, therefore, a factor contributing to the use of creative accounting techniques, given that taxable profit is calculated on the basis of accounting reports (Amat et al. 1999, p.120). If we determine the reasons why creative accounting can be used, we must also take into account its impact on the actors involved in the life of an economic entity. For this purpose we present in table no. 2 the potential gains and losses for all those involved in business life.

Table no. 2 Potential losses and gains for actors involved in the life of an economic entity

Gains	Losses
<b>Managers</b>	
Keeping their job; Reducing the cost of capital; Managing their remuneration; Minimizing the income tax; Improving the relationship with creditors, investors and employees; Declaring and paying steady dividends; Presenting constant results (income) from one period to another; Well passing of the official examination; Respecting debts covenants	Their job Their reputation

Gains	Losses
<b>Existing shareholders</b>	
Increasing their wealth; Increasing the market value of their shares; Reducing the cost of capital; Controlling employees' claims	Confidence in the market
<b>Existing bondholders</b>	
Increase the market value of their shares Controlling employees claims	Wealth transfer to the actual shareholders
<b>Employees</b>	
Keeping their jobs; Increasing their remuneration, especially in the case of profit share payable to employees	Their jobs due to bankruptcies
<b>Suppliers</b>	
Keeping their clients	Money owned due to bankruptcies
<b>Clients</b>	
Providing continuous services; Respecting warranties	Services interrupted; Warranty not honored
<b>State</b>	
Tax to collect; Jobs for the people	No more tax to collect Expenses with the unemployed
<b>Financial creditors</b>	
Repayment of the loans	Money due to bankruptcies
<b>Society</b>	
Jobs; Wealth for the economic environment	Jobs lost as a result of bankruptcies

Source: Own processing after (Stolowy & Breton 2004, pp.41–42)

As we can see in table no.2, we cannot talk only about benefits for those involved, especially those accountable with the entity's management. However, the list of benefits is visibly longer and more attractive, which is why managers are tempted to use these techniques in order to build the desired image of the company's results.

### 3. Conclusions

Even if it involves risks such as losing their job or even worse, losing their reputation, creative accounting practices remain attractive for managers. Starting from the premise „I'm too good to be caught”, managers choose to position themselves favorably most of the time. Often the choice is a simple one (the smallest evil): either they lose their jobs, being penalized by stakeholders for poor management, or they lose their jobs if they are found to use creative accounting techniques. Detection of such techniques involves advanced specialized knowledge from those who examine the financial statements, but there is a small risk of being observed by investors, who often do not possess such knowledge. Making understandability an enhancing characteristic of the accounting information helped this process, because information can be presented, even if it is not understood by all the users.

Another conclusion which can be drawn is related to the ethics of creative accounting: it is possible that, if the reasons or motivations in applying the creative techniques are related to promoting the company and not to self-interest, the thin line between ethical and unethical behavior to be blurred? This is a question to be answered in future research.

Regardless of the reasons given by the entity's management, the use of these techniques should not be used under the auspices of „purpose excuse the means” as they reduce the reliability of accounting information.

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## The Fiscal Councils – Independent Fiscal Institutions for Ensuring Fiscal Discipline

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### Abstract

*Ensuring the sustainability of public finances can only be achieved through substantial and relevant analysis and evaluation of the problems faced by the fiscal and budgetary fields. Thus, through independent tax institutions, based on opinions and recommendations issued, can be identified those decisions designed to ensure a responsible fiscal and budgetary policy. Without claiming an exhaustive approach, through this article we will identify basic principles of Fiscal Councils, the main features of the Fiscal Councils from the IMF member states and we will try to highlight the best practices. By identifying best practices, we will highlight the role of Fiscal Councils in the prudent management of public financial resources and fiscal and budgetary risks.*

**Key words:** fiscal council, fiscal discipline, fiscal performance, fiscal rules

**J.E.L. classification:** E02, E61, H11, H68

### 1. Introduction

Fiscal Councils are independent fiscal institutions with the aim of preparing macroeconomic forecasts for drafting the public budget, monitoring of fiscal performance and issuing opinions on fiscal and budgetary area (European Commission, 2017). Although these institutions are not decision-making authorities, the opinions offered and the evidence provided gives them a very important role in development of fiscal and budgetary policies and in ensuring the sustainability of public finances (Kopits, 2011).

The specialized literature offers a number of studies and research that highlight the importance of Fiscal Councils and their best practices, taking into account the achieved actions. In this regard, the following are noteworthy: also called fiscal watchdogs, the Fiscal Councils contribute significantly to strengthening fiscal discipline and to the flexibility of tax policies based on numerical rules (Calmfors and Wren-Lewis, 2011, p. 649); the way of operation and organization, tasks and duties regulated by law, as well as own-initiative actions are the main coordinates of Fiscal Councils, with a significant impact on fiscal discipline, since they can function as both commitment devices and signaling tools (Debrun and Kumar, 2007, p. 479); the effectiveness of actions taken by Fiscal Councils is demonstrated by increased the fiscal performance and the predictability of macroeconomic and budgetary forecasts (Debrun and Kinda, 2016); without having a direct leverage in managing fiscal and budgetary policy, Fiscal Councils can help strengthen the relationship between the state and taxpayers by explaining how fiscal and budgetary macro decisions work and what is their impact on the short, medium and long term (Beetsma and Debrun, 2016); the constant monitoring of numerical tax rules by Fiscal Councils contributes significantly to identifying the determinants of the budget balance, so that the efficiency and effectiveness of each tax rule can be quantified (Maltritz and Wüste, 2015, p. 222); transparency, responsibility, professionalism and resistance to political change are the key elements for the efficiency and effectiveness of a Fiscal Council (Beetsma, Debrun and Sloof, 2017); the impact of the recent economic crisis on fiscal and budgetary field has led many states to consider as a major priority for an effective governance the creating a framework of fiscal responsibility and fiscal discipline, in which the Fiscal Councils have the fundamental purpose to reduce the risk of

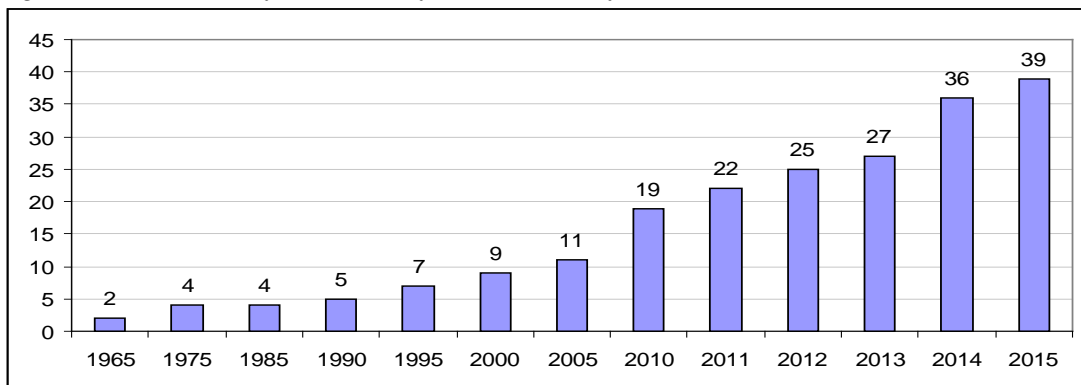
irresponsible fiscal policies (Dziemianowicz, 2014, p. 59).

Analysis of budgetary and fiscal status of each state and identifying the factors of influence, implies the existence of bodies meant to contribute to the consolidation of the fiscal-budgetary performance, the improvement of the macroeconomic indicators. In this regard, independent tax institutions have an important role to play, implicitly the Fiscal Councils.

## 2. Basic principles of Fiscal Councils

Since numerical fiscal rules and Fiscal Councils are institutional solutions to a credible fiscal policy (Debrun and Kinda, 2016), the number of Fiscal Councils has increased significantly over the last period, as can be seen from Fig. no. 1 (IMF, 2017).

Figure no. 1. Evolution of the number of Fiscal Councils for IMF Member States



Source: (IMF, 2017)

Effectiveness of the functions and attributions of independent fiscal institutions can be achieved by observing basic principles. Thus, relying on critical observations and analysis, on examples of good practice, The Council of the Organization for Economic Cooperation and Development adopted on February 13, 2014 a number of 22 principles for independent fiscal institutions, grouped in 9 categories, respectively: local ownership, independence and non-partisanship, mandate, resources, relationship with the legislature, access to information, transparency, communications, external evaluation (OECD, 2014).

Based on the information provided by the IMF Fiscal Council Dataset (IMF, 2017), it is noted that all IMF member states' Fiscal Councils respect these principles, but there are significant differences in the implementation of the principles, taking into account, on the one hand, the local and national dimension of public finances, and on the other hand, the economic, social and fiscal factors that influence fiscal and budgetary policy.

Without presenting all the principles on which the organization and functioning of the Fiscal Councils should be based, we consider the following to be worthwhile (OECD, 2014):

- The efficiency and stability of an independent tax institution requires consensus across the political spectrum of the state in which it operates, and the actions taken must be based on national economic and social conditions, as well as on factors of influence of these conditions, without copying models from other countries. The role, structure, basic features, constraints and specific protection for the independent fiscal institution must be set according to the legal framework, the political system, the fiscal and budgetary system and the culture of the state in which it operates.

- The premises for the success of an independent fiscal institution are independence and non-partisanship, so that opinions issued to be characterized by objectivity and professional excellence. In order to choose the members of an independent fiscal institution, professional merits, academic experience and proven skills in public finance should always be taken into account without reference to political affiliation.

- Specific legislation must refer the mandate of an independent fiscal institution, as well as the elements regarding to the reports and analyzes produced (type, application form, deadline for elaboration). In accordance with its mandate, independent fiscal institution should prepare reports

and analyzes on its own initiative, and on the basis of autonomy, can set its work schedule. Tasks of an independent tax institution during his term of office must provide clear links to the budgetary process, including: short, medium and long-term economic and fiscal projections; analyzes of the executive budget; monitoring compliance with tax rules and rules; analyzes of the impact of legislative measures; analytical studies on fiscal and budgetary issues, etc.

- Because, the legislatures fulfill critical functions on responsibility in the budget process, the calendar of the budgetary procedure must allow for the independent fiscal institution enough time to perform the analysis necessary for parliamentary activity. Responsibility of the institution is reflected by: presenting timely reports so that they can be taken into account in parliamentary debates; the participation of the institution's management in the budget committee to provide pertinent answers to the issues raised by committee members; the parliamentary control of the institution's budget; the involvement of the budget committee in the appointment of the members of the institution.

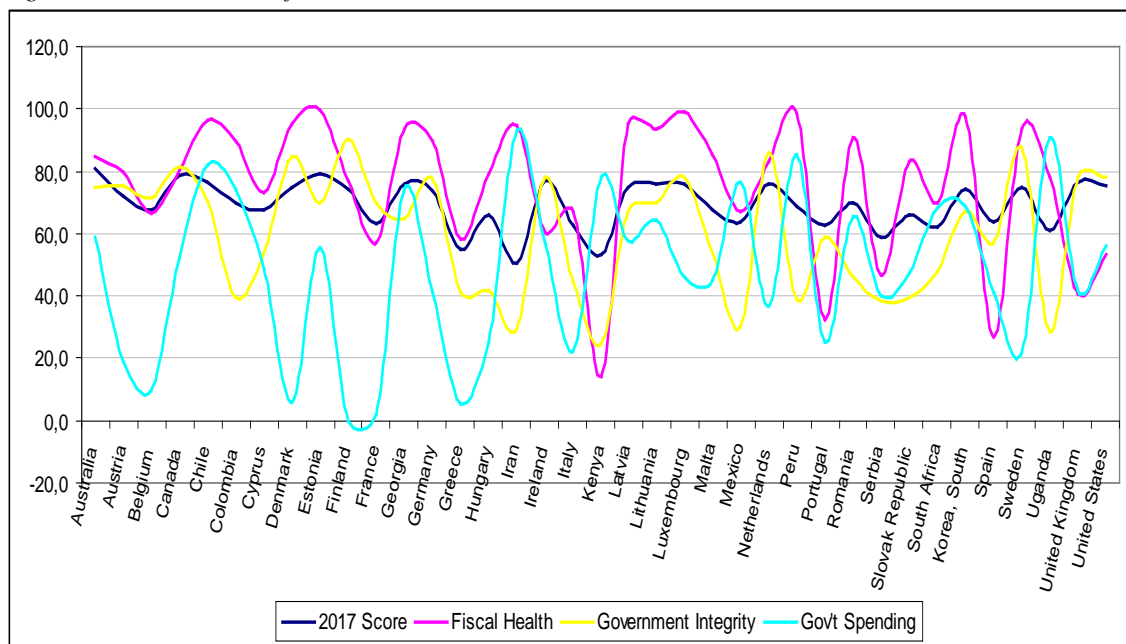
- Promoting transparency in public finance must be the key objective of the independent fiscal institution, transparency of all actions taken thus increasing credibility. The studies and the reports issued by the independent fiscal institution, including the data and methodology used, must be made available to the public. The data used in the reports and analyzes of the independent tax institution must be formally established in order to ensure consistency with government reports and analyzes. The independent fiscal institution should issue analyzes, reports and opinions on economic, fiscal and budgetary issues, during his tenure, in own name.

### 3. Essential characteristics of the Fiscal Councils from the IMF member states

The level of macroeconomic indicators that characterize the sustainability of public finances and fiscal discipline in each IMF Member State varies considerably from one country to another, which requires substantial and pertinent analyzes to improve these indicators.

As can be seen from Fig. no. 2, if the economic freedom index (Heritage, 2017) has in most IMF Member States values over 60 (except Iran, Kenya, Greece, Serbia), which shows that 89.15% of states are in positive areas (40.54 % - moderately free; 45.95% - mostly free; 2.7% - free), the fiscal and budgetary components of this index vary greatly from one state to another.

Figure no. 2. 2017 Index of Economic Freedom in the IMF Member States

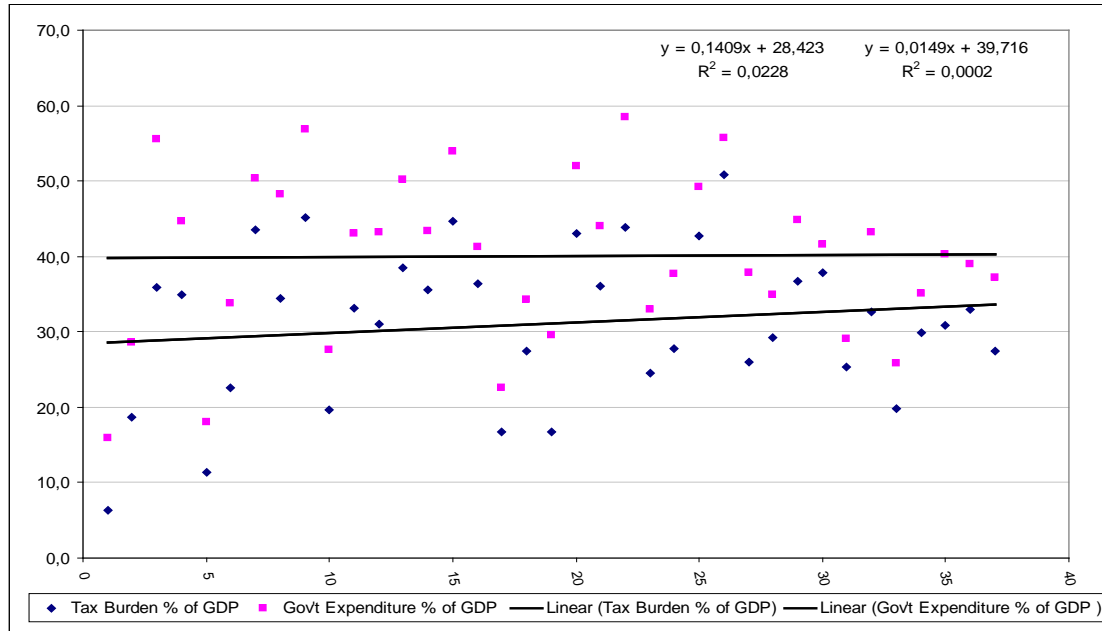


Source: (Heritage, 2017)



Significant differences between IMF member states also exist from the perspective of the relationship between the fiscal burden as% of GDP and government expenditure as% of GDP (Heritage, 2017), as can be seen from Fig. no. 3.

Figure no. 3. The relationship between the fiscal burden as % of GDP and government expenditure as % of GDP in the IMF Member States



Source: (Heritage, 2017)

All these variations of fiscal and budgetary indicators, requires analyzes made by the Fiscal Councils and issuing opinions, worthy of consideration for a prudent management of fiscal and budgetary policy.

So, according to The IMF Fiscal Council Dataset (IMF, 2017) regarding to Fiscal Councils, the following are observed:

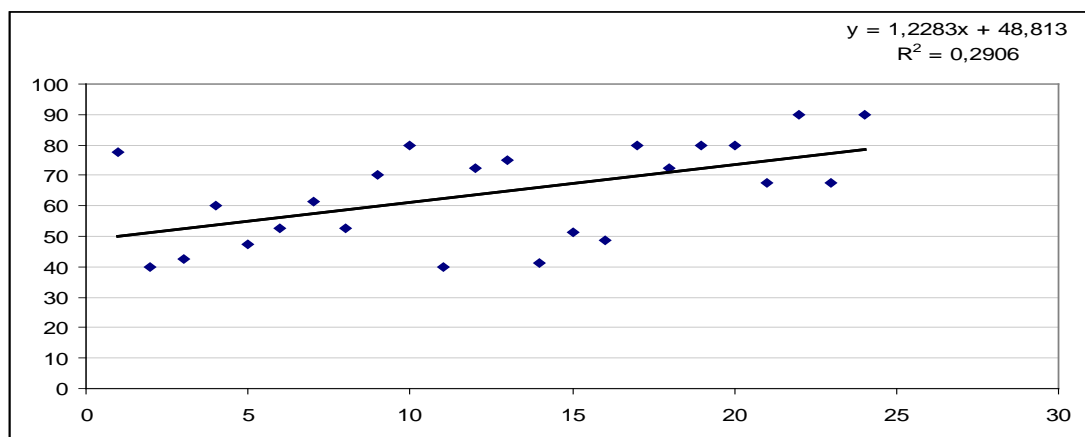
- At the end of 2016, there are 39 institutions identified as Fiscal Councils among the IMF member states, the oldest being in Netherlands (1945), Denmark (1962), Austria (1970) and United States (1974), and the most recent in Lithuania, Malta and Peru (2015).
- In most IMF Member States there is only one Fiscal Council, except Belgium (High Council of Finance - the Public Sector Borrowing Section and Federal Planning Bureau) and the Netherlands (Netherlands Bureau for Economic Policy Analysis and Raad van State).
- For most Fiscal Councils, the coverage of the actions undertaken is represented by general government, with the exception of the Australia, Chile, Colombia, Georgia, Kenya, Mexico and United States Tax Councils, where the area of coverage is represented by the central government and the Portuguese Tax Council, where the area of coverage is represented by general government, state companies, concessions and purchasing power parity.
  - All Fiscal Councils carry out positive analyzes and only 18 perform normative analyzes.
  - The concern of the Fiscal Councils for ex-ante analyzes is found in all IMF Member States, with reference to: forecast assessment, recommendations, long-term sustainability, consistency with objectives (beyond fiscal rules), costing of measures, monitoring of fiscal rules. Most ex-ante analyzes are carried out for: consistency with objectives (beyond fiscal rules) - 79% of the Fiscal Councils carry out such analyzes; forecast assessment – 77% of the Fiscal Councils carry out such analyzes; monitoring of Fiscal Rules – 72% of the Fiscal Councils carry out such analyzes.
  - Ex-post analysis is often found in most Fiscal Councils, with the exception of the Chile, Luxembourg, Mexico, Romania, South Africa and Uganda Fiscal Councils.
  - Austria's Fiscal Advisory Council and High Council of Finance - Public Sector Borrowing Section from Belgium are the only Fiscal Councils which have attributions for fiscal policy coordination.

- In Belgium, Denmark, Finland, Georgia, Greece, Mexico, Netherlands and Romania, Fiscal councils have a mandate beyond fiscal policy.
- The Federal Planning Bureau of Belgium and the Netherlands Bureau for Economic Policy Analysis are the only institutions required to make forecasts on fiscal and budgetary indicators, these forecasts being used in the budgetary process.
- Legislation from Belgium, Cyprus, Estonia, Finland, Latvia, Portugal, Spain and United Kingdom provides or the government's obligation to use the Fiscal Council's forecasts in the budget process, or the justification of deviations from the Fiscal Council's forecasts when the government uses its own forecasts in the budget process.
- The importance attached to the opinions of the Fiscal Council is visible through the official obligation of the governments of Austria, Cyprus, Finland, France, Georgia, Hungary, Iran, Italy, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, Portugal, Romania, Serbia, Spain and the United Kingdom to consult the Fiscal Councils during the budget process.
- The Hungarian Fiscal Council is the only institution that can block the budget process.

At EU level, based on information provided by independent fiscal institutions, regarding the organization, the executed works and the good practices, is determined the Scope Index of Fiscal Institutions - SIFI, taking into account: the attributions of the fiscal institutions and the way of completion of each assignment (monitoring of fiscal policy and rules, macroeconomic/budgetary forecasting, policy costing, analysis of long-run sustainability of public finances, promotion of fiscal transparency, normative recommendations on fiscal policy; the coefficient of legal effect (the attribution is stipulated in the legal provisions; the attribution is the own initiative of the fiscal institution and is exercised regularly; the attribution is the own initiative of the fiscal institution and is exercised sporadically); the share associated with each assignment (European Commission, 2015).

As can be seen from Fig. no. 4, for the Fiscal Councils of the EU and the IMF Member States, at the level of 2015, the Scope Index of Fiscal Institutions – SIFI has registered values between 40 - High Council of Finance - Public Sector of Belgium; Fiscal Council of Hungary and 90 - Independent Authority of Fiscal Responsibility of Spain; Office for Budget Responsibility of United Kingdom.

Figure no. 4. The distribution of the Scope Index of Fiscal Institutions in EU and IMF Member States in 2015



Source: (European Commission, 2015).

The success of any independent tax institution can be found, insofar as its actions aim at collaborating with other specialized institutions. Thus, the exchange of information on good practice (Comanicu, 2014, p.14) should focus on elements such as: clear specification of the mission and objectives (what forecasts are produced, how the forecasts are used to judge the performance of the government, how the long-term performance of public finances is assessed); clear definition of the areas and sub-domains of analysis and research (e.g. macroeconomics, labor market, social policies, international competition, structural changes); presentation of research results by types of reports and areas of interest (annual reports, expert reports, special reports);

making special forecasts (e.g. medium term forecasts at the beginning of each election cycle).

#### 4. Conclusions

In all studies performed, Fiscal Councils must take into account that tax analysis can no longer be carried out in isolation, and the modalities must always be adapted to the progress made in all areas, because taxation is the key element for global development, mobilization of internal resources and good financial governance (OECD, 2014).

Ensuring fiscal and budgetary performance can only be achieved if the performance of each component of this field is ensured, and if all those involved in the adoption and implementation of fiscal and budgetary decisions will take into account efficiency, effectiveness, transparency and prudence.

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## Communication Tool in Central Banking. Increasing its Role for the New Reality

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### Abstract

*The central banks started to give more importance to their communication with the public even before the onset of the global financial crisis, but the use of this complementary instrument of monetary policy intensified significantly both during the period of the financial crisis, and during the post-crisis period. While the communication policy was essential during the financial crisis, it is no less important in the post-crisis period characterized by several challenges and by the increasing uncertainty about the evolution of the economy. The paper shows the way in which the central banks consider their communication policy with the public and with the market during the post-crisis period, highlighting that the challenges facing recently these institutions require refining and expanding the communication instruments.*

**Key words:** complementary instrument of monetary policy, communication policy, financial crisis

**J.E.L. classification:** E52, E58

### 1. Introduction

In order to maximize their discretionary authority, the central banks did not communicate very detailed their intentions at first, but they subsequently noticed that the anticipation of the public reactions was one of the main instruments that can improve the efficiency of the central bank's policy. Therefore, the decisions and communication with the public of an increasing number of central banks are data dependent.

An efficient communication policy presumes a high level of central bank credibility, while sending messages that can be poorly understood or messages that leave room for interpretations can yield adverse effects and unexpected reactions of the market – not just "surprises" from the policy, but also from the market. By communication, the central bank provides essential information to the market and public, orienting their further decisions.

Most central banks publications focus not just on the description of the problems pertaining to the monetary policy, but also provide data and analysis on the overall economic situation, including the international evolutions (Criste and Lupu, 2015a).

Due to credibility reasons and assumed responsibility, the central banks cannot make statements that are not true, but they can be selective about the information they issue, particularly when the objectives of the central bank are not fully in line with those of the market actors, or even with those of the government.

Besides the classical ways of communication (press releases and press conferences) and the newer ones (forward guidance), the central banks are frequently communicating with the market through price and production predictions in order to reduce the uncertainty and the possible errors that the public can make regarding the forecasts and the interpretation of the future policies.

## 2. Forward Guidance – communication of the perspectives and intentions of the central bank

At the beginning of the post-crisis period, the monetary authorities from the advanced countries aggressively reduced the interest rate for the monetary policy and used several nonconventional measures to correct the financial problems and to support the economy (Criste and Lupu, 2015b). Gradually, the unconventional measures expanded the operational monetary policy framework as the monetary policy interest rate area of manoeuvre narrowed (zero lower bound).

Initially, these unconventional measures were quantitative easing (changes of central bank portfolio size) and qualitative easing (changes in the central bank portfolio structure). The qualitative easing was meant to support certain segments of the asset market that were not efficiently functioning, while the quantitative easing relied on the idea that the increase of the central bank balance itself will support the aggregate demand. The efficacy of these measures is not yet sufficiently clear, which is why many central banks introduced a further unconventional instrument – the forward guidance. It relies mostly on a more intense communication of the central bank with the market in order to form market expectations about maintaining lower interest rates for a specific period, which reduced the medium- and long-term interest rates.

The forward guidance presumes a high level of central bank's credibility and a higher specialization in quantitative evaluations and prognosis of the macroeconomic and financial variables. De Graeve et al (2014) highlight that the effects of using this instrument, measured by event studies, of decreasing the nominal interest rate in the long run, should be interpreted with caution, since forward guidance announcements are many times combined with other unconventional measures of monetary policy.

During the post-crisis period, some central banks used different forms of forward guidance, under zero lower bound conditions (Charbonneau and Rennison, 2015). For instance, the Bank of Canada and the Fed maintained the interest rate at a specific level for a period of time (see Table no. 1), while other central banks (Bank of England and also Fed) preferred to maintain the interest rate at a particular level until a specific event occurred or until meeting specific conditions.

Table no. 1 Forward guidance measures adopted during the post-crisis period

Central banks	Type of forward guidance	Sent messages
<b>Federal Reserve</b>	• Time contingent, qualitative	• 2009: the interest rate will be kept at low level for a longer period
	• Time contingent, quantitative	• 2011: the interest rate will be kept at low level at least until mid-2013
	• Condition dependent, qualitative	• 2012: the interest rate will be maintained at least until unemployment remains above 6.5%; the forecast inflation for the next 1-2 years must not exceed 2.5%; the long-term inflationist expectations continue to be properly anchored • 2013: the interest rate will be maintained even after unemployment decreases below 6.5%, particularly if the forecast inflation continues to be below the 2% target
<b>Bank of Canada</b>	• Time contingent, quantitative	• 2009: maintaining the interest rate at 0.25 pp up to a specific date, depending on the perspective of inflation
<b>European Central Bank</b>	• Time contingent, quantitative	• 2013: the key-interest rate is expected to be maintained or reduced for a long period of time
<b>Czech National Bank</b>	• Time contingent, quantitative	• 2013: maintaining the interest rate at minim level (technically, zero) for a long period, until the pressure of inflation increases significantly
<b>Bank of Japan</b>	• Condition dependent, qualitative	• 2012: maintaining the interest rate at zero until the objective of annual 2% Consumer Price Index target becomes "visible"
	• Condition dependent, quantitative	• 2013: accomplishing the price stability objective, with 2% target, as soon as possible, in a time horizon of 2 years

Central banks	Type of forward guidance	Sent messages
<b>Bank of England</b>	• Condition dependent, qualitative	• 2013: the interest rate will be maintained until unemployment falls to 7%. The purchase of assets might increase as long as the unemployment rate is above 7%. The stock of purchased assets will be maintained until the 7% target is reached.
	• Condition dependent, quantitative	• 2014: unemployment must decrease further before increasing the interest rate
<b>Sveriges Bank</b>	• Time contingent, quantitative	• 2009-2010: maintain the interest rate at a low level until the fall of 2010
	• Publishing the forecasts for the interest rate	• 2013-2014: supplying guiding information on the evolution of the interest rate

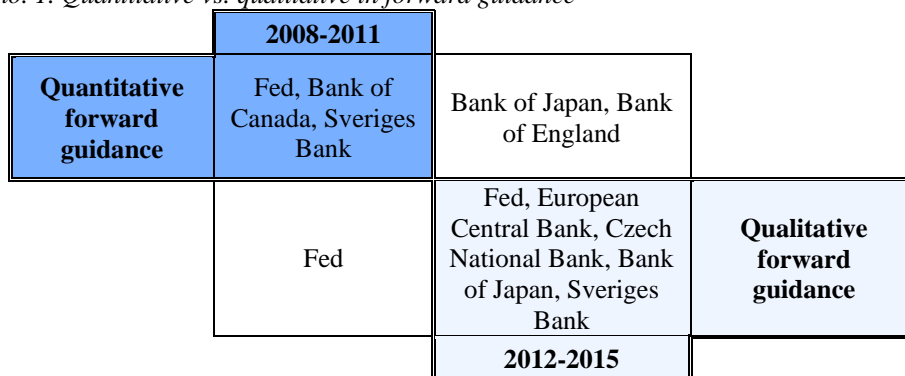
Source: processing the information from the annual reports of the central banks

The *forward guidance* policy tends to become a standard and permanent instrument of the monetary policy framework during the post-crisis period, particularly for those central banks which have inflation targeting as nominal anchor and which publish the expected path of the interest rate for the subsequent period. However, the mechanism of transmitting this decision is, yet, not fully studied and known.

### 3. Qualitative, time contingent and state contingent

The quantitative type of forward guidance measures such as time contingent or set interest rate levels (use of numeric information) dominated in the early post-crisis period, while the qualitative measures predominated in the second part, after 2013 (see Figure no. 1), associating adjectives such as “stable”, “significant”, “considerable”, to some macroeconomic variables, what reflects the cautionary conduit of the central banks under conditions of incertitude.

Figure no. 1. Quantitative vs. qualitative in forward guidance



Source: authors' representation, based on central banks reports

From another perspective, the forward guidance policy may be communicated either specifying a particular time horizon to maintain the monetary policy interest rate (the so-called time contingent forward guidance), or considering the economic situation and the evolution of the macroeconomic variables in the subsequent period. The central banks which use forward guidance intensified the latter variant in the post-crisis period, after 2012, the stress shifting thus from the concrete approach, with specified moments in time, to a data dependent approach depending on the evolution of particular macroeconomic variables (see Figure no. 2).



Figure no. 2. Time contingent forward guidance vs. data dependent forward guidance during the post-crisis period

	<b>2008-2011</b>		
<b>Time contingent forward guidance</b>	Fed, Bank of Canada, Sveriges Bank	European Central Bank, Czech National Bank	
		Fed, Bank of Japan, Sveriges Bank, Bank of England	<b>Data dependent forward guidance</b>
		<b>2012-2015</b>	

Source: authors' representation, based on central banks reports

The credible formulation of the forward guidance announcements, showing their contingency, based on the forecast economic situation, designs a more stable and predictable macroeconomic environment, thus avoiding risks generated by the "uncertain" environment, while the communication policy of the central bank might be more readily applicable, focusing on the evolution of the medium- and long-term nominal interest rates.

#### 4. Publication of the forecasted interest rate trajectory

The communication policy becomes important for the future because it is the instrument used to communicate the prognoses developed by the central bank on the macroeconomic and financial variables.

The prognoses regarding the macroeconomic variables are a useful instrument for the monetary policy decisions, as the central bank considers more and more the perspective and anticipation. The reason behind the forward looking monetary policy and behind monitoring the medium-term evolution of the macroeconomic variables is given by the existence of lags in the transmission of the monetary policy decisions towards the real economy. The central bank cannot influence the inflation and the current production, but can identify the paths of the variables in the future, thus directing the expectations of the public towards specific targets. Hence, the medium-term prognoses on the interest rate and inflation are many times the basis for the formulation of the monetary policy strategy, and their publication contributes to the anchoring of the public expectations (Hubert, 2011), essential element in the accomplishment of the proposed objectives.

Starting from the monitored objectives and understanding the mechanism of transmission that connects the actions and the objectives, the interest rate forecasts give to the central bank's management the possibility to identify the best path for this instrument of monetary policy. The publication of such forecasts gives more information that contribute to a better alignment of the financial assets' yields with the policy objectives and clarify the concrete implications of the data contingent policy. There are empiric studies (Alichi et al., 2015) supporting the idea that the financial markets adapted better to the post-crisis realities in the countries where the central bank publishes the forecast path of the interest rate using an adequate prognosis pattern.

One of the central banks that recently adopted such a measure is the Czech National Bank that, in 2008, started to publish the forecast path of the interest rate, with intervals of trust. This is a sophisticated form of forward guidance, in agreement with the basic principles of inflation targeting, which increases the transparency of the monetary policy and gives a more concrete variant (based on figures) for the expected interest rate evolution. Such decision came not just because of the post-crisis challenges such as reaching the minimum interest rate level, but also because this central bank is rather advanced in matter of macroeconomic prognoses (Criste, 2015).

Irrespective of the objective targeted by the central bank, the speed of reaction and adaptation to unexpected events is one of the factors that increase the quality of the communication policy. The fast reaction of the central bank, which essentially has a discretionary character, aims to limit the systematic risks from the whole economy. Those who develop the policy try to respond as well as possible, and in a predictable manner, to the events that occur within the macroeconomic

environment (shocks), so that the decisions that are taken are not, by themselves, sources of instability.

Compared to the unconventional instrument of data dependent forward guidance, which operates on the basis of the principle that the new information or future shocks can ignore or cancel these monetary policy decisions, the publishing of the predicted interest rate path for the basic scenario and of alternative prognoses, send a more clear signal regarding the "pattern" of the future evolutions that might lead to deviations in the monetary policy interest rate from the minimal level of interest.

## 5. Final remarks

The incertitude characteristic to the post-crisis period requires the continuous improvement of the communication policy of the central bank, not just by selecting the used language and the formulation of the message to be transmitted, but also by refining the instrument which make prognoses for the macroeconomic variables and by thoroughly understanding the economic phenomena and realities which are submitted permanently to new challenges.

Besides the classical ways, the forward guidance type of communication plays an increasingly important role, as well as the communication of prognoses for the different macroeconomic variables (inflation, potential GDP, endogenous interest rate, etc.). The forward guidance policy seems to become a standard and permanent instrument of the monetary policy framework during the post-crisis period, with a predominant qualitative data dependent forward guidance, which reflects the cautionary conduit of the central banks under conditions of incertitude, as well as the interest for higher speed of reaction to emerging events.

Through the levers of the communication policy, the central bank sends messages to the public in order to guide its reactions in a particular way to the new evolutions, and the prognoses of the macroeconomic variables is a useful guide to this.

A more refined communication of the central bank's intentions presumes improving the technical prognosis mechanism, whose precondition is enhancing the professional quality of the staff having this specialization. The central banks which have advanced prognosis instruments and which publish prognoses for the endogenous interest rate may be benchmarks for the other central banks.

The communication policy, that also presumes a high level of central bank credibility, is a "delicate" instrument to use, however, given the potential risk that poorly understood and interpreted messages cause unexpected market reactions. This observation shows the importance of generating "surprises" not just on the side of the monetary policy towards the market, but vice versa too, on the side of the market towards the monetary policy.

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## **The Correlation between the Efficiency of Using the Assets and the Capitals and the Risks in what the Romanian Energy Industry is Concerned**

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### **Abstract**

*The research paper enlarges upon the analysis of the existing connections between the assets and capitals efficiency indicators and the risks, by applying it to 11 companies from the Romanian energy industry. The period of time necessary for the analysis is the interval between 2012 and 2013, where 2012 is used only when it comes to determining the exploitation and financial risk coefficients.*

*The indicators expressing the efficiency of using the company's assets and capitals are rendered with the help of the economic profitability ratio in two ways, by using the permanent capital and all the assets, and the financial profitability ratio.*

**Key words:** efficiency, economic profitability, financial profitability, exploitation risk, financial risk

**J.E.L. classification:** M1

### **1. Introduction**

The energy industry, one of Romania's most significant industries, has been continuously developing both in Europe, as well as in our country, having a great significance in what the gross domestic product of the country is concerned.

The time after 2008 has been even for this industry a difficult period, which has proved to be extremely hard to overcome, this being mirrored also by the results' indicators of the companies belonging to this branch of economy.

The analysis that we have conducted in the present research paper starts with the year 2012, a year known for being one when the majority of the sectors have registered a economic-financial boom, also having as reference 11 companies belonging to the energy industry in our country: Transelectrica, Conpet Ploiești, Electrica SA, Oil Terminal SA, OMV Petrom, Petrolelexportimport SA, Rompetrol Rafinare, Rompetrol Well Services, Nuclearelectrica SA, SNGN Romgaz and SNTGN Transgaz.

In what the structure is concerned, the paper has four parts, the first part consisting of terminology and concepts, where we have defined the profitability indicators used in order to determine the efficiency of using the assets and the capitals; the second part comprises the presentation of a research methodology used for the case study; the case study and the final part, when conclusions are drawn as a result of an analysis of the correlation between the proposed indicators.

## 2. Concepts and terminology

Among the concepts and terminology used throughout the paper, the following can be found: economic profitability ratio, financial profitability ratio, exploitation risk, exploitation risk coefficient, financial risk and financial risk coefficient.

The economic profitability ratio is defined by the specialists as being: "an indicator expressing the global efficiency of the financial and material resources assigned to the entire activity developed by the company" (Siminica,2010, p.162).

Another definition of the economic profitability ratio refers to the concept of performance concerning the company's activity: "the economic profitability ratio quantifies all the performances of a company's activity, regardless of the financing method and of the fiscal system" (Buse et al,2011,p.185).

The authors Buglea A and Lala Popa I. come up with a series of ways with the help of which the economic profitability ratio can be calculated (Buglea,2009,p.173): the first method implies connecting the gross profit to the company's total capital, in this case the profitability ratio mirroring the way the assets are being used, the second method refers to connecting the gross profit to the company's permanent capital, but this time we are bringing into discussion the way of tracking how the permanent capital is being used. Apart from these two possibilities, the authors also come up with the possibility of calculating the two ratios by applying the gross excess from the exploitation or the company's exploitation profit, only that this time the efficiency will be tracked strictly related to the exploitation activity. In the present paper we have referred to the first two possibilities mentioned above.

The second profitability ratio used is the financial profitability ratio, which has been calculated by the specialists as being the connection between the net profit and the company's actual capital.

With the help of the two ratios we have been able to track the efficiency concerning the use of the enterprises' capitals and assets belonging to the Romanian energy industry, the financial profitability ratio mirroring at the same time also the capacity of achieving profit for these companies' stakeholders.

Other indicators that have been used are the indicators reflecting the risk level in what enterprises are concerned. We are thus provided with exploitation risk indicators and financial risk indicators.

The exploitation risk is defined as being: "any inauspicious event that might negatively influence the operational activity, regardless of the place where it has appeared, of the amount and type of damages occasioned" (Carciumaru,2013,p.26). Therefore starting from this definition, the exploitation risk is strongly connected to the financial risk.

The financial risk, the second category of risks that have been brought into discussion, which are connected to the company's mode of funding is defined as being: "the part referring to the variability of the own capitals' efficiency ratio because of the indebtedness" (Brezeanu, 2003, p.413).

## 3. The research methodology

In order to develop the present research paper, we have followed a series of steps, which are: gathering informations, selecting them, processing them, determining the established indicators and coming up with scenarios regarding the correlation level between the indicators.

We have chosen the energy industry due to the importance of this sector for the Romanian economy, considering the total turnover of the sector, the sector's contribution to the gross domestic product, the total number of employees etc.

In order to have a representative analysis of the sector, we have selected a number of 11 societies having the turnover over the sector's average, considering them as being the leading ones on the Romanian energy market.

The data selection has occurred with the help of the website bvb.ro, by checking each society's webpage, and the processing of the data has been made by using the program Excel, and in the end we have come up with a series of scenarios with the help of the program S.P.S.S.

Before starting the case study, we shall proceed with an analysis of the indicators mentioned above and dissected with regard to the exploitation and financial risks, their level being presented in the following table:

Table no. 1 The level of the profitability ratios and of the exploitation and financial lever coefficients

Year	Companies	Economic profitability ratio (Gross profit/Kper)	Economic profitability ratio (Gross profit/At)	Rf	ELC	FLC
2013	Transelectrica	6,75%	4,66%	7,73%	-17,89	2,41
	Conpet Ploiesti	6,31%	5,68%	4,81%	0,02	17,93
	Electrica SA	3,59%	3,08%	4,72%	-0,66	-0,65
	Oil Terminal SA	0,39%	0,32%	0,00%	468,25	-3,61
	OMV Petrom	20,67%	14,61%	18,50%	-0,23	15,32
	Petrolexportimport SA	0,94%	0,48%	2,39%	-0,98	-2,04
	Rompetrol Rafinare	-9,26%	-3,04%	-9,26%	-5,12	-1,04
	Rompetrol Well Services	20,00%	17,92%	17,16%	2,14	0,85
	Nuclearelectrica SA	4,72%	4,43%	4,67%	11,55	10,97
	SNGN Romgaz	14,00%	12,42%	10,71%	-13,17	1,14
	SNTGN Transgaz	13,88%	10,93%	10,89%	3,97	0,03
2014	Transelectrica	12,05%	7,94%	12,81%	5,39	1,02
	Conpet Ploiesti	8,89%	8,01%	7,11%	11,07	0,77
	Electrica SA	7,13%	6,96%	6,96%	242,84	-25,92
	Oil Terminal SA	0,50%	0,48%	0,14%	-4,61	0,00
	OMV Petrom	9,28%	5,91%	6,98%	6,21	1,16
	Petrolexportimport SA	-3,71%	-1,77%	-10,22%	0,65	7,57
	Rompetrol Rafinare	-91,34%	-17,17%	-91,34%	-2,10	-12,21
	Rompetrol Well Services	6,41%	5,84%	5,49%	3,44	0,95
	Nuclearelectrica SA	1,68%	1,57%	1,78%	8,75	1,11
	SNGN Romgaz	17,63%	16,07%	14,52%	3,16	0,86
	SNTGN Transgaz	17,93%	12,92%	15,10%	1,16	4,83
2015	Transelectrica	11,79%	8,22%	12,09%	0,30	0,36
	Conpet Ploiesti	9,84%	9,01%	8,27%	15,90	0,85
	Electrica SA	7,66%	7,46%	7,66%	9,94	0,02
	Oil Terminal SA	2,18%	2,02%	1,38%	7,80	4,15
	OMV Petrom	-2,66%	-1,71%	-2,51%	8,45	0,93
	Petrolexportimport SA	149,19%	-146,82%	113,15%	334,19	-1,14
	Rompetrol Rafinare	-9,20%	-2,18%	6,67%	13,51	0,29
	Rompetrol Well Services	-22,80%	-21,18%	-23,49%	10,66	0,94
	Nuclearelectrica SA	1,99%	1,87%	1,99%	3,34	-1,40
	SNGN Romgaz	14,60%	13,39%	12,32%	1,74	0,89
	SNTGN Transgaz	16,66%	12,29%	13,69%	0,40	3,01
2016	Transelectrica	9,33%	6,39%	8,92%	2,43	1,13
	Conpet Ploiesti	10,54%	9,72%	8,99%	201,83	0,85
	Electrica SA	6,98%	6,83%	6,79%	-10,88	-0,20
	Oil Terminal SA	4,08%	3,81%	3,49%	6,39	1,56
	OMV Petrom	3,91%	2,56%	3,49%	21,00	1,37
	Petrolexportimport SA	7,86%	-8,34%	6,02%	3,28	0,95
	Rompetrol Rafinare	1,66%	0,39%	5,28%	3,00	0,53
	Rompetrol Well Services	-4,74%	-4,35%	-4,84%	1,99	1,07
	Nuclearelectrica SA	1,49%	1,40%	1,50%	0,08	51,31
	SNGN Romgaz	12,77%	11,39%	10,59%	0,77	1,17
	SNTGN Transgaz	18,27%	13,45%	15,49%	1,68	1,21

Source: table generated with the help of Excel by processing the financial-accounting data

#### 4. Case study

Taking into consideration the values introduced in the previous table, we have been able to come up by using the Pearson correlation coefficient with an analysis of the level of correlation between the indicators reflecting the degree of efficiency when using the company's capital and assets and the risk level that has been taken by the companies belonging to the energy industry in our country.

The correlation level can be spotted in the following table:

*Table no. 2 The correlation between the economic profitability ratio, the financial profitability ratio and the exploitation and financial lever coefficients*

##### Correlations

		Economic profitability ratio (Gross profit/At)	Rf	Economic profitability ratio (Gross profit/Kper)	FLC	ELC
Economic profitability ratio (Gross profit/Kper)	Pearson Correlation	-,591**	,985**	1	,081	,791**
	Sig. (2-tailed)	,000	,000		,600	,009
	Years	44	44	44	44	44
Economic profitability ratio (Gross profit/At)	Pearson Correlation	1	-,497**	-,591**	,076	,681**
	Sig. (2-tailed)		,001	,000	,625	,001
	Years	44	44	44	44	44
Rf	Pearson Correlation	-,497**	1	,985**	,842	,353*
	Sig. (2-tailed)	,001		,000	,527	,019
	Years	44	44	44	44	44

The results from the table above certify the existence of a strong correlation between the efficiency indicators of the assets and the capitals and the risks the enterprise is exposed to in what the exploitation, as well as the financial activity are concerned.

#### 5. Conclusions

Putting together such a research paper has allowed us to come to the following conclusions:

- taking into consideration the profitability indicators in 2016, only the trading company Rompetrol Well Services has registered a negative score, the situation being an inauspicious one;
- in what the exploitation and financial lever coefficients are concerned, there is a single company that has registered a negative score of these coefficients, but it cannot be asserted that the company Conpet has a very good situation by considering the results, on the contrary, according to the specialists of this field of activity, a high score of these two coefficients can trigger an alarm;
- regarding the analysis of the correlation, we have obtained a strong direct correlation between the economic profitability ratio and the exploitation lever coefficient, but also a strong correlation between the financial profitability ratio and the financial lever coefficient.

It can be consequently concluded that in what the energy industry is concerned there is a strong correlation between the indicators reflecting the efficiency of the use of the company's assets and capitals and the risks related to the two exploitation and financial levels.

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## Some Insights of Value-Added Tax Gap

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### Abstract

*This paper analyzes the Total Value-Added Tax Gap and its components for the Member States of the European Union: the Policy VAT Gap (which reflects VAT revenue losses due to the application of tax exemptions and reduced VAT rates) and the Compliance VAT Gap (that refers to losses in VAT receipts arising from tax evasion, insolvency and bankruptcy).*

**Key words:** tax, gap, fraud

**J.E.L. classification:** H25, H26

### 1. Introduction

VAT is one of the most important revenue sources for the EU Member States (it is also a resource for the EU budget). A constant European concern is to identify and combat tax fraud in the area of VAT. In this respect, it is important to quantify the VAT Gap, which also contains a tax fraud component.

The estimation of VAT Gap is found in studies such as those produced by the Center for Social and Economic Research (2014-2017) and Reckon LLP (2009) - for EU countries, HMRC (2014) and Thackray (2012) - for the United Kingdom.

CASE (2017) quantifies the VAT Gap (in absolute and relative terms) for the 2011-2015 time period, for the EU-28 member states.

Reckon LLP (2009) measures and analyzes the VAT Gap (in absolute terms and as a share of theoretical VAT liability) in the EU-25 member states other than Cyprus over the 2000-2006 period.

The first part of the article delimits the notions of theoretical, potential and effective VAT, and then the calculation methods for the different types of value-added tax gap (in absolute and relative terms) are presented. The practical part of our study analyzes the 2015 data for the EU-28 member states, from the point of view of the total VAT gap and its components: compliance gap and policy gap (rate gap and exemption gap).

### 2. Theoretical, potential and effective VAT

Theoretical or ideal VAT ( $VAT_t$ ) represents the tax that is obtained by applying a single (standard) VAT rate to the entire final consumption. National accounts express final consumption in market prices (including VAT); furthermore, the theoretical tax may be estimated by applying the legal standard rate ( $t$ ) to the net final consumption, estimated as the difference between gross final consumption (FC) and actual VAT receipts ( $VAT_e$ ), this particular methodology being similar to the one found in OECD (2014).

$$VAT_t = (FC - VAT_e) \times t$$

CASE (2015) estimates net final consumption by deducting effective VAT receipts from the gross final consumption, except for VAT receipts from investments made by exempt sectors that do not directly enter within the production of final goods.

The potential tax refers to the tax that is obtained by applying the legal (standard and reduced) rates on the actual tax base:

$$VAT_p = \sum_i^n VAT_{pi} = \sum_i^n B_i \times t_i$$

where:

$VAT_{pi}$  = the potential tax for the  $i$  rate;

$B_i$  = the tax base for  $i$  rate;

$t_i$  =  $i$  VAT rate;

$i = \overline{1, n}$ ;

$n$  = the number of applied rates.

The tax base of VAT may be expressed as follows (Cuceu et al, 2012, p.300):

$$B = CF_x + CI_{xn} + I_{xn}$$

where:

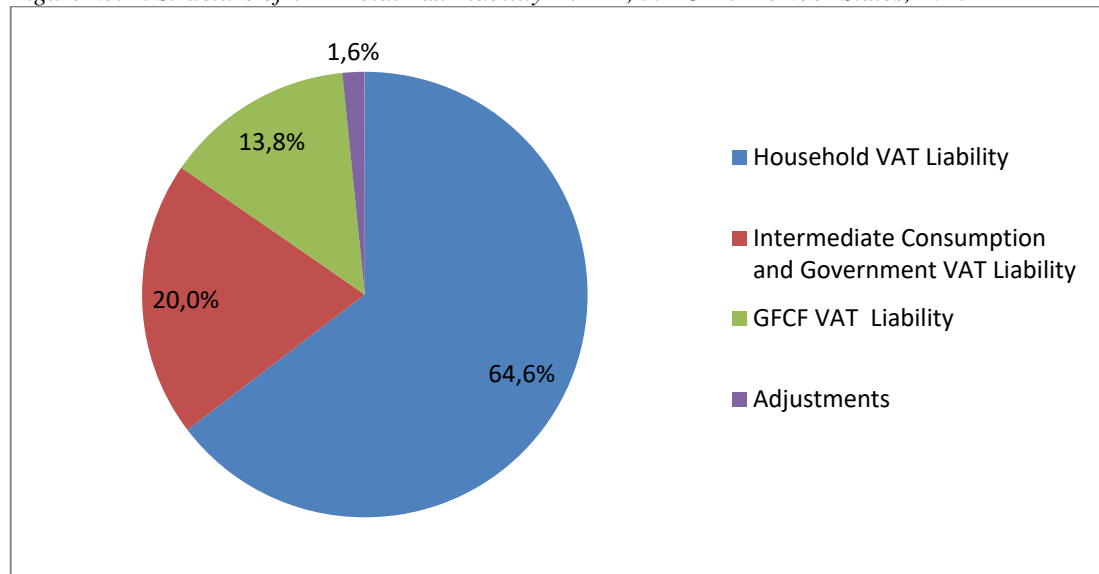
$CF_x$  = the final consumption of taxed goods and services;

$CI_{xn}$  = the intermediary taxed consumption for which the tax cannot be deducted;

$I_{xn}$  = the taxed investments for which the taxes cannot be deducted.

The VAT for household consumption represents only about 65% of the total potential tax. A fairly large share of the total potential tax is held by the tax for the intermediate consumption and that of the government (around 20%), then that of the Gross Fixed Capital Formation (GFCF) (around 14%).

Figure no. 1. Structure of VAT Total Tax Liability - VTTL, in EU-28 Member States, 2015



Source: based on Center for Social and Economic Research (CASE), 2017

The potential tax includes the tax related to the final taxable consumption, but also the tax related to some investment and intermediate consumption components (taxed effectively); on the other hand, the effective tax is the part of the potential tax that is actually collected.

The difference between the theoretical tax and the effectively collected tax is determined by the following factors (Cuceu & Văidean, 2014, p.474-475):

- the difference between the theoretical tax base (the final consumption) and the effective tax base (a part of the final consumption is not taxed, while a part of the intermediary consumption and a part of the investments are taxed);
- the difference between the standard rate (maximum legal rate) and the effective VAT rate (the average VAT rates applied within a certain country, weighted by the tax base for each rate);
- the existing gap between the consumption moment and the moment of collecting its related tax;
- the gap between the moment of collecting the tax and the moment of its repayment;
- the proportion of to be collected VAT suspended because of insolvencies and bankruptcies;
- VAT evasion.

### 3. The VAT Gap in absolute and relative terms

In absolute terms, the Total VAT Gap may be determined as a difference between theoretical VAT ( $VAT_t$ ) and effectively collected VAT ( $VAT_e$ ):

$$Total\ Gap = VAT_t - VAT_e$$

Keen (2013) deals with the decomposition of the C-efficiency Ratio (VAT efficiency based on consumption) in two parts: the compliance gap and the policy gap. Thus, the Total VAT Gap could be expressed by adding up the Policy VAT Gap (indicating VAT revenue losses caused by the use of exemptions and reduced VAT rates) and the Compliance VAT Gap (due to tax evasion, but also due to some other causes such as insolvency, bankruptcies, legal tax optimization):

$$Total\ Gap = Policy\ Gap + Compliance\ Gap$$

$$Policy\ Gap = VAT_t - VAT_p$$

$$Compliance\ Gap = VAT_p - VAT_e$$

where  $VAT_p$  = potential value added tax.

In relative terms, the Total VAT Gap and its components may be expressed as follows:

$$Total\ Gap\ (as\ a\ percent\ of\ VAT_t) = \frac{VAT_t - VAT_e}{VAT_t} = 1 - \frac{VAT_e}{VAT_t}$$

$$Policy\ Gap\ (as\ a\ percent\ of\ VAT_t) = \frac{VAT_t - VAT_p}{VAT_t} = 1 - \frac{VAT_p}{VAT_t}$$

$$Compliance\ Gap\ (as\ a\ percent\ of\ VAT_p) = \frac{VAT_p - VAT_e}{VAT_p} = 1 - \frac{VAT_e}{VAT_p}$$

The relationship between the Total VAT Gap and its components (expressed in relative terms) will be the following:

$$Total\ Gap = 1 - \frac{VAT_p}{VAT_t} \times \frac{VAT_e}{VAT_p} = 1 - (1 - Policy\ Gap)(1 - Compliance\ Gap)$$

The following determinations may be demonstrated:

$$Policy\ Gap = \frac{Total\_Gap - Compliance\_Gap}{1 - Compliance\_Gap}$$

$$Compliance\ Gap = \frac{Total\_Gap - Policy\_Gap}{1 - Policy\_Gap}$$

These relationships are similar to the ones found by CASE (2014, 2015).

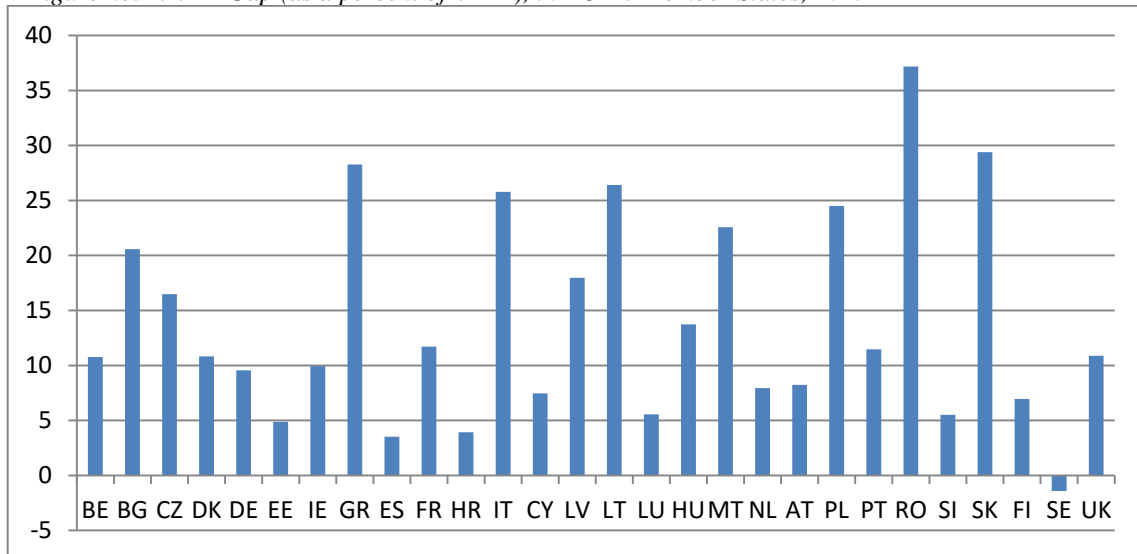
The Policy Gap may be decomposed within a Rate Gap (due to the use of reduced tax rates) and an Exemption Gap (due to the use of exemptions).

In CASE (2017), the *VAT Gap* concept (in absolute terms) has been measured as the difference between the potential VAT (the VAT Total Tax Liability - *VTTL* – which is the theoretical tax



liability according to the law, estimated using the ESA10 national accounts) and effective VAT (actual revenue collected). So, this study considers the *VAT Gap* notion as the so called Compliance Gap, and not the Total Gap.

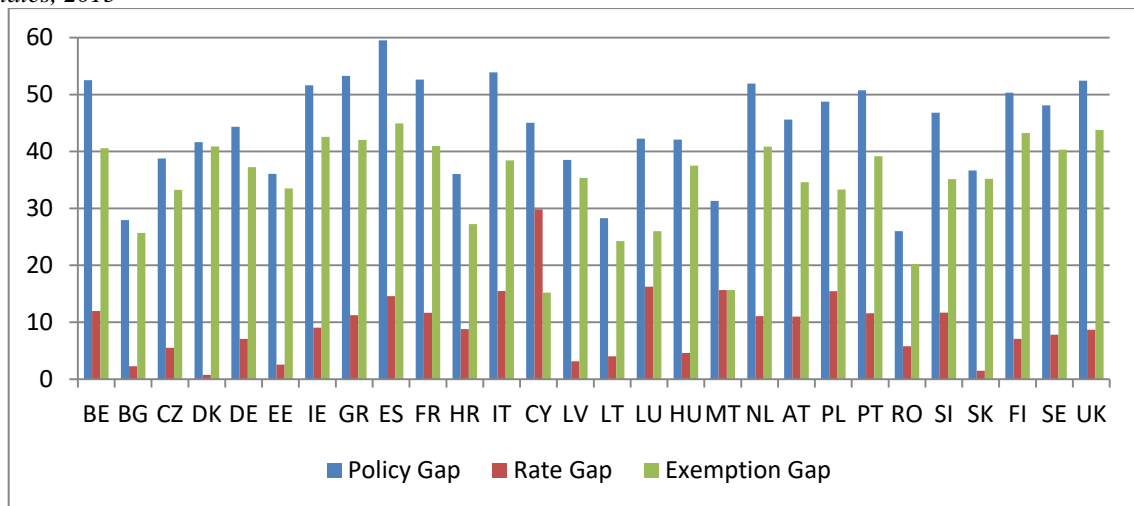
Figure no. 2. *VAT Gap (as a percent of VTTL), in EU-28 Member States, 2015*



Source: based on Center for Social and Economic Research (CASE), 2017

In 2015, the largest VAT gaps (in relative terms) were observed in Romania (37.18%), Slovakia (29.39%) and Greece (28.27%), and the smallest VAT gaps (in relative terms) were registered in Sweden (-1.42%), the EU average being 12.77%.

Figure no. 3. *Policy Gap, Rate Gap and Exemption Gap (as a percent of VAT<sub>t</sub>) in EU-28 Member States, 2015*

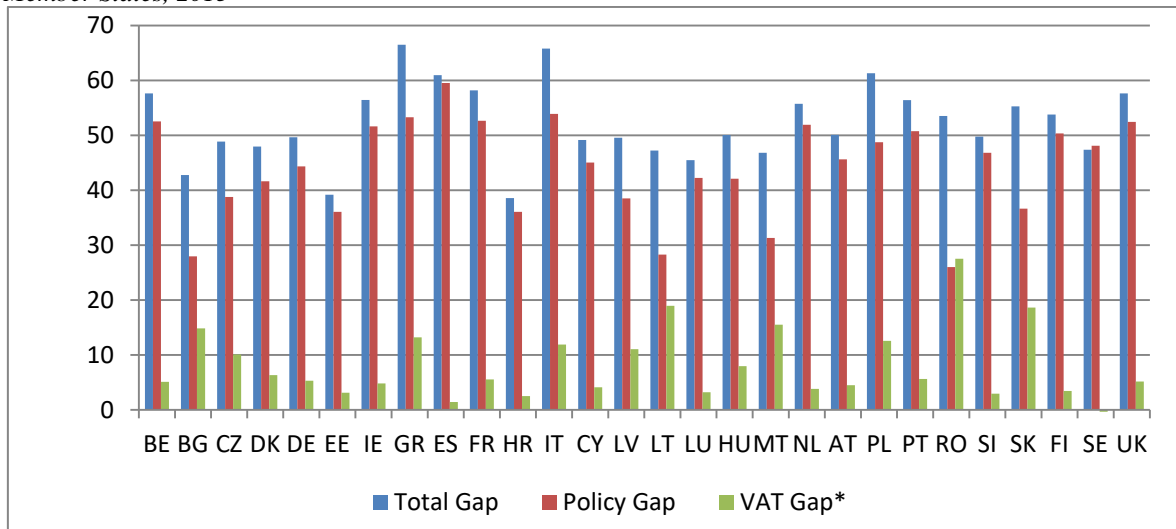


Source: based on Center for Social and Economic Research (CASE), 2017

The largest Policy gaps (in relative terms) were observed in 2015 in Spain (59.53%) and Italy (53.9%), while the smallest Policy gaps (in relative terms) were registered in Romania (25.99%), the EU average being 44.04%. Romania was the one and only country for which the Policy Gap was smaller than the VAT Gap (in relative terms).

Cyprus registered the highest Rate Gap (29.83%), but it also registered the lowest Exemption Gap (15.20%), being the only country for which the Rate Gap exceeds the Exemption Gap. The countries with the lowest Rate Gap were Denmark (0.75%) (it does not apply reduced tax rates) and Slovakia (1.47%) (it applies a reduced tax rate for very few goods and services). The highest Exemption gaps were registered in Spain (44.93%), UK (43.77%) and Finland (43.25%).

Figure no. 4. Total Gap, Policy Gap and VAT Gap\* (VAT as a percent of theoretical VAT) in EU-28 Member States, 2015



Source: based on Center for Social and Economic Research (CASE), 2017

The largest Total gaps (in relative terms) were observed in Greece (66.49%) and Italy (65.78%), while the smallest Total gaps (in relative terms) were registered in Croatia (38.56%) and Estonia (39.19%).

The difference between Total Gap (in relative terms) and Policy Gap (in relative terms) is represented by the weight of the VAT Gap in the theoretical VAT (VAT Gap\*). The highest VAT Gap\* was registered in Romania (27.52%), and the lowest one in Sweden (-0.74%). Romania was the one and only EU member state for which the 2015 VAT Gap\* in relative terms (27.52%) exceeded the Policy Gap in relative terms (25.99%); basically, Romania was the only EU country for which the VAT Gap in absolute terms exceeded the Policy Gap in absolute terms.

#### 4. Conclusions

The Total VAT Gap may be decomposed within a Policy Gap and a Compliance Gap (these can be expressed in both absolute and relative terms). The Policy Gap has two components: Rate Gap (which is due to the use of reduced tax rates) and Exemption Gap (due to tax exemptions). Quantification of the Compliance VAT Gap is important because it also includes a tax fraud component. Romania stands out among the other EU Member States because of its largest Compliance VAT Gap in relative terms (meaning that it registers serious problems in the field of tax collection), but also through its lowest Policy Gap (in relative terms); nevertheless, Romania finds itself among the countries with the largest share of VAT Gap within the theoretical VAT.

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## Direct Taxation of Certain Activities in Romania: Specific Tax

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### Abstract

*Direct taxes are one important instrument for governments to influence economic activities, but also to reduce tax evasion. In 2017, Romanian regulators introduced new lump-sum tax on certain activities. The aim was to impose an annual payment for companies that activate in tourism and food sector, regardless of their financial situation. Profit is no longer taken into account in these cases, but some particular variables.*

*Present paper aims to detail the way that specific tax is calculated, given the different sectors that are affected by the new legislation.*

**Key words:** legislation, lump-sum tax, annual specific tax

**J.E.L. classification:** H20

### 1. Introduction

Ideally, a country's tax system should be neutral with regard to its impact on business decisions (OECD, 2015, p.13). Still, governments around the world adopt fiscal measures that inevitably advantage some sectors and disadvantage others. As a consequence, companies may profit from different taxation legislation.

Lump-sum tax is a pre-established, invariable tax. It is not a profit-based tax and it affects both large and small companies, but places greater relative burden on the latter (Mankiw et al, 2009, p.149). For such reasons, it is rarely preferred and only for limited periods.

On the other hand, such type of tax provides scope for improving efficiency, equity and simplicity of tax system (Peichl, 2014, p.9). Moreover, it is an instrument of combating the widespread phenomenon of tax evasion (Paliu-Popa et al., 2010, p. 80). Hence, given that some economic sectors may be inclined to tax evasion and control is difficult to administer, governments may advocate lump-sum tax. This is the case of Romania.

Starting with January 1st 2017, a new type of lump-sum tax has been introduced in Romanian legislation, called specific tax. This new type of tax addresses to companies that activate in specific domains, respectively the ones that activate in tourism sector, restaurants and food sector. Practically, a new tax system has been introduced by the Law no.170/2016, which imposes calculation of annual specific tax for targeted sectors by taking into account certain variables, such as rank of locality where company is located, total area for targeted activities or seasonality. As a consequence, financial results of such companies are no longer taken into account when calculating tax.

### 2. Lump-sum tax in Romania

According to Law no.170/2016, specific tax on certain activities is owed by companies that cumulatively fulfill two conditions: have included within constitutive acts at least one of the targeted CAEN codes as main or secondary activity and are not in liquidation. Targeted CAEN codes are:

- 5510 - Hotels and other similar accommodation facilities
- 5520 - Accommodation facilities for vacations and short term periods
- 5530 - Parks for caravans, camping and camps
- 5590 - Other accommodation services
- 5610 - Restaurants
- 5621 - Catering
- 5629 - Other food services
- 5630 - Bars and other beverages serving activities.

Thus, all companies that develop such activities must pay specific tax, except microenterprises. It is important to note that starting with November 2017, firms having a maximum income of euro 1 million are considered microenterprises. Consequently, a smaller number of companies are liable for annual specific tax payment. Originally, such companies were not exempted from payment.

As Law no.170/2016 regulates, specific tax varies accordingly to the area where companies are located, stating that calculation of this new tax is based on area categories within Romania, grouped as follows:

- Bucharest and 8 important poles, respectively Brasov, Cluj-Napoca, Constanta, Craiova, Iasi, Ploiesti, Sibiu, Timisoara;
- municipality and cities, other than ones above;
- national resorts;
- villages and local resorts.

Annual specific tax is determined for each operating unit, by using specific formula, and resulted sum is considered tax liability. Given type of activity, formula is established distinctively for restaurants, bars and catering services and for accommodation services, as Figure no.1 shows.

Table no.1 Formulas used in calculus of specific tax

Type of activity	Formula
Accommodation	$k \cdot (\text{no. of accommodation seats})$
Bars	$k \cdot (x + y \cdot q) \cdot z$ , where $k = \text{Lei } 900$ and $q = 0.9$
Restaurants and catering services	$k \cdot (x + y \cdot q) \cdot z$ , where $k = \text{Lei } 1400$ and $q = 0.9$

Source: (Romanian Parliament's Law no.170/2016, 2016, pp.6-9)

Note that:

$k$  = standard tax value;

$x$  = variable according to rank locality;

$y$  = variable according to commercial usable / serving / activity area;

$q$  = adjustment factor for technical unit space;

$z$  = seasonality coefficient.

According to Figure no.1, given restaurants or bars of same commercial usable area, location of their activity is main factor in establishing specific tax. This is highlighted by the fact that variable related to rank locality and seasonality coefficient decrease as location varies from Bucharest and the 8 poles mentioned above (Brasov, Cluj-Napoca, Constanta, Craiova, Iasi, Ploiesti, Sibiu, Timisoara) to villages and resorts. Hence, new legislation takes into account location potential, although such activities may not generate similar income.

Let's take, for example, the case of a restaurant of 125 square meters. As seen in Figure no.2, there are important differences between values of specific tax owed by restaurants located in different regions of Romania. Such disparities may lead to relocation and, on the medium term, may influence firm's investment decisions. Indeed, the effect of fiscal policies may transform a given jurisdiction into a more or less attractive one (Galletta et al., 2016, p.2).

Table no.2 Examples of specific tax calculus

Location	Annual specific tax for restaurants	Annual specific tax for bars
Constanta (zone A)	$1400 \cdot (15 + 29 \cdot 0.9) \cdot 0.45 = \text{Lei } 25893$	$900 \cdot (14 + 14 \cdot 0.9) \cdot 0.45 = \text{Lei } 10773$
Tulcea (zone A)	$1400 \cdot (13 + 29 \cdot 0.9) \cdot 0.35 = \text{Lei } 19159$	$900 \cdot (12.5 + 14 \cdot 0.9) \cdot 0.35 = \text{Lei } 7906.5$
Mamaia	$1400 \cdot (5 + 29 \cdot 0.9) \cdot 0.3 = \text{Lei } 13062$	$900 \cdot (2 + 14 \cdot 0.9) \cdot 0.3 = \text{Lei } 3942$
1 Mai	$1400 \cdot (3 + 29 \cdot 0.9) \cdot 0.1 = \text{Lei } 4074$	$900 \cdot (0.4 + 14 \cdot 0.9) \cdot 0.1 = \text{Lei } 1170$

Source: (Finances Minister's Order no.464/2016, 2016, pp. 1-10)

For accommodation units, annual specific tax is calculated given ranking and number of seats. Standard tax value (k) differs by accommodation ranking stated by certificate of classification. Seasonality is taken into consideration only for accommodation units located on the seashore, as in such cases, number of activity days is related to number of days in a year. Number of activity days is stated by operating license or classification certificate issued by specialized institutions.

The Implementing Rules of Law no.170/2016 state that companies within the tourism and catering sector which also carry out other types of economic activities must pay a mixed tax starting with January 1st 2018. Hence, mixed tax regime is established for mixed-activity companies as follows:

- specific tax for activities corresponding to the eight CAEN codes listed above;
- corporate income tax for other activities.

This is not classified as double taxation, as revenues related to specific tax are excluded from calculation of corporate income tax. Thus, for example, if a company which owns a hotel and a restaurant carries out other economic activities, such as car service and car wash, owes mixed tax, respectively a specific tax due to accommodation and food services it offers, but also corporate income tax (profit tax) due to car service and car wash services. Still, exemptions refer to micro-enterprises, so, in such cases, they are excluded from paying mixed tax.

In cases of temporary inactivity, closing down or other particular situations, regulators strictly specify how tax liability is established. Table no.3 resumes these particular situations.

Table no.3 Particular cases

Situation	Consequence
Company closes down within a year	Owes specific tax, determined by taking into account number of days of activity within year
Company loses operating license/certificate of classification	Owes corporate income tax starting with next semester
Company has reported temporarily inactivity to trade register	Does not owe annual specific tax starting with next semester
Period of inactivity ends	Owes tax starting with next semester

Source: (Romanian Parliament's Law no.170/2016, 2016, p.3)

### 3. Specific tax for resorts

Law no.170/2016 particularly distinguishes resorts, which include not only accommodation facilities, but recreation, wellness, restaurant and bar services. In such cases, companies must calculate and pay annual specific tax only for accommodation services. Still, if total number of accommodation seats exceeds total number of seats in restaurants and bars, annual specific tax is owed for the number of exceeding seats. This is determined by using formulas related to restaurant or bar activity, as seen in Table no.1.

In other words, a comparison must be made between these two ones, in order to establish which one is the biggest. Therefore, if number of seats corresponding to each type of food service is below number of accommodation seats, specific tax is calculated as mentioned above. In the latter case, if number of seats corresponding to each type of food service is bigger than number of accommodation seats, specific tax must be distinctively calculated for the exceeding number of seats, for type of activity related to this excess.

Let's take, for example, a resort in Mamaia which includes a 4 star hotel of 140 rooms and 280 accommodation seats, restaurant A of 180 square meters and 90 seats, restaurant B of 120 square meters and 60 seats and a bar of 80 square meters and 40 seats. In this case, specific tax is established by making following comparisons:

- number of hotel seats vs. number of seats in restaurants:  $280 > (90+60)$ ;
- number of seats in hotel vs. number of seats in bar:  $280 > 40$ .

In this case, number of seats in restaurants and bar is considered assigned to number of accommodation seats. Hence, resort has the following tax liability:

$$\text{Annual specific tax} = \text{Lei } 271 * 280 = \text{Lei } 75880.$$

Further, we will discuss the case of a resort in Poiana Brasov which includes a 5 star hotel of 110 rooms and 220 accommodations seats, restaurant X having 290 square meters and 145 seats, restaurant Y having 160 square meters and 80 seats, bar K having 80 square meters and 40 seats and bar L having 50 square meters and 25 seats. Annual specific tax is determined in this latter case as a sum of specific taxes, starting with same comparisons:

- number of hotel seats vs. number of seats in restaurants:  $220 < (145+80)$ ;
- number of seats in hotel vs. number of seats in bars:  $220 > (40+25)$ .

Given that there are 5 exceeding seats in restaurants, area for each of these seats must be determined, as follows:

$$\frac{\text{Total area of restaurants}}{\text{Total number of seats in restaurants}} = \frac{290+160}{145+80} = 2 \text{ square meters/seat.}$$

Hence, for 10 square meters, specific tax is calculated for restaurant activity:

$$\text{Annual specific tax for restaurants} = \text{Lei } 1400 * (5+2*0.9) * 0.3 = \text{Lei } 2856$$

$$\text{Annual specific tax for hotel} = \text{Lei } 448 * 220 = \text{Lei } 98560$$

$$\text{Total annual specific tax} = \text{Lei } 2856 + \text{Lei } 98560 = \text{Lei } 101416.$$

Resorts that offer tourists other additional services, apart from accommodation, are taxed according to specific tax rules if such services are included in the total price of package, as they represent resort's income. Contrarily, in case tourists and other clients are offered such services but are not included in total price package, the resulted income is subject of corporate income taxation. Such services include hairdresser, manicure, pedicure, parking.

#### 4. Conclusions

Changes in taxation system have major effects on companies' activity. Introduction of lump-sum taxes, although for limited periods, is obviously intended to generate benefits for state budgets. Apart from their quantifiable benefits, such taxes lead to several amendments of tax systems, as the ones that Romanian regulators targeted:

- simplification of tax calculation;
- increases in tax compliance;
- abatement of tax avoidance;
- reduction of tax evasion.

Still, Romania's recently designed specific tax had no ample effects on state budget (at the time of writing present article), as few companies within tourism and food sector became liable to such tax. This is because according to new legislation many firms became eligible as microenterprises. Consequently, we consider that future corroboration of legislation is necessary in order to benefit Romanian tax system.

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## Some Differences in the Budgetary Situation of the Local Authorities from Romania's "Centru" Region of Development

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### Abstract

*The important role of local authorities in regional and local development raise the necessity of local financial autonomy, necessary for local governments to develop services needed in their area of competence and to cooperate to other local communities from neighborhood to cover local or regional needs. The paper analyze, for the consolidated local budgets of the counties from Centru region of development, the evolution of some budgetary indicators to evidence the differences into the possibility of local authorities from the region to promote development and suggest some ways of increasing that involvement.*

**Keywords:** local budgets, budgetary indicators

**J.E.L. classification:** H70, H72

### 1. Introduction

Local governments contribute to the economic development of the community and the increase of quality of life of the citizens (Luger, 2007, p. 4; Bercu et. al., 2015, p. 67-68) or deal with the effects of the economic crisis (Pelinescu et. al., 2010, p.17). The involvement of the local governments needs financial resources, but also, in many cases, cooperation with other local authorities or with different other actors. European Union generated more support from European Commission for these cooperations in the last years (PLATFORMA, 2013, 26-33). Effective involvement of local governments into these cooperation agreements raises the question about the local financial autonomy necessary for sustaining development (Cigu, 2014, p. 44-51).

For Romania, 2007 was the year of country integration in the European Union, which gives the opportunity to access the structural funds, but in the period following that year the economic crisis hit the country and affected the economy, society and, as a consequence, the financial balance of the local authorities. Integration in the EU generated for Romania the necessity to institute the development regions. According with law no. 151/1998 (revised through law no. 315/2004), Romania was split in eight development regions, relatively similar in size, with the exception of Bucharest-Ilfov region (for more information on this, see Dornean, 2015, p. 147). The evolution of after 2007 was not in the sense of reducing the development gaps between the regions (Dornean, 2015, p. 152). Based on these, we analyze some of the imbalances between the local budgets of the local governments from the counties of the development region "Centru" in the period 2007-2016 to evidence the evolution of their capacity to involve in development and cooperation processes.

### 2. Literature review

In the European context, Cigu (2014, p. 47-51) argue that local financial autonomy is absolutely necessary to ensure local sustainable development. This is the prerequisite of the possibility of local authorities to be more flexible to the economic context and to the local needs by a more

effective use of revenues, along with more accountability of these authorities on the results of using their resources.

In the Romanian context, there are many papers dealing with the subject of financial autonomy of the local budgets (e.g. Dogariu, 2010; Matei and Manole, 2012; Andronic (Brătulescu), 2016) that concludes that the level of financial autonomy vary in different periods of time, at different levels of local governance or as a result of the decisions of the national government. One of these important decisions that affect the local financial autonomy is represented by the solutions adopted for balancing the local budgets. For Romania, Balalia and Afanase (2010, p.185-190) or Stoica (2015, p. 812-816) analyzed this aspect in correlation with regional or budgetary disparities. Analysis of the procedure for balancing the local budgets in Romania realized by Bunescu and Cristescu (2011, p. 203) suggest that "solving a local community problem depends on the available resources, the quality of financial management, but also on the collaboration between various government structures". In the local and/or regional development process, the cooperation between local communities in the neighborhood appears quite often. In this context, analyzing the capacity of the local governments from the same regional development to sustain development is important. At the best of our knowledge, such view of analysis was realized for Romania just by Bătrâncea et al. (2013,p. 846-855), for the local budgets in the northwest region.

### **3. Data and methods**

Data used are from the database of execution of local budgets revenues and expenditures offered by Ministry of Regional Development, Internal Administration and European Funds.

To analyze the budgetary imbalances, we studied the evolution of a set of indicators that evidence financial autonomy and the possibility of decisions of the local authorities.

The indicators used in our paper reflect the following aspects:

- the self-financing capacity (the degree of financial autonomy) of the local authorities, reflected by the ratio between own revenues of the budget of the county (region) and total budget revenues of the county (region). We used for this own revenues (as considered by the law (sf1), but also by excluding quotas and amounts from quotas deducted from income tax (sf2). Higher is the indicator, a greater proportion of the financial resources are available to be distributed by the own decision of the local authorities.

- the degree of covering the local expenditures based on the own incomes, reflected by the ratio between own revenues (considered in both approaches) of the budget of the county (region) and total budget expenditures of the county (region). A favorable situation is when the indicator is higher, reflecting the ability of local authorities to finance more of their needs by revenues over them local governments have the fully decision.

- the capacity of the local public authority to access non-reimbursable funds, seen as percentage ratio between revenues from non-reimbursable funds and total revenue of the local budgets;

- the rigidity of the expenditures, as the ratio between the personnel expenditures and total expenditures of the local budgets, reflects the lack of flexibility in distributing local public funds.

- the investment capacity, considered as the ratio between capital expenditures and total expenditures of the local budgets, is important for identifying the capacity and will of the local governments to solve future needs of the local communities.

### **4. Results and discussion**

The self-financing capacity (the degree of financial autonomy) of the local authorities for the counties of the development region "Centru" is reflected by data in table no. 1.

Table no.1 The self-financing capacity of the local authorities from the counties of the development region "Centru" between 2007 - 2016

Own rev./total rev.		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Alba	Sf1	35.28	37.03	36.00	36.54	39.09	36.90	38.90	40.69	34.05	41.53
	Sf2	14.43	11.96	11.38	12.87	15.26	13.64	14.77	15.26	12.34	14.96
Braşov	Sf1	57.03	58.27	54.04	56.38	52.89	57.53	58.73	55.98	56.08	59.70
	Sf2	24.63	22.10	21.13	22.78	22.55	25.05	25.16	23.22	22.41	23.21
Covasna	Sf1	34.41	32.74	34.65	35.31	37.34	36.27	38.15	34.59	28.31	36.54
	Sf2	13.23	11.35	11.68	13.14	14.88	14.69	16.77	15.04	11.70	15.45
Harghita	Sf1	29.76	32.03	33.74	33.50	34.13	35.75	34.42	30.01	27.95	32.34
	Sf2	12.53	11.76	11.84	13.22	15.21	15.79	15.31	13.18	11.55	13.38
Mureş	Sf1	42.02	44.54	42.28	44.80	44.17	42.96	40.96	42.31	43.40	46.74
	Sf2	16.56	11.77	13.65	16.10	17.43	17.25	16.78	17.65	17.30	18.35
Sibiu	Sf1	53.69	50.93	49.58	53.16	54.06	56.12	56.17	52.76	51.75	55.09
	Sf2	23.00	17.75	17.03	20.11	21.19	21.61	21.60	20.75	18.97	20.52
Centru Region of development	Sf1	44.96	45.53	44.07	45.88	45.81	46.63	46.63	44.91	42.70	47.84
	Sf2	18.76	15.37	15.48	17.46	18.69	19.04	19.19	18.37	16.64	18.51
National level	Sf1	47.05	47.19	48.52	48.38	49.03	47.61	48.45	44.63	43.25	46.63
	Sf2	16.98	14.53	14.04	15.75	17.27	17.14	18.06	16.56	15.41	16.51

Source: authors' processing after data provided by the Ministry of Regional Development, Internal Administration and European Funds, online at [http://www.dpfbf.mdrap.ro/sit\\_ven\\_si\\_chelt\\_uat.html](http://www.dpfbf.mdrap.ro/sit_ven_si_chelt_uat.html)

Data show that the indicator of self-financing capacity for the "Centru" region of development is higher than for the whole Romanian local budgets just for 2016 and 2014 when considering all own revenues, but when the shares from income tax and deduced sums from income tax are excluded, this indicator is higher in "Centru" region for all the period analyzed. The indicator registers significant imbalances between the local budgets seen at the county level from the development region. The highest levels, suggesting a better situation, are for Braşov and for Sibiu counties, where the indicator is higher than the mean value at national and regional level, but for the local budgets in Alba, Covasna and Harghita the indicator is below national and regional mean value. The local budgets from Mures county are in an intermediate situation. Based on this, the situation of Brasov and Sibiu counties is favorable, more than 50% of their revenues being under the own decision, giving the authorities space for more flexibility in allocation. The evolution of the indicator in 2015 was, partly, the effect of a formula of equalization applied, favoring the communities with smaller budgets, whose dependency registered a growth.

The degree of covering the local expenditures based on the own revenues is reflected in table no. 2.

Table no.2 The degree of covering the local expenditures based on the own revenues of the counties of the development region "Centru" in 2007-2016

Own revenues / Total expenditures		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Alba	Sf1	37.64	37.86	36.68	39.14	40.40	36.27	39.00	42.53	35.85	40.99
	Sf2	15.40	12.23	11.59	13.79	15.78	13.41	14.81	15.95	12.99	14.76
Braşov	Sf1	62.45	59.73	54.20	58.62	55.31	56.77	61.06	57.50	61.37	72.06
	Sf2	26.96	22.65	21.19	23.68	23.58	24.72	26.16	23.85	24.52	28.02
Covasna	Sf1	37.23	34.26	35.89	37.97	35.40	37.34	39.84	35.57	28.48	40.30
	Sf2	14.31	11.88	12.10	14.13	14.11	15.12	17.51	15.46	11.77	17.04
Harghita	Sf1	32.34	34.23	35.36	36.42	33.66	35.32	35.62	32.46	27.82	35.53
	Sf2	13.62	12.57	12.40	14.38	15.00	15.60	15.85	14.26	11.49	14.70

Mureş	Sf1	45.56	47.47	43.83	47.52	43.32	42.38	41.72	45.00	44.79	48.15
	Sf2	17.95	12.54	14.15	17.07	17.10	17.01	17.09	18.78	17.85	18.90
Sibiu	Sf1	58.50	53.08	52.40	57.58	57.31	56.16	56.93	55.25	57.06	62.82
	Sf2	25.06	18.51	18.00	21.78	22.47	21.63	21.89	21.73	20.91	23.40
Centru Region of development	Sf1	48.81	47.53	45.40	48.88	46.58	46.27	47.77	47.10	44.96	52.46
	Sf2	20.37	16.04	15.95	18.60	19.00	18.89	19.66	19.26	17.52	20.30
National level	Sf1	50.96	48.77	50.19	51.57	49.92	46.67	49.18	45.97	45.02	49.31
	Sf2	18.39	15.01	14.53	16.78	17.58	16.80	18.34	17.06	16.04	17.46

Source: authors' processing after data provided by the Ministry of Regional Development, Internal Administration and European Funds, online at [http://www.dpfbf.mdrap.ro/sit\\_ven\\_si\\_chelt\\_uat.html](http://www.dpfbf.mdrap.ro/sit_ven_si_chelt_uat.html)

The degree of covering local expenditures based on own revenues (as defined by the law) is relatively high, as a mean at the regional level, being between 44.96% (in 2015) and 52.46% (in 2016), close to the national mean. But analyzing this indicator at the county level, it can be observed that there are important differences between the situation of the counties from "Centru" region. From a value under 30% in Covasna and Harghita (in 2015) to a value of more than 70% in Braşov (in 2016) there are significant differences, with strong impact on the capacity of local budgets to distribute the revenues from their budgets for development and according to their own wishes. Even when are considered just own revenues provided by the local taxes, the indicator for Centru region of development is higher than for the whole country, this being favorable for development. When the indicator is analyzed for the counties of Centru region, it can be seen that just for Brasov and Sibiu this indicator is higher than the national mean all the years and, for some years, Mureş is also in such situation. But for Alba, Covasna and Harghita this indicator is smaller than the national mean all the years. These latter counties are, as a consequence, more dependent of other sources of revenues and of the formula of equalization for covering local needs.

The capacity of the local public authority to access non-reimbursable funds, determined as a percentage ratio between revenues from non-reimbursable funds and total revenue of the local budget reflects the "level of interest of local public agencies in attracting alternative funding to invest in local development/public services, in order to meet the objectives of the local community" (Tudose, 2013, p.562). The evolution of this indicator for the period 2011-2016 (when data are available) for the counties from "Centru" region of development is highlighted by table no.3.

Table no.3 The capacity of the local public authority to access non-reimbursable funds for the counties of the development region "Centru" in 2011-2016

Sums from non-reimbursable funds/Total revenues	2011	2012	2013	2014	2015	2016
Alba	11.23	14.40	9.90	7.53	10.98	2.64
Braşov	1.79	3.57	5.33	4.24	5.86	2.99
Covasna	5.41	13.14	10.72	6.25	15.79	6.74
Harghita	9.32	10.09	14.03	12.88	13.02	8.85
Mureş	6.26	6.80	13.44	8.52	8.40	2.12
Sibiu	5.96	6.05	5.18	6.08	7.21	1.62
Centru Region of developmen	6.07	7.93	9.34	7.33	9.38	3.60
National level	8.04	7.68	8.79	6.27	8.70	2.71

Source: authors' processing after data provided by the Ministry of Regional Development, Internal Administration and European Funds, online at [http://www.dpfbf.mdrap.ro/sit\\_ven\\_si\\_chelt\\_uat.html](http://www.dpfbf.mdrap.ro/sit_ven_si_chelt_uat.html)

The evolution of this indicator as a mean for "Centru" region of development highlight that, excluding 2011, the interest for attracting non-reimbursable funds was higher than for national level. Analyzing this indicator evolution between the counties from "Centru" region we observe that this is generally higher in the counties where the self-financing capacity is lower (Alba,

Covasna, Harghita, Mureş), situation appeared, in our opinion, because for a number of non-reimbursable funds the allocations must be made in the less-developed communities, but also because the local authorities in these counties identified these kind of funds as solutions to overcome the lack of the own revenues for financing local needs.

For the rigidity of the expenditures (established by order 2651/2010) a smaller value is desired, giving local authorities enough flexibility to adjust to actual conditions.

*Table no.4 The rigidity of the expenditures of the local budgets from the counties of the development region "Centru" in 2007-2016*

Personnel expenditures/total expenditures	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Alba	37.41	40.85	42.02	37.05	28.89	27.17	30.56	34.07	29.51	35.02
Braşov	28.40	34.45	33.68	28.80	21.95	22.77	25.97	27.89	27.76	33.04
Covasna	43.66	47.99	50.27	43.96	33.81	36.68	38.64	38.84	28.98	40.53
Harghita	40.02	43.75	47.77	41.74	31.75	35.06	37.02	38.76	32.63	38.85
Mureş	39.17	39.19	45.35	39.63	28.55	29.81	30.52	33.45	32.86	37.40
Sibiu	29.05	32.52	34.19	29.91	22.43	23.19	25.09	26.63	27.36	30.62
Centru Region of development	34.74	38.30	40.46	35.30	26.67	27.64	29.92	32.09	29.84	35.30
national	32.71	36.27	38.89	32.97	25.55	25.66	28.64	30.56	28.61	32.17

*Source:* authors' processing after data provided by the Ministry of Regional Development, Internal Administration and European Funds, online at [http://www.dpfbf.mdrap.ro/sit\\_ven\\_si\\_chelt\\_uat.html](http://www.dpfbf.mdrap.ro/sit_ven_si_chelt_uat.html)

Based on this indicator, Centru region register higher values than the national ones, so, as a whole, is in a worse situation than the mean. But analyzing the counties, it could be highlight that for Sibiu (all the years) and for Brasov (except 2016) this indicator is smaller than the national mean, placing them in a better situation than of the other counties in the region from the perspective of flexibility.

The investment capacity indicator shows the importance of investments in the total expenditures from local budgets.

*Table no.5 The investment capacity of the local budgets from the counties of the development region "Centru" in 2007-2016*

Capital expenditures/total expenditures	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Alba	21.67	17.16	16.97	13.00	13.40	11.16	12.33	14.49	14.14	15.97
Braşov	18.88	14.25	14.66	17.90	30.90	22.26	17.11	15.77	13.91	13.40
Covasna	20.16	19.09	19.80	17.80	20.84	11.62	12.00	18.13	10.81	17.01
Harghita	24.65	23.72	20.75	20.17	21.97	16.05	13.36	15.16	12.12	17.75
Mureş	15.34	16.99	11.58	11.15	15.46	12.64	8.18	11.69	10.18	15.23
Sibiu	23.31	21.42	19.47	17.71	20.39	16.35	16.58	17.45	16.06	20.22
REG7C	20.18	18.08	16.37	16.00	21.21	15.81	13.39	15.16	12.97	16.36
national	20.43	17.08	15.03	14.63	18.94	17.21	13.58	14.96	14.05	18.24

*Source:* authors' processing after data provided by the Ministry of Regional Development, Internal Administration and European Funds, online at [http://www.dpfbf.mdrap.ro/sit\\_ven\\_si\\_chelt\\_uat.html](http://www.dpfbf.mdrap.ro/sit_ven_si_chelt_uat.html)

The evolution of the values of the indicator by comparing Centru region and all country is mixed, some years being higher for the region and some years being higher for the country. Analyzing the evolution of the indicator in the counties from Centru region there is a group of counties that register most of the years high values (Sibiu, Harghita and Covasna), some counties

that have some years with important values of this indicator (Braşov and Alba) and Mureş register in most of the years low values of this indicator. Because the analyzed period coincided (most of the years) with the economic downturn, part of the evolutions is determined by the counties' decisions to cut some of the investments instead of financing them by attracting alternative funds (then own or state budget revenues).

## 5. Conclusions

Analysis of the local autonomy and other significant budgetary indicators of the consolidated budget of the counties from Centru region of development evidence that there are important imbalances between local authorities of the same region, and the decisions about budgetary revenues and expenditures are also different. The structural funds tend to be considered a source of financing more in the less developed counties, but in this case the necessary funds for co-financing are important. Alternative solutions could be to attract other stakeholders (from private sector or NGOs) in financing some of the local needs, to cooperate in developing public services addressed to local communities, but for this local authorities must have more important roles in stimulating private involvement.

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## Advance Pricing Agreements and Double Taxation – Key Concepts in the Context of Transfer Pricing

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### Abstract

*The paper presents the main advantages and disadvantages of an advance pricing agreement (APA), illustrates a practical example regarding a situation of double taxation of results and presents a comparative analysis between the number of advance pricing agreements granted by the EU countries and the number of Double Tax Treaties concluded by these countries.*

*Results show that an APA presents more advantages than a transfer pricing file, but its disadvantages (regarding the cost and the period of time needed for the issuance) have a big impact on the business of a company and determine most of the taxpayers to choose a transfer pricing documentation file rather than to apply for an APPA. The results of this research also show that countries which have concluded a big number of Double Tax Treaties tends to grant much more APAs compared with the other category of countries where the number of Double Tax Treaties is smaller.*

**Key words:** transfer pricing, advance pricing agreements, double taxation, tax treaties

**J.E.L. classification:** M40, K34

### 1. Introduction

In the context of increasing the number of multinational companies, the number of related party transactions increases as well and therefore transfer pricing has begun to be considered one of the most important aspects in terms of tax matters. This consideration takes into account the fact that through transfer pricing, multinationals may try to move their profits from a high tax jurisdiction into a low tax one. Given this, tax authorities are paying a special attention to the transfer pricing subject, initiating tax audits in order to verify if the prices invoiced by multinationals in relation with their related parties are complying with the legislative provisions. During these tax audits entities can be subject to transfer pricing adjustments which may determine a double taxation of the results at group level. The transfer pricing adjustments can be performed either when the prices invoiced by a company in relation with its related parties are not complying with the legislative provisions or due to an abusive approach of the tax authorities which do not agree with the analysis presented by the taxpayer. In order to avoid the risk of transfer pricing adjustments and implicitly of double taxation due to an abusive approach of the tax authorities, companies could apply for advance pricing agreements (i.e. a documentation issued by the tax authorities mentioning how the price within a related party transaction that will take place in the future, should be computed).

All the aspects mentioned above represented the motivation of writing this paper which briefly presents the main advantages and disadvantages of an advance pricing agreement, illustrates a practical example regarding a situation of double taxation of results and presents a comparative analysis between the number of advance pricing agreements granted by the EU countries and the number of Double Tax Treaties concluded by these countries.

The paper is structured as follows: section 2 presents the background literature, section 3 presents the research methodology, sections 4 – 6 present the results of the research and section 7 the main conclusions.



## 2. Literature review

According with Matei and Pirvu (2011) transfer pricing represent the prices invoiced within related party transactions (e.g. acquisition or sale of goods/services). Further on, the profit registered by each related party, and implicitly the level of the corporate income tax owed by these, are influenced by the prices at which goods or services were transferred between these related parties (Sansing, 2014). Moreover, Peralta et al. (2006) considered that multinationals can own entities in both high tax jurisdictions and low tax ones, and due to this situation these multinationals may try to benefit from the differences in tax rates and in this respect may try to use transfer pricing to shift profits from a jurisdiction into a another one. In addition, Neighbour (2002) emphasized the idea that through transfer prices governments might be deprived from the taxes owed by multinationals. As a consequence to this situation, governments adopted transfer pricing legislation, trying to assess if the transfer prices invoiced by multinationals entities are adequate (Yao, 2013).

Further on, Riedel et al. (2015) concluded that "transfer price documentation provisions have some effectiveness in limiting mispricing behaviour". On the other hand, Beer and Loeprick (2013) noted that the profit shifting within a multinational group has decreased by 60% among for years from the introduction of a compulsory transfer pricing documentation. The authors concluded that the profit shifting is discouraged due to the significant compliance impact of the documentation requirement on multinationals.

Looking at things from the perspective of good faith companies that are trying to set up the transfer prices in accordance with the arm's length principle (i.e. the prices are set in the same way as in the situation in which the transaction would be performed between independent companies and not between affiliated companies) and which analyse and sustain this aspect within the transfer pricing file, Becker et al. (2014) considered that these companies assume a double taxation risk as they do not know whether their analysis will be accepted by the tax authorities and in this situation whether the tax authorities will adjust their transfer prices. According to Lohse and Riedel (2012), companies could reduce the risk of double taxation through the application for advance pricing agreements (APAs).

According to Becker (2017) advance pricing agreements (APAs) set up in advance the transfer prices charged between affiliated entities. Therefore, APAs have as a main scope the establishment of the transfer pricing methodology for the prices that will be charged within a related party transaction (i.e. the APAs are concluded for a related party transaction which will be performed in the future). Depending on the number of tax authorities involved in negotiations, the APAs could be unilateral, bilateral or multilateral (Becker et al., 2014).

Regarding the double taxation, it involves the taxation of the same profit in the hands of different taxpayers. There could be a double taxation at national level (i.e. the profit is taxed twice in the same country) or an international double taxation. Cornelia Lefter and Simona Chirica (2010) noted that in the case of international double taxation, companies are taxed twice: once in the state where the income is realised (i.e. in the source state) and second one in their residence state.

The double taxation could be eliminated if there are met certain conditions. For the elimination of the national double taxation, countries over the world have established their internal regulations. In terms of international double taxation, it can be eliminated through the initiation of the mutual agreement procedure provided by the Double Tax Treaty concluded between the source state and the residence state. If between the two state is not concluded a Double Tax Treaty, the double taxation cannot be eliminated. However, the elimination of the double taxation involves the following of certain steps and procedures which need a long period of time (certain years) and these steps and procedures not always conduct to the desire results (i.e. the elimination of the double taxations).

## 3. Research methodology

Below are presented the objectives of this research. For each objective, there was presented the research methodology applied in order to achieve it.

Taking into consideration that in terms of transfer pricing regulations companies have two options, respectively to prepare a transfer pricing documentation file or to request to the fiscal authorities an advance pricing agreements, and considering that an APA presents a big advantage compared with a transfer pricing documentation file, namely the elimination of the double taxation risk, one of the objective of this research was to perform an analysis of the two options in order to asses which of them would be a better choice for a taxpayer. In this respect there was performed a comparison between the main advantages and disadvantages of an APA and the main advantages and disadvantages of a transfer pricing file.

The second objective of the paper was to illustrate a situation which conducts to a double taxation of the results in order to capture how the double taxation appear. In order to this, there was performed a quantitative research, using in this respect the case study as a research tool.

Within a country where companies request and implicitly the tax authorities grant a big number of APAs, the double taxation risk (from the transfer pricing point of view) is smaller compared with the countries where there is a small number of APAs granted. In this context, and also considering the fact that the elimination of the double taxation is conditioned by the existence of a Double Tax Treaty, there has been found interesting to set as a third objective of the research the performing of a comparative analysis between the number of the APAs granted and the number of Double Tax Treaties concluded by different countries. In this respect, the research was performed at the level of the EU countries as for these countries were found available the statistic data needed.

The number of the APAs granted was gathered from the official site of the Joint Transfer Pricing Forum and the most recent data published envisage the year 2015 (i.e. there is presented the number of APAs granted during 2015). The source of these statistic data is: [https://ec.europa.eu/taxation\\_customs/sites/taxation/files/jtpf0152016enapa.pdf](https://ec.europa.eu/taxation_customs/sites/taxation/files/jtpf0152016enapa.pdf).

The number of the Double Tax Treaties concluded by EU countries was gathered by accessing the Tax Treaties Database published by IBFD (International Bureau of Fiscal Documentation).

#### 4. Transfer pricing documentation file vs. APA

The table 1 below presents a comparison between the main advantages and disadvantages of an APA and the main advantages and disadvantages of a transfer pricing documentation file.

Table no. 1 APA vs. transfer pricing file

Indicator	APA	Transfer pricing file
Advantages	It is valid a long period of time (i.e. certain years).	It is cheaper than an APA.
	Transfer pricing analysis is performed before the related party transaction takes place.	It could be prepared in a short period of time, compared with an APA
	It prevents future transfer pricing adjustments and double taxation of results at group level.	
	Through an APA entities could establish a good relationship with the tax authorities.	
	It is no longer necessary to prepare a transfer pricing file for the transactions and periods covered by the APA.	
Disadvantages	The issue of an APA by the tax authorities may take a long period of time (certain years), and during this time a company may not be interested in performing the transaction for which the analysis was requested or the result of the analysis may be obtained to late affecting in this way the business.	Transfer pricing analysis is performed after the transaction takes place and this could determine a risk of double taxation in the case that the prices are not in accordance with the arm's length principle.
	It is more expensive than a transfer pricing file.	

Source: own processing

*Results and interpretations*

As could be observed from the table above, an APA presents more advantages than a transfer pricing file, but its disadvantages (regarding the cost and the period of time needed for the issuance) have a big impact on the business and determine most of the taxpayers to choose a transfer pricing file. This assumption is based on the statistics data presented in section 6 below, according with the average number of APAs granted by the tax authorities from the EU countries did not exceed 44 in 2015.

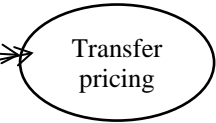
However, in order to dismiss the risk of double taxation which would be covered by an APA, the taxpayer contracts different tax firms, requesting transfer pricing policies or the preparation of the transfer pricing documentation and the assistance during a tax audit. On the other hand, the choice for an APA or a transfer pricing file is a decision which should be taken by the companies according to its needs in that moment.

**5. Illustration of the double taxation**

An illustration of the double taxation can be performed starting from the following example: Company RO manufactures in Romania washing machines brand X and sells them to the affiliated entity Company BG which distributes the goods on the Bulgarian market. Company RO incurs costs of EUR 200 for the production and delivery of a washing machine. Company BG purchases the goods from Company RO paying in this respect EUR 250/product. Company BG sells the washing machines on the Bulgarian market at a price of EUR 290/product. In addition, in order to sell the washing machines in Bulgaria, Company BG incurs distribution costs of 10 EUR/product. Table 2 below illustrates all from the above.

*Table no. 2 Data for the study case*

Indicator (EUR)	Company RO	Company BG	Total
Sales revenues	250	290	540
Production and delivery costs	(200)	n.a.	(200)
Cost of acquisition	n.a.	(250)	(250)
Distribution costs	n.a.	(10)	(10)
Gross result	50	30	80
Corporate income tax	8 (50*16%)	3 (30*10%)	11
Net result	42	27	59



Source: own processing

During a tax audit, the tax authorities considered that the price of EUR 250 charged by Company RO to Company BG is not in accordance with the arm`s length principle required by the legislation, sustaining that the price charged by Company RO to Company BG should have been of EUR 270 instead of EUR 250. Therefore, the tax authorities performed a transfer pricing adjustment in order to increase the selling price from EUR 250 to EUR 270. The impact of this adjustment is presented in table 3 below.

*Table no. 3 Transfer pricing adjustment*

Indicator (EUR)	Company RO - before adjustment -	Company RO - after adjustment -	Company BG
Sales revenues	250	270	290
Costs	(200)	(200)	(260)
Result	50	70	30

Source: own processing

As a result of the transfer pricing adjustment from EUR 250 to EUR 270, the result of Company RO increased from EUR 50 to EUR 70, impacting the corporate income tax that should be paid by Company RO. The profit obtained by the Group before the adjustment was of EUR 80 (50+30), while after the adjustment this profit was in the amount of EUR 100 (70+30). Given this, the amount of EUR 20 (70-50) is taxed twice, once in Romania and once in Bulgaria, at Group level resulting a double taxation of the results.

## 6. Statistics regarding APA and Double Tax Treaties at the level of EU countries

Table 4 below presents the number of APAs granted by the tax authorities from the EU countries during 2015 vs. the number of Double Tax Treaties (DTT) concluded by these countries.

Table no. 4 Statistics regarding APA and DTT

No.	Country	Number of APAs granted in 2015	Number of DTTs in force	No.	Country	Number of APAs granted in 2015	Number of DTTs in force
1	Greece	0	57	15	Poland	6	80
2	Latvia	0	59	16	Denmark	8	79
3	Slovakia	0	66	17	Germany	9	95
4	Cyprus*	0	61	18	Hungary	11	82
5	Croatia*	0	61	19	Spain	16	94
6	Slovenia*	0	58	20	France	18	125
7	Estonia*	0	57	21	Finland	22	81
8	Bulgaria*	0	70	22	Czech Republic	27	88
9	Malta*	0	71	23	Italy	27	97
10		2	75	24	United Kingdom	37	131
11	Lithuania	2	53	25	Luxembourg	145	81
12	Portugal	3	76	26	Netherlands	236	99
13	Sweden	3	89	27	Belgium	602	92
14	Romania	4	85	28	Austria	**	89

\*Until 31 December 2015 these countries did not introduced in the local legislation the option to apply for an APA. Therefore, no APA was granted by these countries.

\*\* Data not available/submitted

Source: own processing based on the statistic data mentioned within the chapter regarding the research methodology

### Results and interpretations

As could be observed from the table above, in general, countries where no APAs was granted (e.g. Greece, Latvia, Slovakia etc.) or countries where a small number of APAs was granted (e.g. Ireland, Lithuania etc.) have concluded a small number of Double Tax Treaties compared with the countries that granted a big number of APAs (e.g. Belgium, Netherlands etc.). Therefore, generally speaking, countries which have concluded a big number of Double Tax Treaties tends to grant much more APAs compared with the other category of countries where the number of Double Tax Treaties is smaller.

Given all the above, companies which are operating within countries which grant a small number of APAs and which concluded a small number of Double Tax Treaties, are exposed to a bigger risk of double taxation compared with companies operating in the other category of countries (i.e. which granted a big number of APAs and also concluded a big number of DTTs). This risk may be mitigated either through the concluding by the countries of more Double Tax Treaties or by the development and implementation of regulations regarding APA and by encouraging of the taxpayers to apply for APAs (for example by offering certain tax facilities).

## 6. Conclusions

In the context of increasing the number of multinational companies and related party transactions, tax authorities are paying a special attention to the transfer pricing subject, initiating tax audits in order to verify if the prices invoiced by multinationals in relation with their related parties are complying with the legislative provisions. In this context, groups of companies may face

with a transfer pricing adjustment performed by the tax authorities and also may assume the risk of double taxation of results. In order to mitigate this risk companies have the option to apply for an advance pricing agreement instead of preparing a transfer pricing documentation file.

Despite the fact that an APA presents more advantages than a transfer pricing documentation file, its disadvantages (e.g. the cost and the period of time needed for the issuance) have a big impact on the business and determine most of the taxpayers to choose a transfer pricing file. This assumption is based on statistics data, according with the average number of APAs granted by the tax authorities from the EU countries did not exceed 44 in 2015.

Taking into consideration that an international double taxation could be eliminated through the initiation of the mutual agreement procedure provided by the Double Tax Treaty concluded between the source state and the residence state, companies which are operating within countries which grant a small number of APAs and which concluded a small number of Double Tax Treaties, are exposed to a bigger risk of double taxation compared with companies operating in the other category of countries (i.e. which granted a big number of APAs and also concluded a big number of DTTs).

The results of the research show that countries which have concluded a big number of Double Tax Treaties tends to grant much more APAs compared with the other category of countries where the number of Double Tax Treaties is smaller.

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## Internal Audit: "A Necessary Evil" or A Creator of Added Value?

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### Abstract

*The present work focuses on the problem of creating added value by the department (service) of internal audit. This basically is a creator of new value by saving resources and avoiding losses due to disturbing factors that may appear at a certain moment in the entity's activity.*

*The concept of "added value" in the internal audit activity is a controversial concept and the auditor is an "independent valuator" of the efficient use of resources inside the entity. The specialty literature and the practice allow the possibility to identify premises and factors on which the performance of the internal audit function depends on. A method to measure the performances of the internal audit department inside the entities is the "Synoptic scoreboard". This instrument allows identifying the fields the internal audit can bring an added value to the entity and the impact of the internal audit function on the performances, including the financial ones.*

**Key words:** internal audit, added value, "Synoptic score tables", performance

**J.E.L. classification:** M42

### 1. Introduction

The objective of each entity is obtaining added value by focusing the economic agents' activity on improving their performances. This is not possible without satisfying the demands, under a permanent competition to enlarge their clients by a proposal for more performing, superior, better goods and services at accessible prices.

In a market economy, the competition represents the engine of economic development and the internal audit has a special role in ensuring the stability of the economic entity.

The standards for *Internal Auditing professional practice* issued by the Internal Auditing Institute from USA (IIA), especially, Standard 2000, named "The "Conducting internal auditing work" stipulated the following: "The executive management of the audit must conduct the internal auditing activity in an efficient way to ensure the creation of added value inside the organization".

The internal audit is a promoter of added value by a resources economy that creates and avoiding loses due to some disruptive activity factors. The purpose of an efficient internal audit department is to ensure that reducing the activity is as limited as possible and that the safety net is tight enough. Thus, a possible reduction of the volume of activity and the financial result is not dangerous for the entity. This imposes the orientation of the internal audit department's activity is set on the company's strategy, that has to be a preventive action, a continuous and to the subject.

### 2. Research methodology

Generally speaking, the added value is a way to express the economic-financial performance and measures the plus that are obtained from the production activity. It measures the supplement of economic value created by the production and it is equal to the difference between the production

value and the value of the assets and services destroyed or transformed during the production process.

"Added value" is a concept that finds its origin in the macro-economic analysis; it belongs to the national accounting and is related to the production concept. Economically, the production is the activity performed under the control and responsibility of an institution (trade company, individual company, public administration or non-profit institution), that uses capital inflows, labour, goods and services to produce goods and services.

The value added concept has different approaches. An important distinction has as criteria the type of resources the added value comes from: the commercial production or the non-commercial activity. A production is considered commercial if sold at an important price from an economic point of view. A production (activity) is non-commercial is provided for free or at a price which is not significant from an economic point of view: it belongs to public administration field and to non-profit institutions that belong to households (C. Jessua s.a., 2006, p. 935 – 936).

In the internal audit activity, the added value concept is a controversial one. It is difficult to find an approach globally accepted that fits to each entity no matter the economic, social and cultural environment. The internal audit is different from country to country and from one organization to the other. Thus, there are situations when some internal audit practices may be considered as value added providers for the organization, while at the same time the same practices for another organization may be resources consumer (C., Bota-Avram, 2008, p. 4).

The special literature mentions that the internal audit departments are concentrated on their role as a reviser and independent valuator of the efficiency of the internal controls and the financial health of the organization. Compbell M. considers that the internal audit departments as a result of the Sarbanes-oxley law from 2002 must provide more value to the organizations where they function.

In their view, the internal audit departments must adopt an approach centred on the audit's client that will provide value and ensure a continuous dialogue with all the departments of the organization.

Another approach supposes to be taken into consideration the points of view of all parties interested inside the organization. Thus in 2003, IIA led a study entitled "Value added services of Internal auditing", and the results of this study show that more than 52% of the interviewed ones needed to make significant changes in the internal auditing practice to provide more value to the organizations. Because the interested parties inside the organization are not totally aware of the internal auditing responsibility we consider that the internal auditors must explain the role of the internal auditing in adding value inside the organization.

### **3. Problems to determine added value by the internal auditing**

The diversity of conceptual approaches of the added value is due to the particularities that materialized the internal auditing function from one organization to the other. At the same time, it is necessary to take into consideration the fact that the activity of internal auditing must comply with the conceptual framework promoted by IIA, through the International Standards of Internal Auditing, their compliance being compulsory; they do not have a recommendation character.

A significant influence on quality and quantity of the added value created by the internal auditors has the following premises and factors:

- Knowing the depth of the organization;
- Knowing the practices of internal auditor and the formation of added value in this activity;
- The courage to innovate and to adapt the innovations to the organizations' conditions (V., Emil, 2007, p. 61).

These premises and factors have been identified by Roth J. that after research mentions that an ideal department of internal auditing must have the following characteristics:

- The personnel inside the department must have the experience of such an activity;
- A challenging labour environment;
- Alignment form an organizational point of view to the best practices in this field;

- Valuating the quality risks and providing solutions in real time;
- A matrix approach of the audit services.

In studying the ways to provide added value by the internal auditing another category of identifying the determinants factors has been identified:

- Improving labour productivity;
- Reducing costs related to the internal auditing function;
- Adopting more efficient audit techniques;
- Reprojecting the audit plan is necessary in order to obtain a better efficiency;
- Eliminating the useless projects, the outdated ones (C., Dobroteanu, L. Dobroteanu, 2007);
- Continuous improvements of the competences;
- Issuing recommendations that added value by improving the audited activities.

In order to issue recommendations that really generate value, Walz A. (1997) identified the following relevant guidance the auditors must take into consideration:

- The auditors must be a support to create value and must not prevent the activity that creates value;
- Promote positive changes, and the recommendations made by the audit department should not be destructive, on the contrary they must favour the creation of value;
- To be oriented towards the future because preventing a situation that generates difficulties is easier than treating an existing problem in the entity's activity;
- To provide improvements to help the organization to be more competitive in her field;

The added value provided by the internal auditing gains more and more relevance in nowadays economic conditions and this imposes the identification and quantification of the determining factors in the entity's performance.

The question that becomes more and more often is "How could the internal auditing contribute to the improvement of the efficiency and the risk management, the control and the governance processes?"

Meeting these objectives is based on the management and analysis of the risks. At the moment the managers do not give a sufficient attention on valuating their own risks, their activity is empiric. They do not take into consideration the activity of the auditors and the good practices recognized in this field. The entities have not created systems to identify potential risks in an early stage, possibility given by the existence of a system warning over the risks.

The good international practice in the field considers that the managers and internal auditors that work together in valuation of the entity's risks and reorganization of the managerial control system could obtain a higher added value from the internal auditing.

The head of departments of the internal auditing valuate the value the organizations provided by a serial of indicators:

- the quality of the findings and recommendations made available for the managers;
- issuing reports on time and their quality;
- presenting reports to the administrative committee or the audit committee;
- analyzing the satisfaction forms of the clients and beneficiaries;
- the position of the internal auditing department inside the organization;
- savings and higher efficiency due to the internal auditing.

The entities must analyse the efficiency of their own internal auditing departments and must make sure that they are equipped properly in order to fulfil their tasks. Therefore the internal auditing departments must established measuring systems in order to prove that they perform activities in a proper way. In order to prove that the internal auditing adds value, the internal auditors can count the financial benefits produced by the managers of different departments following the changes in their activity as a result of the recommendations brought by the internal auditing. These may refer to: updating some internal control activities, improvement of the working procedures, proposals of reducing the expenses, changing the suppliers, etc.

The contribution of the internal auditing under the form of added value can be measures by valuating the financial impact on the entity in the future period.



Inside the entity there is used a method of measure the performances of the internal auditing department "Synoptic score tables". This is an instrument of the internal auditing that allows the alignment of the internal auditing with the organizational objectives by the management of the strategic performances. With its help the internal auditing department delimited the main fields where an added value may be brought to the entity and includes the function of the audit over the financial performance of the organization.

After the consultation with the Audit Committee, the internal auditing department must define the main purposes for each of the entity's fields of activity where an added value is brought and established their objectives and way to improve them. Because each organization has unique objectives and the synoptic table is unique.

In UK and Northern Ireland, II A describes the way of using the "Synoptic score table" to measure the performances of the internal auditing and it identified six main themes:

- determine how by measuring the performances of internal auditing reflect on the function of the internal auditing;
- verify if there are faster cashing indicators of the debts, and later payments of the debts;
- examine the efficiency of measuring the performances of the internal auditing departments in the operational strategy;
- ensure that the different sides measured for the entity's performance are understood and administrated accordingly;
- value how measuring the performance reflects the proposal to increase the added value by the internal auditing;
- determine if measuring the performances supports the strategic role of the internal auditing inside the organization.

To develop a frame inside the synoptic score table for the internal auditing the following stages must be fulfilled:

- the chiefs of the internal auditing must make a SWOT analysis to evaluate the hard and weak points of the department;
- concentrate on strategic development themes;
- identify the length of different sides measured for the performance related to the strategic objectives established;
- a continuous valuation of the use and efficiency of the synoptic score table.

In the internal auditing there have been developed also some other approaches in order to show the management that they provide added value, to value their performance compared to other similar entities. Therefore the internal auditing must have measuring methods of the accomplished performance to demonstrate they add value to the organization.

#### **4. Conclusions**

The main objective of the internal auditing is to supply the management team of the organization with an independent opinion and an objective one over the internal control and the management system.

The internal auditing contributes to a rigorous management of the resources, to the increase of performance of policies implementation, programs and actions established by identifying the risks and finding corresponding solutions.

The audit should focus on assessing the managerial capacity to achieve organizational goals, to determine the extent to which the managerial decisions are appropriate to achievement of their objectives and how they are achieved.

The contribution of the internal auditing department to create added value is possible by the use of suitable instruments to take into consideration the specific activity developed by each entity.

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# The Statistical Analysis of the Relationship Between Poverty and Public Expenses in the European Union Countries

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## Abstract

*The 2020 Europe strategy has among its objectives the reduction of poverty. This study aims to observe if the European Union countries distribute and perform the public expenses by state functions so that it influences the reduction of poverty. The study also tackles the identification of the types of public expenses by state functions which have the greatest effect in the poverty reduction. The analysis is performed on 27 of the 28 countries of the European Union. The variables for Cyprus have extreme values and that is why this country has been excluded from the analysis. The results obtained confirm that in 2015, the expenses performed by state functions have a significant influence on poverty reduction. The greatest influence is held by the expenses for social protection and they are followed by the health care, business and education-related expenses. Thus, the EU countries should distribute their public expenses prevalently towards these state functions in order to minimize poverty.*

**Key words:** poverty, public expenses, regression analysis.

**J.E.L. classification:** I38, C01, H19

## 1. Introduction

One of the main objectives of the 2020 Europe Strategy was poverty reduction. If each citizen of a country wishes to reduce poverty, individual measures will not have any consequence. But, governmental decisions can lead to strategies that should eventually reduce the poverty in a country (Van de Walle, D., 1995). A leverage in this case is offered by structuring the public expenses by state functions so that they determine the reduction of disparities between citizens' incomes and implicitly, the reduction of poverty.

Studies show that the incentives granted by the state in the field of education, health care and social protection (Van de Walle, D., 1995) are "at least progressive", because they have a higher level for the poor. The benefits are also growing continuously: the number of the poor is reduced with the disappearance of social inequalities. Van de Walle (1995) states that usually the level of public expenses is higher in the urban areas than in the rural ones.

In most of the developed countries, the poor families tend to have more children than the richer ones and most of them do not graduate middle school. Milanovic, B. (1992) ascertains that the level of development often depends on the public expenses performed on education. Generally speaking, a higher education level in a country and a more developed private economic sector, the more public expenses can reduce poverty.

As regards the health sector, the public expenses allocated for the primary medical centres that ensure preventive and curative care are usually more pro-poverty than the expenses for the hospitalization (Van de Walle, D., 1995).

Social transfers (pensions, allowances, compensation) represent an important income source for certain persons especially in the East European countries. Milanovic (1992) states that pensions and allocations have opposite incidences. Thus, public expenses for the pensions of the old are against poverty while family allowances are pro-poverty. These aspects are quite logical because it is obvious that the pensions help the old live a decent life and contribute to the reduction of poverty for this group of people while family allowances determine the young to give up the idea of having a job and live only on social transfers. This aspect leads to unemployment, poor living standards, lack of an adequate education for children, reduction of work productivity and eventually, to the increase in poverty rate.

## **2. The relationship between public expenses and poverty**

The study of the relationship between poverty and public expenses has become more and more debated by researchers in the last couple of years, having in view that poverty reduction is one of the main objectives of the Europe 2020 Strategy and public expenses may influence the poverty in a country.

In the specialty literature there are numerous studies that deal with public expenses (some of them expressed in public investments), economic growth and the poverty phenomenon. Public expenses affect poverty both directly and indirectly.

Public expenditure influence poverty *directly* through economic growth, occupation of workforce and wages (Keteb, 2012). The investments in the human and physical capital have influence on the economic growth. In its turn, economic growth implies a GDP increase as well as an increase in national productivity and all these have influence the workforce occupation and the salary level. as a consequence, the national level of poverty also changes. *Indirectly*, poverty is influenced by the public expenses through the social transfers to households and the expenses for social services and private investments.

A comparative analysis of public expenses before and after the budgetary reform in 2004 in Indonesia as well as its relationship with the poverty rate highlights that before 2004 there was a significant inverse correlation between poverty rate and public expenditure in education and industry (Biro, 2011). After the reclassification of state functions, it was noticed that the poverty rate has a negative correlation with the level of expenses for education, general services, order and safety. The study used as control variables the population growth and economic growth that also indicated a significant inverse correlation with poverty rate.

In a study on poverty in Ghana (Adjasi and Osei, 2007), it was discovered that the poverty level is more reduced in urban households and where the head of the family has a longer education. There are also fewer chances of poverty in the households where the head of the family is employed in the management or administrative sector in comparison with those where the head of the family was employed in services, sales or agriculture. A more accentuated poverty level was observed in larger households as well as in those where a woman was the family provider. If the Government cannot interfere in the personal life of its citizens and on the labour force market there must be employees in the all the fields of activity, it can invest in the population's education and the state urbanization in order to fight current poverty. An efficient educational system develops the skills and competences required on the labour market, stimulating thus the future employees to work better and be productive. Without proper education, unemployment and implicitly, the risk of poverty increase both for the households and for the entire country.

The relationship between unemployment and poverty has been underlined by a study concluded by Ukpere and Slabbert in 2009. The authors demonstrate that unemployment has a significant influence on the inequality of population's incomes and the third world poverty. In the era of globalization, the phenomenon of social inequality becomes more accentuated by means of favouring the exploitation of global work which determines the increase in poverty rate.

As for the types of public expenses which contribute to the poverty reduction, the most relevant for Nigeria are those from the sector of social services, health care and education. Theoretically, for each 1% spent from the GDP on social sectors, the poverty rate should reduce by 0.5% (Carter, 2015).

The investments in the health sector contribute to the insurance of human rights and are essential for poverty reduction. The public expenses must be oriented also towards the acquisition of vaccines and medicine, to the construction and equipment of hospitals or medical centres where these do not exist or are not sufficient, the personnel training (which is also part of the educational sector). The efficient expenses performed in this sector contribute to the economic development of the country by means of the increase in labour force productivity and the reduction of poverty rate risk. Special attention must be granted to children's health because the healthy children from today are the productive adults from tomorrow.

The public expenses in education are also important for the reduction of poverty because knowledge lasts in time and it is not lost easily. The most important step is the primary education where children learn the basis of education. An efficient educational system develops their skills and competences needed on the labour market and stimulates the future employees to work better, be productive and be rewarded accordingly. Moreover, a good education has a positive impact on people's health because they know how to prevent diseases, the importance of hygiene and sports for the human body.

The studies undertaken for the Organisation for Economic Co-operation and Development (OECD) by Förster and Mira present in 2005 that in the countries where the expenses for social services (excepting the health expenses) are higher, the poverty rate among the active population is lower in comparison with the other states. An important role in the poverty reduction in the OECD states is also played by the expenses for education (Afonso et al., 2010). These lead at the same time to the efficiency of expenses in the social sector.

Shengen analysed in 2008 the relationship between public expenses, poverty and economic growth in the developing countries and determined the fact that the richer a country, the more it allocates a bigger weight of its GDP for health and implicitly, poverty rate in these countries is more reduced.

In this paper, the authors analyse the relationship between the poverty rate in the European Union and the public expenses by state functions. The main goal is to determine the sectors whose expenses have influence on the poverty in Europe in order to know exactly the areas that require greater financial allocation for future poverty reduction.

### 3. Empirical analysis

In this paper, the expenses for the ten state functions are analysed. The state functions mean the well-functioning of a country and the insurance of population's wellbeing while public expenditure are an instrument to manage the activities that aim to accomplish the general objectives of the Government. The functional classification of public expenses focuses on ten areas where the public money is invested. The public expenses are classified by UNO in: expenses for general services (*Gnr*), public expenses for defense (*Apar*), expenses for public order and safety (*Ord*), public expenses for businesses (*Af\_ec*), public expenses for environment protection (*Med*), expenses for housing and community facilities (*Loc*), public expenses for health care (*Snt*), expenses for recreation, culture and religion (*Recr*), public expenses for education (*Educ*), public expenses for social protection (*Soc*).

The data for the public expenses by state functions and for the rate of poverty risk for the European Union member states for the year 2010 and the year 2015 were taken from the Eurostat database.

In order to create an overall image and to perform a general presentation of public expenses in the EU member states, we present the total public expenses in the years 2010 and 2015, expressed as a percentage of the GDP. The country distribution in the European Union according to the total public expenses is presented in figure 1.

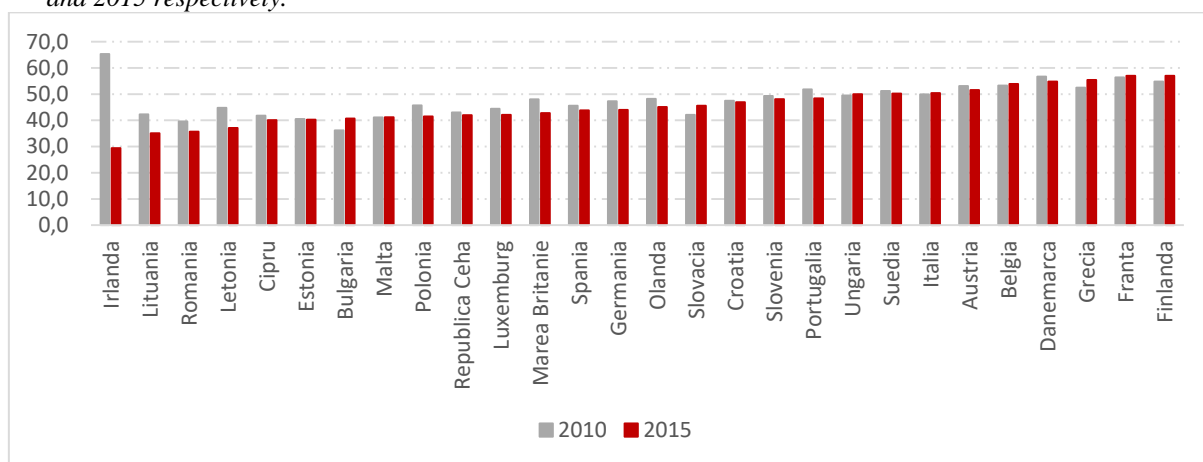
Each state manages its expenses in compliance with the objectives and development policies it adopts for their performance. In the European Union, the greatest weight of the GDP in 2015 is allocated for public expenses in Finland, being followed by France and Greece. The countries that in 2015 allocate a greater share of the GDP for total public expenses in comparison with 2010 are Bulgaria, Slovakia Hungary and Italy. If in 2010 Ireland allocated the greatest weight of the GDP to public expenses, in 2015 this is the country with the lowest weight. Countries such as Lithuania,

Romania, Latvia, Cyprus and Estonia are the countries with the lowest weights allocated for total public expenses in 2015, being even lower in comparison with 2010.

The distributions of the weights of public expenses by state functions within total expenses are analysed in a graphical way by means of boxplot diagrams which especially are helpful in the determination of potential extreme values and provide information about the asymmetry of distributions. The boxplot diagrams for the weights of public expenses by the ten state functions are presented in figure 2.

Figure 2 suggests the possibility of the existence of some extreme values in the case of expenses related to general public services, to environment protection, housing, health care and recreation. Before making any decision regarding the extreme values of the variables, their existence is also verified numerically.

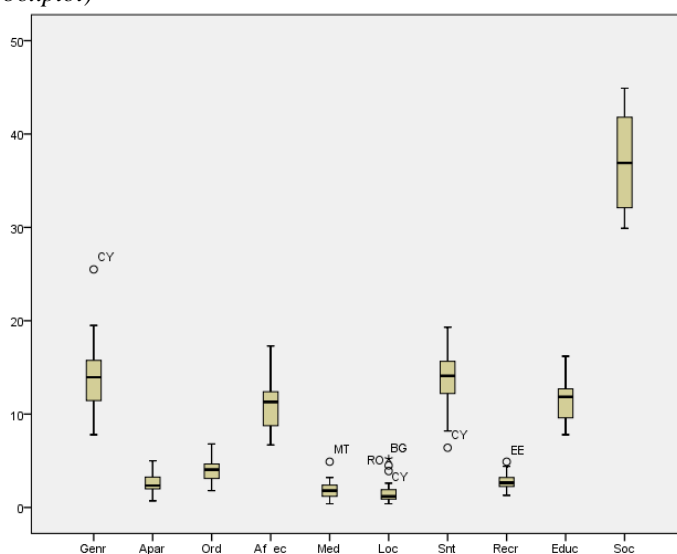
Figure no. 1. The weight of total public expenses in the GDP for the UE member states for the year 2010 and 2015 respectively.



Source: Performed by the authors

Since this paper aims to establish the correlations between poverty and public expenses, the analysis of extreme points uses the Leverage distances. According to the results obtained, the values of the variables for Cyprus are extreme points. In order not to influence subsequent analyses, the working sample is made up of 27 recordings – states of the European Union without Cyprus.

Figure no. 2. The weight of expenses by state functions within the total public expenses in the EU countries in 2015 (boxplot)

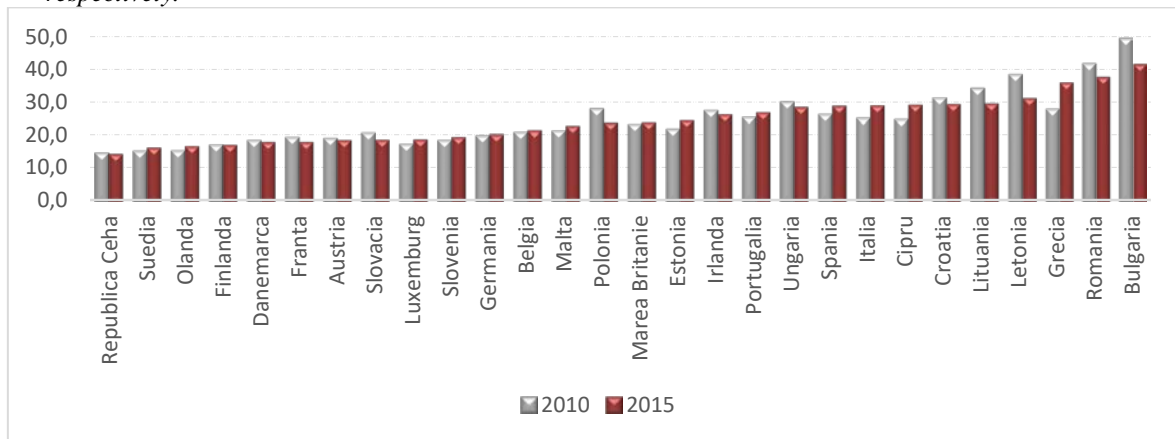


Source: Performed by the authors

The European Union makes considerable efforts to reduce poverty, using development strategies and policies of the different sectors correlated directly or not with the poverty phenomenon in the world. Each state aims to annually reduce poverty by a certain percentage and the objective can only be reached by adopting efficient policies at national level.

A general image on the rate of poverty risk in the European Union member states can be observed in figure 3 which presents the distribution of countries according to the poverty level from the years 2010 and 2015.

Figure no. 3. The distribution of the EU countries according to the rate of poverty risk in 2010 and 2015, respectively.

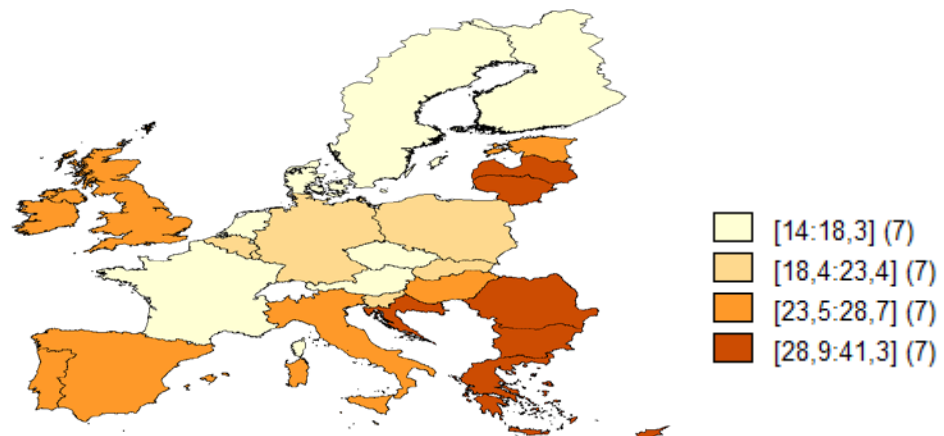


Source: Performed by the authors

Some states of the European Union have registered a reduction in the poverty risk in 2015 in comparison with 2010 while some others have registered growths of this indicator. In 2015, the highest rates of the poverty risk are registered by Bulgaria (41.3%), Romania (37.4%) and Greece (35.7%). If Bulgaria and Romania have made great progress as far as the reduction of poverty is concerned during 2010-2015, Greece is characterised by a significant increase in the rate of poverty risk, ranking on the 3rd place in the top of the poorest countries in the European Union. Considerable reductions of the poverty rate during 2010-2015 have been registered also in countries such as Latvia, Lithuania or Poland. At the opposite end, aside Greece, in Spain, Italy and Cyprus, the rate of poverty risk has increased in 2015 in comparison with 2010.

A spatial analysis of the poverty situation in the European Union allows the visualization of the most exposed countries to poverty. This is performed by means of the Quintile map which breaks down the distribution of the UE states in four intervals where an equal number of countries is distributed. Figure 4 presents the rate of poverty risk in 2015 in the European Union states.

Figure no. 4. The rate of poverty risk in the European Union in 2015



Source: Performed by the authors

Therefore, it can be observed that the South-East countries of Europe (Croatia, Greece, Cyprus, Bulgaria and Romania) and two countries in North Europe (Latvia and Lithuania) face the highest level of poverty in the EU. These countries have the rate of poverty risk comprised in the interval [28.9 ; 41.3]%. At the opposite end, the lowest rates of poverty risk are registered in Finland, Sweden, France, the Netherlands, Denmark, Czech Republic and Austria, with values between 14% and 18,3%. The countries from the „heart of Europe” (Belgium, Germany, Luxembourg, Poland, Slovakia and Slovenia) as well as Malta are characterised by rates of poverty risk lower than half of the EU states. They register values comprised in the interval [18.4 ; 23.4]%. The other seven states (Spain, Portugal, Ireland, Great Britain, Estonia, Hungary and Italy) have rates of poverty risk comprised in the interval [23.5 ; 28.7]%, being higher than the rates recorded for half of the countries in the European Union.

In order to determine what types of public expenses influence the rate of poverty risk, we estimated a multiple linear regression model between the rate of poverty risk and the weight of public expenses by state functions within the total public expenses. We estimated the model by means of the Backward method, which implies the introduction of all independent variables and the gradual elimination of the non-significant ones. The dependent variable is the rate of poverty risk and as independent variables we used the weight of public expenses by the ten state functions.

Of all the ten independent variables (the weight of the public expenses by the ten state functions within the total public expenses), in the regression models only four significant variables remained in the final model: the weight of public expenses for business (*Af\_ec*), the weight of public expenses for health care (*Snt*), the weight of public expenses for education (*Educ*) and the weight of public expenses for social protection (*Soc*). Thus, in the European Union, these types of expenses have influence on the rate of poverty risk. The estimated regression model is of the form:

$$R\_sar = \beta_0 + \beta_1 \cdot Af\_ec + \beta_2 \cdot Snt + \beta_3 \cdot Educ + \beta_4 \cdot Soc + \varepsilon$$

The estimated model complies with all the hypotheses specific to the regression model.

Table no. 1 The estimation of the regression model

Parameters	Estimations	Estimations <sup>1</sup>	Tolerance	VIF
$\beta_0$	130.792***			
$\beta_1$	-1.374**	-0.554	0.296	3.377
$\beta_2$	-1.683***	-0.627	0.670	1.493
$\beta_3$	-1.615***	-0.501	0.658	1.521
$\beta_4$	-1.333***	-0.950	0.332	3.010

Note: <sup>1</sup> represents estimations of the parameters of the regression equation with standardized variables  
\*\*\*, \*\*, \* - significantly for a taken risk of 1%, 5%, 10%

According to the results in table 1, there is an inverse correlation between the rate of poverty risk and the weight of public expenses for businesses, health care, education and social protection. As a consequence, the weight of the expenses in these sectors should be privileged if poverty reduction is desired. The estimated coefficients of the regression model with standardized variables highlight the fact that the public expenses for social protection have the highest influence in poverty reduction, being followed by the public expenses for health care, the public expenses for businesses and the public expenses for education.

The estimated equation of the regression model is of the form:

$$R\_sar = 130.792 - 1.374 \cdot Af\_ec - 1.683 \cdot Snt - 1.615 \cdot Educ - 1.333 \cdot Soc$$

The rate of poverty risk decreases on an average, by 1.37% when the weight of public expenses for businesses within the total of public expenses increases by 1%. At an increase of the weight for health care expenses by 1% of the total public expenses, the rate of poverty risk decreases, on an average by 1.61%. The rate of poverty risk also decreases by 1.33% when the weight of the expenses for social protection increases by 1% of the total public expenses. The determination ratio shows that 56.5% of the variation of the poverty rate in the EU countries is determined by the



simultaneous variation of the weight of the public expenses for businesses, health care, social protection and education within the total expenses.

#### 4. Conclusions

Previous studies confirm that the distribution of public expenses by state functions may reduce poverty. In order to identify the existence of a correlation between the poverty rate and the expenses by state functions we analysed the regression and correlation analysis. In the estimation of the regression model we used the weights of the expenses by state functions within the total public expenses for comparison reasons among the European Union countries.

The empirical analysis for the year 2015 for the European Union countries confirm the results of the previous research. The public expenses for social protection, for health care, education and businesses have a significant influence in the reduction of poverty risk. The greatest influence is performed by the expenses with social protection and are followed by the public expenses for health care, businesses and education. Therefore, the distribution of public expenses prevalently towards these state functions will allow the significant reduction of poverty rate.

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## The Efficiency Market Theory: A Case of Commercial Banks Stocks in Nigeria

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### Abstract

*This study focused on testing the efficient market theory in Nigeria. The quest to stimulate research interest in testing this theory using the stock price before announcement of dividends and the stock price after the announcement of dividends motivates the conduct of this study. To this end, a pilot experiment is conducted using the stock prices of five commercial banks that are listed on the Nigerian Stock Exchange market. The sample are selected based on the fact that the selected banks have concluded their financial year on or before the end of September 2017. In the result, it was observed that that announcement did not make any significant difference between the stock prices in the banking sector in Nigeria and therefore conclude that the efficient market theory does not hold in the Nigerian Stock Exchange market. We recommend that there should be consistent sensitization of investors by banks listed on the Nigerian Stock Exchange market and stock broking firms to guide them in making informed investment decisions make it difficult for individual investors and agents to 'beat the market'.*

**Key words:** Efficient Market Theory; Stock Price; Commercial Banks; Nigeria Stock Exchange.

**J.E.L. classification:** C22, G14, H54, P34

### 1. Introduction

The Efficient Market theory was developed by financial economist during the early 1960s to determine stock market efficiency. According to the theory, financial markets can be said to be "informationally efficient" (Eisenhardt, 1989; Fox and Sklar, 2009; Gómez-Baggethun et al, 2010). This means that stock prices are expected to fully reflect available information owing to the fact that it is expected that there is symmetric information in the stock market (Fama, 1970; Malkiel and Fama, 1970). It also means that the current price of a security current reflect its intrinsic value. Furthermore, because it is believed that the arrival of new information is random, the prices of stock randomly fluctuate. Hence, the market is expected to be efficient in information dissemination to investors in order to that the real prices of securities sold in the stock market reflect their intrinsic values. According to Jovanovi *et al* (2016), investors are aware of the "true" pricing models of securities at their various equilibrium values. Therefore, the resultant effect of this is to admit that Efficient Market Hypothesis test makes it possible to determine if there is symmetric information in the market and if the prices paid by investors reflect the intrinsic values of the securities.

The financial structure of a country is that within which the pattern of investment takes place (Gereffi and Wyman, 2014; Piketty and Zucman, 2014). It provides the model within which the surplus sector's savings are made accessible to the deficit sectors of the economy for investment purposes (Onodugo *et al*, 2013; Raheem *et al*, 2017). This is facilitated by the intermediation of both money and capital markets. Since the rapid industrialization in an economy largely depends on access to financial services, hence, the ability of Nigerian government to speedy-up the development of the capital market is essentially connected with the objective of facilitating the industrial development of the country (Richard and Okoye, 2013). Since the capital markets have

important roles to play in enhancing the socio-economic development of developed and developing economies, it becomes very crucial for these markets to be efficient in providing information to investors in order to reduce the possibilities of an individual investor or agent taking advantage of the system. As identified by Adeusi *et al* (2013), the Nigerian capital market facilitates the provision of the lubricants that maintains the turning wheels of the Nigerian economy by both providing the required investment funds and efficiently allocating them to the best projects. Therefore, this allocation role must be seen to be efficient before it can sustain the development of the nation's economy. If this is not the case, the study by Anyanwu and Yameogo (2015) is of the opinion that quality service of the markets will be altered and this can inhibit the pace of economic growth of the country.

In line with this, it is important to conduct a study to empirically determine the existence of the efficient market theory among Nigerian banks operating in the Nigerian stock market by examining the relationship existing between the stock price before and stock price after announcement in the banking sector in Nigeria. The study will also investigate the disparity between the stock price before and the stock price after announcement in the banking sector in Nigeria and then make appropriate policy recommendations based on the observed relationship between both set of prices using the paired sample t-test. The rest of the study is organised in the following order. Section 2 provides a brief literature review, section 3 provides the research methodology, section 4 provides the presentation of results, and section 5 provides the conclusion and recommendations.

## 2. Literature Review

In empirical literature, studies have been conducted to determine the relationship between stock returns and its determinants. For instance, Al-Majali and Al-Assaf (2014) observed that macroeconomic variables like short term interest rate, inflation, industrial production, exchange rate, and money supply are important determinants of stock prices in Jordan rather than just efficient information flow. In a similar study, Hussain *et al* (2016) found that the exchange rate, consumer price index, Treasury bill rates, and the broad money supply are important determinants of stock prices and stock returns and not just market efficiency. As confirmed by Chen (2010), stock returns are worsened by monetary shocks. Furthermore, Chiarella *et al* (2013) observed that the stock prices of firms belonging to different industries react in a different way to monetary policy announcement. It also suggested that the asymmetry observed between the stock price movement and monetary announcement is determined by the industry affiliation of the firm. Khan *et al* (2015) investigated the relationship between stock prices and the macroeconomy of six European countries; Netherlands, France, Switzerland, Germany, the United Kingdom and Italy using a quarterly data covering 1962 and 1995. It was observed that the stock prices in Germany positively enhanced the return of the stock markets in the other five European countries. Yang *et al* (2014) observed that the asymmetric asset-price movements in Asia are caused by the exchange rate elasticity of the real money balance. It was also found that fiscal revenues expenditures have strong positive impacts on stock prices in the Asian Pacific Region

Ananzeh (2014) conducted a test on the efficiency of the Amman stock exchange (ASE) market. The study examined the randomness of ASE stock prices using daily data and both parametric and nonparametric tests. The Jarque-Bera result confirmed that the daily returns of the ASE stock prices were not normally distributed, and that they were inefficient too at the weak form. Furthermore, the stationarity results confirmed the weak-form inefficiency in the stock price of ASE. It was therefore concluded that the ASE stock market is inefficient at the weak form level and hence, the efficient market hypothesis could not be ascertained for ASE. Recently, Hamid *et al* (2017) conducted an enquiry to test the weak-form market efficiency of the stock market returns of fourteen Asian economies. It was observed that the monthly returns of the stock prices were not normally distributed meaning that the monthly prices do not follow random walks in the fourteen Asian economies. This can make investors and agents take the stream of rewards through the process of arbitrage from profitable opportunities across the various markets. It is evident from the foregoing that there is dearth of studies testing the efficient market theory in the literature. Also, in Nigeria, searchlight has not been focused on assessing the efficiency of the stock market. Moreover, testing the efficient market theory using the 'price before announcement' and the 'price

after announcement' is novel, thereby throwing up more research possibilities in this area. This is the original contribution of this study to the literature.

### 3. Research Methodology

In this section, the methodology employed in this study is discussed. This includes the research design, population of study, study sample, and sources of data. The quantitative research design was adopted in this study using a purposive sampling and based on secondary data collected in accordance with the research objectives stated in the introductory section. The population of the study is made up of commercial banks in Nigeria, which have concluded their fiscal year on or before the mid-term of the year 2017. As a result of this, five commercial banks that have their financial reports ready are selected in the sample. The purposive sampling is more useful due to the nature of this empirical enquiry to test relationship between the prices before and prices after announcement for the stocks of commercial banks operating in the Nigerian stock exchange market (Barratt *et al*, 2015; Etikan *et al*, 2016). The banks include First bank, First City Monument Bank, Fidelity Bank, Guaranty Trust Bank, and Stanbic IBTC. Specifically, the data for the study were sourced from the reports of the Nigerian Stock Exchange (NSE). The data collected include prices of stocks before the declaration of dividend reports (announcement) and prices of stocks after the declaration of results (announcement).

### 4. Data Presentation and Analysis

In this section, the result of the study is presented starting with the descriptive analysis. This is followed with the presentation of the research result and the implications of findings.

#### 4.1 Descriptive Analysis

Table 1: Descriptive statistics of stock price before and after announcement

S/N	Banks	Price Before (₦)	Price After (₦)	Price Difference (₦)
1	First Banks	3.48	3.17	+0.31
2	Stanbic IBTC	21.45	21.49	-0.04
3	First City Monument Bank	1.17	1.25	+0.08
4	Fidelity Bank	0.93	0.92	-0.01
5	Guaranty Trust Bank	25.95	24.50	+1.45

Source: Author's Computation (2017)

From Table 1, First Bank of Nigeria price before and after announcement were ₦3.48 and ₦3.17 respectively indicating increase of 8.91% in the value of the stock. Stanbic IBTC recorded a decrease of -0.18% in stock price before and after dividend declaration. For First City Monument Bank, there was an increase of 6.29% in the value of stock before and after the declaration of dividends. For Fidelity Bank there was 1.07% decrease in the prices of stock prices after the announcement of dividends, while Guaranty Trust Bank, there was a 5.58% increase in the value of its stock prices after the declaration of its dividends to shareholders.

#### 4.2 Research Result and Implication of Findings

Table 2: Test of the difference between price before and price after announcement

Pair* Price Before – Price After	Price Before		Price After		t-test-Sig val.
	Mean	S.D	Mean	S.D	
	10.5960	12.10860	10.2660	11.70015	1.145--0.316

Source: Author's Compilation (2017)

In Table 2, the research result presented suggests that the significance test for the stock price before announcement and stock price after announcement as denoted by the t-test is 1.145 while its probability value as denoted by the 'sig' value is 0.316. Therefore, in line with our first objective, there is no significant difference between the price of stock before announcement and the price of stock after announcement among the selected banks in Nigeria. This means that there is significant relationship between both set of stock prices. Furthermore, as presented in Table 2, the mean of stock prices before announcement is 10.59 while its standard deviation is 12.11. Also, the average of the stock price after announcement is 10.26 while its standard deviation is 11.70. Therefore, in line with our second objective, it means that after comparing the standard deviations of both prices, we found that there is no significant disparity between the stock price before announcement and the stock price after announcement in the banking sector in Nigeria. Owing to the result of this empirical enquiry, we have confirmed that announcement does not make any significant difference between the stock prices in the banking sector in Nigeria. We, therefore, conclude that the efficient market theory does not hold in the Nigerian banking sector.

Owing to the results of this study, which did not find support for the efficiency market theory, the following recommendations are made in this study: (i) the regulatory authorities should work assiduously in making information available to investors to ensure that future investment decisions are made on the basis of symmetric information flow; (ii) every commercial bank operating in the Nigerian Stock Exchange market should be encouraged to submit financial statement bi-annually. This can help to bridge the information gap and make the market more efficient; and (iii) there should be consistent sensitization of investors by banks listed on the Nigerian Stock Exchange market and stock broking firms to guide investors in making informed investment decisions. This will also make it impossible for individual investors and agents alike to 'beat the market'.

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# Analysis of the Amendments to the Independent Auditor's Report Starting with the Auditing of the Financial Statements as at 31.12.2016

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## Abstract

*In an ever-expanding and changing market economy, audit is a tool that can provide some stability at the economic and social level, but over time there have been various cases of financial scandals and economic and financial crises that questioned the work of the auditor and led to a decrease in the confidence of the intended users in the auditors work. As a result of these events, there have been changes in the way the auditors work.*

*One such example is the amendment of the International Standards on Auditing in 2015, applicable in our country starting with the auditing of the financial statements on 31.12.2016, being an effect of the last economic and financial crisis. Changes have been made following the projects initiated by the International Auditing and Assurance Standards Board (IAASB), aiming at identifying ways to improve the International Standards on Auditing in order to restore the confidence of the intended users in the work of auditors.*

**Key words:** audit, independent auditor's report, intended users, SWOT analysis

**J.E.L. classification:** M42.

## 1. Introduction

Analyzing the evolution of the market economy, we can notice that there was always a need for assurance regarding the information contained in the entities financial statements, especially those of public interest. These needs can be met through audit services. However, over time there have been various cases of financial scandals and economic and financial crises that have had major economic influences, always questioning the work done by auditors, lowering the confidence of the intended users in the actions taken by auditors to issue an opinion on the financial statements in the independent auditor's report.

Audit in general, is a systematic process of objectively obtaining and evaluating the information or statements to assess their degree of compliance with predetermined criteria, and communication of results to interested users. The audit consists of checking and certifying the financial statements by an independent expert to provide an opinion on the facts and accuracy of the data contained therein. The role of audit is to provide users with information on the principles and accounting practices and accounting and presentation of financial statements accurate image, clear and complete financial position and financial performance of the company. (Petraşcu, 2010, p. 239).

The instrument through which the conclusions of the auditor's work are presented in the form of an opinion based on sufficient and adequate audit evidence gathered during the audit engagement is the independent auditor's report.

The interest for the form and content of the audit report is higher than ever, and it represents a reaction to the financial crisis and financial scandals of recent years. Investors are cautious because of accounting frauds, so their requirement for a revised audit report and a quality audit is considered justified. Regulators (International Auditing and Assurance Standards Board) and researchers have focused their attention on this issue, and the reforms are to appear quickly as the revised standards have been published at the beginning of 2015 and will come into effect from 2016. With these revisions, the degree of transparency of information has also been amended,



thereby increasing the degree of assurance on compliance with the code of corporate governance of the entity. (Kiss, Fulop and Cordoş, 2015, p. 10)

The purpose of this scientific approach is to identify those elements that have provided improvements to the independent auditor's report and any possible negative aspects that could not be eliminated, and these are being analyzed through a SWOT analysis of the amendments to the International Standards on Auditing, namely ISA 700 *Forming an opinion and reporting on financial statements*, and changes made to it through ISA 700 (Revised).

## **2. Methodology of scientific research**

In order to accomplish the present scientific approach, the methodology of the scientific research used presumes the presentation of the general theoretical aspects regarding the independent auditor's report by consulting the national and international literature and the conduct of a SWOT analysis to identify the positive and negative aspects brought by the new amendments to the International Standards on Auditing, notably the standards regarding the Independent Auditor's Report. Their applicability was made with the drafting of the independent auditor's report for the financial statements prepared on 31.12.2016.

## **3. General aspects regarding the independent auditor's report**

The main purpose of the work carried out by both accountants and auditors is to act in the public interest. The purpose of the audit is to increase the confidence of intended users in the information provided by the financial statements of the audited entity.

The objective of the financial statements is to present information related to an economic entity in order to substantiate the users' decisions, but their purpose may differ from one case to another due to the non-compliance with the economic events on the basis of which they were generated or because they are misunderstood, either because of the variety of factors that influence the preparation of financial statements, which will lead to different decisions. Different user requirements make it difficult to meet their informational needs. However, the risk of conflict between users of accounting information may be diminished by means of a quality reference, as well as auditing financial statements. (Berheci, 2010, p. 256)

The audit report is the document where the auditor issues his/her opinion on the financial statements of the audited entity, such that this opinion is regarded by society as having a public character. The audit report is often regarded as a "barometer" for the entity's financial situation and not only as a document that reveals reliability on the financial statements, such that the audit report is the climax of the audit process through which the auditor issues his/her opinion on the audited financial statements or the reasons not to issue them. (Heliodoro, Carreira, Lopes, 2016, p.182)

In addressing international regulations, the audit report has a triple role (Horomnea, 2010, p.225):

- Instrument for communication with users of the financial statements prepared by the entity, mainly with shareholders and the public, for substantiating economic decisions;
- A tool for confirming the confidence of shareholders and the public in the financial statements presented by the entity;
- Identification tool of responsibilities for auditor and for the management of the audited entity.

The auditor's report is the key deliverable communicating the results of the audit process. Investors and other financial statement users have asked for a more informative auditor's report—in particular for auditors to provide more relevant information to users. Research, public consultations, and stakeholder outreach, including global roundtables, indicate that enhanced auditor reporting is critical to influencing the perceived value of the financial statement audit. <https://www.iaasb.org/new-auditors-report> (Accessed on November 10<sup>th</sup>, 2017)

The main reasons for the report's lack of understanding are as follows (Heliodoro, Carreira, Lopes, 2016, p.182):

- Standardized report: as the structure of the report is according to the norms, regardless of the activity sector it is applied to, it becomes more a symbolic document than a communication



between the auditor and the user, which leads to the users not reading the audit reports.

- Technical language: the commission for the auditor's responsibilities (Cohen Commission) enhances the use of a highly standardized language which results in an ambiguity for most of the users who often lack the accountant or audit skills.

In addition to this lack of understanding the independent auditor's report, there is also an audit expectation gap that represents the discrepancy between the activities that users expect auditors to carry out and the actual activities undertaken by them. All amendments to the independent auditor's report through the revision of the International Standards on Auditing aim to determine solutions to diminish or eliminate these problems and to restore the confidence of intended users in the work of the auditors.

#### 4. SWOT analysis of the amendments to the independent auditor's report

In order to highlight the main positive aspects of the new amendments to the International Standards on Auditing in 2015 and to the independent auditor's report respectively, that were applied with the auditing of the financial statements as at 31.12.2016, as well as the issues that can be further improved, I chose to make a SWOT analysis. In this regard, we have analyzed the examples provided by the International Standards on Auditing related to ISA 700 *Forming an opinion and reporting on financial statements* and ISA 700 (Revised).

Table no. 1 SWOT analysis of the amendments to the independent auditor's report

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Reordering the issues presented in the independent auditor's report in order to present the information in a more appropriate way to the intended users, for example one of the biggest changes is that the first paragraph of it is the paragraph on the auditor's opinion.</li> <li>• Introducing a paragraph to present the key aspects of the audit, namely those issues that required significant attention during the audit, and which can provide a more complete image to intended users on certain aspects of the audited entity. This paragraph is mandatory for public interest entities.</li> <li>• Inserting <i>The basis for opinion</i> paragraph where there are provided information regarding the auditors compliance with the International Standards on Auditing, independence from the audited entity and compliance with the general audit principles, as well as assurance on obtaining all adequate and sufficient audit evidence underlying the issued opinion. At the same time, the possibility of presenting situations from the activity of the audited entity, which attracted the auditors attention that can generate some significant uncertainties and influences on the going concern of the audited entity, namely the fact that these aspects have changed or not the auditor's opinion.</li> <li>• More explicit wording of the <i>responsibilities of the audited entity</i>, namely the responsibility of management of the audited entity to prepare the financial statements in accordance with the general financial reporting framework, to assess the going concern and to conduct financial reporting supervision.</li> </ul>	<ul style="list-style-type: none"> <li>• Obligation to present the key issues encountered in the work of the auditor, only for public interest entities.</li> <li>• All the changes made do not eliminate the audit expectation gap that represents the discrepancy between the activities that users expect auditors to carry out and the actual activities undertaken by them, but only diminish it.</li> </ul>

<ul style="list-style-type: none"> <li>• One of the most important improvements to the new report is the more detailed presentation of the <i>auditor's responsibilities</i>, containing, for example, elements regarding the use of skepticism and professional reasoning, how the risks of material misstatement were identified, knowing the internal control of the audited entity, obtaining audit evidence to justify compliance by the audited entity with the entity's going concern, evaluating the fair presentation of the information contained in the financial statements, as well as communication between the auditor and those responsible for governance</li> </ul>	
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Increasing the confidence of the intended users in the auditor's work.</li> <li>• Making the best decisions by the intended users based on the provided audit reports that comply with this new form as set out by the International Standards on Auditing.</li> <li>• Reducing the audit expectation gap that represents the discrepancy between the activities that users expect auditors to carry out and the actual activities undertaken by them so that the auditor can issue an opinion in the independent auditor's report on the fair presentation of financial statements in accordance with a general financial reporting framework.</li> </ul>	<ul style="list-style-type: none"> <li>• The possibility that the changes made do not really meet their main purpose, namely increasing the confidence of final users of financial reporting.</li> <li>• The possibility that future modifications to the International Standards on Auditing and to the Audit Standard 700 will be required to meet new needs of the intended users if the present changes prove to be insufficient.</li> </ul>

Source: personal adaptation from ISA 700 and ISA 700 (Revised) (IAASB, IFAC, CAFR, 2016, 730-1046)

## 5. Conclusions

Currently, the global economy is constantly changing, being influenced by the changes made at the social, political and legislative level. An instrument created by the needs of participants in the economy to provide assurance on the quality and reliability of the information provided by the entity's financial statements is the audit. As a result of the auditor's work, based on the audit evidence collected, he formulates an opinion on the information analyzed, being expressed in the Independent Auditor's Report.

The subject of the Independent Auditor's Report is the financial statements, providing information about audited entities to different categories of users. The purpose of the Independent Auditor's Report is to provide reasonable assurance that the financial statements are free from material misstatement due to fraud or error, in order to increase the confidence of the intended users in the information provided as they will use this information in the decisions taken that will thereby influence the activity developed by them.

Among the steps taken by the *International Auditing and Assurance Standards Board (IAASB)* to amend the International Standards on Auditing, there is also a review of the Standard 700 *Forming an opinion and reporting on financial statements*, which makes significant changes in the drafting of the Independent Auditor's Report. The main purpose of these changes was to restore the confidence of the intended users in the work done by the auditors and to reduce the audit expectation gap that represents the discrepancy between the activities that users expect auditors to carry out and the actual activities undertaken by them.

The effect of these changes can only be identified after auditing more than one financial exercise, when the opinion of the intended users on the new form of the Independent Auditor's Report can be analyzed, and then identifying new improvements that can be made to the report, in order to maintain and even to increase the confidence in the work of the auditors.

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# The Time Value of Money in Financial Management

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## Abstract

*The Time Value of Money is a important concept in financial management. The Time Value of Money (TVM) includes the concepts of future value and discounted value. It is mandatory for a financial professional to know and operate the specific techniques of TVM. Within the present article we present the basic notions and illustrate their application in the field of investment projects. The case studies presented are valuable for an efficient financial management.*

**Key words:** time value of money, present value, future value

**J.E.L. classification:** G21; G32; M21

## 1. Introduction

The concept of Time Value of Money (TVM) has a large applicability in the financial management of companies, in banking, on the capital market and in day to day life.

Damodaran sed: „There are three reasons why a dollar tomorrow is worth less than a dollar today:

- Individuals prefer present consumption to future consumption. To induce people to give up present consumption you have to offer them more in the future.
- When there is monetary inflation, the value of currency decreases over time. The greater the inflation, the greater the difference in value between a dollar today and a dollar tomorrow.
- If there is any uncertainty (risk) associated with the cash flow in the future, the less that cash flow will be valued”. (Damodaran, 2010)

But why is TVM concept necessary in banking?

- People with spare funds and the desire to invest them could decide to directly lend them to borrowers in exchange for periodic repayments of the principal and interests. However, this would involve resources and costs for both the lender and the borrower:

(1) On the one hand, it is extremely difficult for the lender to have an accurate picture of the borrower’s situation in terms of guarantee, so lender would have to monitor the borrower so as to assess the security of the investment;

(2) On the other hand, the borrower might want a larger loan than the lender is able to provide or perhaps needs the money for a longer period of time than the lender can afford. (Paniego, Muñoz MLM, 2015 p 4)

The concept of TVM is used in financial management and within the selection methods of investment projects.

## 2. The concept of Time Value of Money

The TVM is the concept according to which a sum of money owned in the present has a greater value than the value of the same sum received at a moment in the future. Thus, it is taken into account the opportunity of the one presently owning the sum of money to invest it and to obtain future gains such as interest or profit. The techniques used in order to make possible comparing and

calculating the time value of money include: Compounding, Discounting, Capitalization, Indexing. Within the present paper we shall focus on the first two techniques.

„In fact, most of Time Value of Money formulas are closely related. When introducing TVM formulas, the author can classify them under different conditions and link their relationships to organize them”. (Chen J. K, 2009, p 77)

**Compounding** represents the conversion of a current (today) amount of money into a future (a future year) amount of money, through the compounding factor or the compounded interest factor. The formula is:

$$V_n = V_o \times (1 + k)^n, \text{ where:}$$

$V_o$  = the initial invested capital (the present day sum of money);

$k$  = the profitability rate requested / expected by the investor;

$n$  = the time interval existing between the present moment and the future moment for which the future value of the capital is estimated

$V_n$  = the value of the capital estimated for a certain future moment;

$(1+k)^n$  = represents the compounding factor.

„Future Value is the value at some future time of a present amount of money, or a series of payments, evaluated at a given interest rate”. (Kuhlemeyer, 2008)

**Discounting** is the technique that calculates the present value of a future sum of money (that can be received or paid). Discounting requires computing the discounted (present) value of the amount of money (cash flows) that are going to be received at future moments in time.

$$V_0 = V_n \times \frac{1}{(1 + k)^n}$$

Present Value is the current value of a future amount of money, or a series of payments, evaluated at a given interest rate”. (Kuhlemeyer, 2008)

### 3. Applying discounting in the selection methods of investment projects

The evaluation of investment projects of companies is an important part of the efficient financial management and presumes taking the following mandatory steps:

1. Quantifying the costs of the investment project is the initial deciding step, with important effects over the next steps and over the final selection decision.
2. Estimating the cash flows (CF) that will result following the implementation of the investment project.
3. Determining the cost of capital or the discount rate
4. Discounting the cash flow generated by the exploitation of the investment.
5. Comparing the present value of the estimated cash flows with the prior computed costs of the project. If the present discounted value of cash flows of the respective project is larger than the implementation costs, then the project may be accepted as being profitable. Otherwise, the project is not to be implemented.

In order to select the profitable investment projects we can use the **payback period (PP)** method or the **NPV (net present value)** method.

#### Case study 1. A model of determining the discounted payback period

In a company it is sought to increase productivity by acquiring a new technological line. There are two options to make this investment and the incoming and outgoing flows are synthesized in

Figure no. 1. Investment options

Year	Discounted cash-flow	
	Option A	Option B
Initial cost	-3500000	-3500000
1	1500000	1475000
2	1800000	1680000
3	2000000	1500000
4	1150000 + 930000	1450000 + 930000

Source: own calculations

The negative value represents the costs of the initial investment and the flows in year 4 are cumulated with the residual value of the company at the time, 930000 thousands of lei.

In the following lines we shall answer the question: "Which of the two projects should be chosen using the project selection method PP?"

For the purpose of determining the PP of the investments there must be determined the cumulated discounted cash-flows for the two options. (Figure 2)

Figure no. 2. Cumulated discounted CF

Year	Cumulated cash-flow	
	Opt. A	Opt. B
Initial costs	-3500000	-3500000
1	-2000000	-2025000
2	- 200000	- 345000
3	1800000	1155000
4	3880000	3535000

Source: own calculations

Substantiating the decision in financial management is realized after computing the payback period for each project:

**Project A:**

The 3500000 thousands of lei initially invested are paid back in two years plus a period of t1 days that we shall determine. In the third year we recuperate 1800000 thousands of lei. We calculate the daily cash flow for year 3.

$$CF_{3/zi} \frac{2\,000\,000}{365} = 5\,479,45 \text{ thousands of lei / day}$$

The 200000 thousands of lei that remain at the end of year 2, will be recuperated in:

$$t_1 = \frac{200\,000 \text{ lei}}{5\,479,45 \text{ lei / day}} = 36,5 \text{ days} \approx 37 \text{ days}$$

For project A it results a payback period of:

$$PBP = 2 \text{ years} \ \& \ 37 \text{ days.}$$

**Project B:**

After 2 years, the initial investment is not fully covered. Again, we calculate the daily cash flow for year 3:

$$CF_{3/zi} \frac{1\,500\,000}{365} = 4\,109,58 \text{ thousands of lei / day}$$

The 345.000 thousands of lei that remain unpaid at the end of year 2.

$$t_2 = \frac{345\,000 \text{ lei}}{4109,58 \text{ lei/zi}} = 83,95 \text{ zile} \approx 84 \text{ zile}$$

PBP = 2 years and 84 days.

We choose project A for implementation. Project A is the one that proves again as being more effective for the company.

### Case study 2. Model of determining the NPV of the investment

The financial flows generated by implementing an investment project are produced at different moments in time. In order to determine the profitability of an investment, we must compare the financial flows, at the same moment, a process realized taking into account the TVM. This may be accomplished through the discounting procedure by which all the generated flows of the investment are mathematically translated to the initial moment of implementation of the project. The method used in selecting the profitable project is the *Net Present Value (NPV)*.

If we have several projects that have positive NVP, we will implement the one with the greater net present value. If the NVPs are close, we will choose the project requiring a smaller initial investment.

For the calculation of NVP we have the formula:

$$NPV = \text{Net discounted cash flows} - \text{initial investment}$$

and

$$V_{netpresent} = \sum_{i=1}^n \frac{CF_i}{(1+k)^i} = \frac{CF_1}{(1+k)^1} + \frac{CF_2}{(1+k)^2} + \dots + \frac{CF_n}{(1+k)^n}$$

Thus, the NVP method does not offer decision makers any certain information regarding the order of acceptance for financing various analyzed investment projects, it only answers the question: "Are the projects acceptable?".

We must decide, by using the NPV method, if the following project is profitable taking into account the data:

Initial investment costs = 100000 EUR; Cash flow in the next 4 years: Year 1: 60000 EUR; Year 2: 80000 EUR; Year 3: 80000 EUR; Year 4: 100000 EUR. Discount rate: 12%.

We discount the estimated cash flows and we compare them with the prior computed costs of the investment. (Fig 3)

*Figure no. 3. Net present value* -EUR-

Year	Cash flow	Discounted rate (1+k) <sup>i</sup>	Discounted cash flow
1	60000	0.8928	53568
2	80000	0.7972	63776
3	80000	0.7118	56944
4	100000	0.6355	63550
TOTAL:			237838
Initial investment:			100000

*Source: own calculations*

NPV = 237838 EUR - 100000 EUR = 137838 EUR > 0, the project is profitable and may be implemented.

#### 4. Conclusions

TVM concept stands at the basis of the profitability analyses in financial management. As the PP represents the period at the end of which the initial investment equals that of the total cash flow generated by the investment project, we may say that this method is connected to the notion of investment liquidity. The investment liquidity is greater as the payback period is shorter.

Discounting, as a financial technique, allows the comparison of the revenue obtained at different moments in time with the initial costs necessary for the implementation of an investment. This technique is useful in determining the profitable projects, as it was presented in the case study no 2.

Damodaran sed: „Present value remains one of the simplest and most powerful techniques in finance, providing a wide range of applications in both personal and business decisions. Cash flow can be moved back to present value terms by discounting and moved forward by compounding. The discount rate at which the discounting and compounding are done reflect three factors: (1) the preference for current consumption, (2) expected inflation and (3) the uncertainty associated with the cash flows being discounted”. (Damodaran, 2016).

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## New Trends in Leasing Accounting

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### Abstract

*The financial leasing market in Romania has a history of about 20 years. During this short relationship, there have been impressive growth rates almost every year until 2009. By the end of 2009, the new volume per year has fallen more than 4 times compared to 2008, reaching EUR 1.3 billion in 2009 compare to EUR 4.8 billion (ALB Romania, 2017).*

*An entity shall apply IFRS 16 Leasing contracts for annual periods beginning on or after 1 January 2019. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure for accounting of the leases. The objective is to ensure that leasing companies and locators provide relevant information in a way that accurately represents those transactions. Based on this information, users of financial statements can assess the effect that leases have on an entity's financial position, financial performance and cash flows.*

**Key words:** lease, accounting, fair value.

**J.E.L. classification:** M41, G32

### 1. Introduction

The year 2017 was a good year for the financial leasing industry, so in the first nine months of the year, the leasing companies financed the value of Lei 7,627 million (EUR 1,700 million), up 14% over the same period of the previous year (Association of Financial Societies - ALB Romania, 2017). However, growth has been robust in terms of the leasing market, remarkably slowing the growth rate compared with the previous years.

The growth of the industry was mainly due to the increase in motor vehicle financing (24% year / year), with the leasing industry being positively influenced by the increase in demand for new cars that advanced 17% in the first three quarters of the year, but also for second hands that grew by 70%, according to data published (ALB Romania, 2017). Light vehicles registered a substantial increase (27% a year /year), such as farm equipment (48% year / year) and real estate financing (54% year / year), although the latter have a relatively low share of total financing of financial leasing companies. Other categories of equipment recorded declines, mainly medical (ALB Romania, 2017) .

Vehicles have increased their market share in total funding to 38% in the first three quarters of the year, gaining ground over other vehicles (34%), while equipment financing continues to account for a quarter of total new financing (ALB Romania, 2017) .

Although there is a tendency to orient the new financing to the local currency, the financing in the euro remains prevalent, holding a share of 79% of the total financing, but decreasing compared to 2015 when it accounted for 85% (ALB Romania, 2017).

### 2. Recognition of the lease

Leases are classified as financial leasing or operating leases. The classification of leasing contracts depends on the economic way of executing the transactions and not exclusively on the form of the contract. A lease transaction is financial when all the costs and benefits associated with ownership are transferred to the lessee; all other leasing operations are operational leasing

operations (IASB , 2016).

The operating leasing market recorded an increase of 12.3% in the first half of 2014 compared to the same period last year, exceeding the threshold of 45,000 units, according to a press release of the Association of Operating Leasing Companies (ASLO). In the first six months of the year, approximately 5,400 new vehicles were registered by operating leasing companies, more than double the first half of last year, accounting for more than 15% of total new car registrations and light commercial vehicles. The evolution recorded in the first six months of 2014 overlaps over a period of economic growth and the resurgence of car sales, says ASLO (ALB Romania, 2017).

According to data centralized by the Association of Operating Leasing Companies, LeasePlan Romania, ALD Automotive, Porsche Mobility, Arval Service Lease Romania and Fleet Management Services were among the top five companies. ASLO estimates that the total operating lease market could reach 47,000 units at the end of 2014, given the interest in operational leasing and fleet management services, manifested by an increase in the number of requests from car fleet companies (ALB Romania, 2017).

The demand for operational leasing and fleet management has increased significantly in the first half of this year, and the results have not been delayed, with the trend being materialized by the conclusion of a larger number of contracts than in 2013. This has contributed both re-launching investments by increasing the absorption rate of European funds and increasing competitiveness, which has led to a reduction in costs for end-users, according to ASLO President Daniel Ivan (ALB Romania, 2017) .

At the level of the members of the association, which represent 90% of the total market, the full operational leasing (fleet financing and fleet management) dominates with a 69% share, followed by fleet management 23%, the rest representing operational leasing ).

According to ASLO, the trend is a migration of preferences to small and compact cars with a 1.6-liter engine and low operating costs.

### **3. Cost-based model**

To apply the cost model, a user must assess the use of the asset at the historical cost less the cumulative depreciation in the account and any additional impairment losses that are adjusted for the lease revaluation resulting from the lease (IASB, 2016) .

The operating leasing market exceeded 62,000 units in management at the end of the first quarter of 2017, up 3% from the end of 2016, according to data announced by the Association of Operating Leasing Companies (ASLO) (ALB Romania, 2017) .

During January-March, nearly 4,300 vehicles were registered by operating leasing companies, accounting for 16% of all new registrations, of about 26,000 cars and light commercial vehicles.

The results of the first quarter of 2017 confirm the positive evolution of the operational leasing and fleet management market, in line with the expectations for the end of the year. Increase of the full service leasing share by over 8% over the similar period of the year the past is proof of increasing market maturity and adoption of the benefits of our core product, according to Dan Boiangiu, ASLO President (ALB Romania, 2017). Another indicator that marks a significant increase is the share of operating lease registrations in total new vehicle registrations, which reached 16% compared to 13.3% as it was at the level of the whole year 2016. This share by 20% large, reconfirms both the growing popularity of our product among local companies, including SMEs, as well as the significant contribution of our industry to increasing the pace of company renewal. This is all the more important as the removal of stamps has significantly reduced the share of new vehicles in total new registrations in Romania, he added (ALB Romania, 2017).

According to data centralized by the Association of Operational Leasing Companies, LeasePlan Romania, ARVAL Service Lease Romania, ALD Automotive, Porsche Mobility and BCR Fleet Management are among the top 5 companies (ALB Romania, 2017).

The members of the association account for over 97% of the total market. The portfolio structure (at the association level) consists of full operational leasing services (fleet financing and management) with a 76% share, followed by fleet management 16%, the rest representing operating leasing without administration services (ALB Romania, 2017).

Starting with 2019, for companies reporting IFRS financial statements, a new standard - IFRS 16 *Leases* - will enter into force with 2018 training (IASB, 2016). According to expert estimates, these changes will not diminish the benefits offered by the operational leasing product.

#### **4. Classification of leasing contracts**

A lessor must classify each of its lease contracts either as an operating lease or as a finance lease. A lease is classified as a finance lease if it transfers substantially all the risks and rewards of ownership over a underlying asset. All other leasing contracts that are not financial leases will be classified as operating leases (Nicolae, 2010).

The problems raised by the sale and leaseback contracts sometimes make the leasing companies difficult, according to an analysis of ALB Romania (ALB Romania, 2017). The criteria for qualifying a leasing contract as financial or operational differ from the accounting perspective to the fiscal one. Although the two sets of criteria provided by the Order of the Minister of Finance number 1804 from 2014 and according to the Fiscal Code, respectively, seem to be very similar, there are some differences of nuance that can lead to the different classification of the same leasing contract from the accounting and tax point of view respectively.

A lease may be recognized as an operating lease if it does not meet any of the conditions listed above. For example, if, under a sale and leaseback operation, the lease is financially accounted for as a financial asset, the transaction would be treated as a simple financing operation - generating only interest and commission charges paid in the leasing contract.

On the other hand, if the same leasing contract concluded in a sale and leaseback operation were classified as operational from a tax point of view, the sale and leaseback operation could be treated, at least in terms of tax, as a sale followed by a lease of the same asset, generating both incomes and expenses different from those recorded in the accounting. Under these circumstances, the question arises as to whether the differences in tax treatment from the accounting one would, in the calculation of corporation tax, generate similar items of income and expense. On an affirmative answer, there is a need for a double register of youngsters - for accounting and tax reporting, which would further aggravate the administrative obligations of Romanian companies.

#### **5. Initial assessment of lease payments included in the net lease in lease**

At the date of commencement of the lease, the lease payments included in the net lease valuation include the following payments related to the right to use the underlying asset during the lease term and which are not paid when the leasing contract commences (Nicolae, 2010) fixed payments (including fixed payments to the fund), minus any debt arising from leasing contracts.

If the lessee has calculated the present value of the minimum lease rates using the interest rate specified in the lease, such a present value will normally be less than the fair value of the leased property (net grant and tax credits) at the beginning of the transaction of leasing (Nicolae, 2010). During the leasing operation, each lease rate will be allocated between a debt reduction and the financial expense so as to produce a constant periodic rate of residual debt throughout the amortization period. The asset initially recorded is depreciated in a manner consistent with that used by the lessee for the assets it holds (Nicolae, 2010).

Depreciation is usually based on the useful life of the leased asset; or, for the shortest duration between the duration of use and the duration of the leasing contract. Conditional rentals are generally not included in the minimum lease rates and therefore are not accounted for as part of the capitalized leased asset (Nicolae, 2010). They should be credited over the periods they are related to. Minimum lease payments exclude contingent rentals (part of the lease payment whose settlement depends on an event, other than the passing of time), but includes any payment due by the lessee.

It is important to note that from the point of view of the quality of the national portfolio, according to the National Bank of Romania, a decrease in the share of overdue and doubtful debts in the total net asset value by 14.5% is recorded in the NBR registered in the Special Register (ALB Romania, 2017).

The evolution of the Romanian leasing market follows the same upward trajectory of the entire balance of commitments granted by the IFNs, a balance that registered an annual growth of 14.2% according to the NBR statistics (ALB Romania, 2017).

Recovery of the leasing business is a feature at European level, particularly evident in the car leasing segment, with most of the national markets registering double digits, while leasing equipment financing indicates growth discrepancies between countries. The volume of new leasing finance for cars increased by 15.9% in 2015 compared to 2014 (ALB Romania, 2017).

A slower but still vigorous overall growth of 11.3% was for commercial vehicles. The IT & Office equipment segment improved well on average, increasing by 10.9%, largely due to significant increases in only a few countries(ALB Romania, 2017).

## 6. Accounting for a financial lease in the user's account

At the commencement of the term of the lease, lessees shall recognize the finance lease in their balance sheet as assets and liabilities at an amount equal to the fair value of the leased asset or the present value of the minimum lease payments if the latter is smaller. For calculating the present value of the minimum lease payments, the implicit interest rate in the lease is considered as an update if it can be determined. Otherwise, the marginal interest rate of the lessee should be used. Any direct lessee's direct initial costs are recognized as assets (Nicolae, 2010).

Lease payments have to be divided into leasing financing costs and reduction of unpaid debt. Funding costs should be allocated over periods over the lease term so as to obtain a constant periodic rate of interest on the outstanding balance of each period (Nicolae, 2010).

A finance lease gives rise to amortization expense and financial expense in each accounting period. The depreciation policy for leased assets should be consistent with that applied to depreciable depreciable assets, and depreciation recorded should be calculated based on the provisions of IAS 16 Tangible assets. If there is no reasonable assurance that the lessee will acquire the right of ownership until the end of the lease term, the asset must be fully depreciated for the shortest duration of the lease term and the useful life of the lease (Nicolae, 2010).

### Example

The entity Subalroxl purchases a car under a finance lease in 2016 under the following conditions: CIP value (excluding taxes) = 34,000 Euro; DDP (with taxes included) = 40,800 Euro; Advance (CIP) = 10,000 Euro; Contract duration = 5 years; Annual interest rate = 6.5%; Annual CASCO insurance rate = 6%; Exchange rate: 4.5 lei / Euro.

CIP value (excluding taxes) = 34,000 Euro x 4,5 lei = 153,000 lei

Advance (from CIP) = 10,000 Euro x 4,5 lei = 45,000 lei

Funded volume (Capital) = €34,000 - €10,000 = €24,000

Monthly capital / debt ratio = 24000 euro / 60 months = 400 Euro x 4.5 lei = 1800 lei;

Interest rate = 24.000 Euro x 6.5% = 1560 euro / 12 months = 130 Euro x 4.5 lei = 585 lei

Monthly CASCO insurance rate paid = 40,800 euro x 6% = 2448 euro / 12 months = 204 Euro x 4,5 lei = 918 lei

Accounting records:

1. Advance payment receipt:

Table no. 1 Sales on credit vendor

Debit	Credit	Amount
%	Providers of tangible assets	<u>54,000</u>
Suppliers borrowers		45,000
VAT deductible		9,000

Source : Author processing

2. Advance payment:

Debit	Credit	Amount
Providers of tangible assets	Balances with banks	<u>54,000</u>

Source : Author processing

3. Car registration:

Debit	Credit	Amount
Means of transport	Other borrowings and assimilated debts	153,000

Source : Author processing

4. Invoice for the monthly installment - capital + interest:

Debit	Credit	Amount
%	Providers of tangible assets	2,862
Other borrowings and assimilated debts		1,800
Interest charges		585
VAT deductible		477

Source : Author processing

5. Rate invoice payment:

Debit	Credit	Amount
Providers of tangible assets	Balances with banks	2,862

Source : Author processing

6. Invoice Insurance CASCO:

Debit	Credit	Amount
Expenditure on insurance premiums	Providers	918

Source : Author processing

7. Payment of Invoice CASCO insurance:

Debit	Credit	Amount
Providers	Balances with banks	918

Source : Author processing

8. Calculate and record depreciation:

Annual amortization =  $153,000 / 5 \text{ years} = 30,600 \text{ lei} / 12 \text{ months} = 2,550 \text{ lei}$

Debit	Credit	Amount
Operating Expenses on Depreciation of Fixed Assets	Depreciation of machinery and equipment	2,550

Source : Author processing

## 7. Conclusions

Financing and operational leasing is an interesting alternative for all categories of entities in the Romanian economy. In the current period, the chances of a sustained increase in the volume of leasing transactions are seen.

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## Comparative Analysis of the Social Assistance System in Romania vs. Hungary

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### Abstract

*The problems of social assistance are addressed and solved within the national framework of each state, social assistance by its nature having an internal character. Social assistance is being restructured and develops according to the existing situation of the population and the local and regional traditions, but it also takes into account the international regulations. According to the provisions of art. 22 of the Universal Declaration of Human Rights states that any person, in his capacity as a member of society, has the right to social security (social protection) and therefore to social assistance; she is entitled to achieve the economic, social and cultural rights indispensable for her dignity and for the free development of her personality through national effort and international collaboration, taking into account the resources of each country.*

**Key words:** social assistant, health system, employed population

**J.E.L. classification:** H55

### 1. Introduction

Romania's accession to the EU marks once more the opportunity to build a modern social system. Under the conditions of the general transformation of the Romanian society, from the key institutions and flexible structures in motion, to the opening of the population to change, the promotion of an efficient social model, based on the principles promoted by the EU proves to be a responsible and necessary act for our country .

The need to build up the social system in our country is primarily driven by different risk areas such as pension, sickness and unemployment benefits, providing protection against poverty for a large number of people at risk (Buzducea, Doru, 2009).

The general objective of building a socially successful model in Romania is to advance the reform of the social sector by addressing the social problems of integration with a strong political and strategic emphasis, provoking debates and discussing policy recommendations (Cojocaru, Ștefan, 2006). A European learning process is embedded, crystallizing a complex, flexible and open method of coordination of actors dedicated to the European integration of Romania. All activity is a contribution to the development of the European Social Strategic Framework (Ionescu, C, Toderaș, N, 2007).

Achieving a social model that is fully compatible with the requirements of the European Union and subsequently having the capacity to integrate new elements resulting from best practices in the Community space in the future requires an effort to eliminate the distortions that occur in the use of human resources and ensuring a higher quality of the social assistance sector (Ciumaș, C., Văidean, V.L,2011).



## **2. Analyzing the level of development and specialization in Romania Employment in Romania**

In our country, from 2005 to 2009, the employed population registered a decrease of about 400 people, then by 2013 it increased significantly, reaching 9369.7 persons (Major D, 2009). In 2014, there was again a decrease followed by a slight increase in population, these fluctuations also reflecting the population occupied in health and social care, where values also fluctuated from one year to the next (Payne, Malcom, 2012).

### **Gross Domestic Product in Romania**

Total Gross Domestic Product recorded a significant increase over the analyzed years from RON 80.3 billion in 2005 to 512.5 RON in 2015. This led to an increase in the Gross Domestic Product and in the health sector and social assistance.

### **Comparative analysis between the two states**

Hungary is a parliamentary republic located in the center of Europe. It neighbors Serbia to the south, Croatia and Slovenia to the southwest, Austria to the west, Slovakia to the north, and Romania to the east. The capital of the country, Budapest, is also its largest city and the seventh city in the EU by population (1.7 million inhabitants).

The quality of medical services has not improved significantly in recent years, although the system has received more and more money. CNAS's budget has risen at an explosive pace since the beginning of 2010.

According to the data of the National Insurance and Health House, the budget granted in 2010 was 4.17 billion lei, thus reaching up to 16.9 billion lei in 2015. Hungary has approximately 200 hospitals and a number about 72 thousand beds.

In 2012, according to statistics, Hungary's health service contributed 4.17% to GDP, 1.17% higher than Romania. According to the Hungarian Health Insurance Authority, 41% of hospitals are providing information brochures to people about their rights as patients and more than half of hospitals provide this information online.

In 2012, a hospital room in Hungary had an average of 3.6 beds funded by the National Health Insurance Fund, and in 2013 it fell to 3.5 beds. In a hospital, there were on average 7 single-bed rooms, funded by the same source, and 28 double-bed rooms in 2013, 3% more beds than in 2012.

In conclusion, we can say that the Hungarian health and social assistance system is clearly superior to the Romanian one through the services offered, by the degree of government involvement and, last but not least, by the aspect and standards of public and private institutions.

For the analysis of health services and social assistance in Romania compared to Hungary, we have chosen as a comparison indicator the number of beds in hospitals.

## **3. Relative specialization index calculation for Romania and Hungary**

### **Employed population**

Total employment in Hungary in 2015 =  $PO_t = 10.0$  thousand people.

Employment in the health service is 8.8%.

Employment in health service =  $PO_s = 880\ 000$  people

From all this it follows that the share of the population occupied in the health service in Hungary in the year 2015 is:  $\frac{880}{10.000} * 100 = 8,8\%$

Index of relative specialization in the health service and the Service Health Hungary and Romania:  $4,36\% - 8,8\% = -4,44\%$

### **The gross domestic product**

Hungary's total GDP in 2015 was RON 157.275 billion

GDP in the health service is RON 13.9 billion.



The share of GDP in the health service in Hungary in 2015 is:  $\frac{13,6}{156,284} * 100 = 8,70\%$

Index of relative specialization in the health service and the Service Health Hungary Romania:  
 $10,17\% - 8,70\% = 1,47\%$

#### 4. Forecast of development of social services

In this chapter we predict employment in health and social welfare and GDP. For both the employed population and the Gross Domestic Product, we will use two prediction methods: the average growth method and the linear trend method.

#### Employment in health and social system

Table no. 1. Average earning method for employed population

Years	$y_i$ - thousands of people-	$t_i$	$\hat{y}_i = y_1 + \bar{\Delta} * t_i$	$(y_i - \hat{y}_i)^2$
2005	341,8	0	341,2	0
2006	346,4	1	347,38	0,71
2007	357,2	2	353,56	22,52
2008	357,5	3	359,74	1,12
2009	366,9	4	365,92	0,48
2010	352,7	5	372,1	364,88
2011	378,4	6	378,28	0,522
2012	373,6	7	384,46	89,51
2013	354,8	8	390,64	1342,52
2014	393,8	9	396,82	3,37
2015	402,7	10	403	0
<b>Total</b>	<b>4042,7</b>	-	-	<b>1825,451</b>

Source: National Institute of Statistics: www.insse.ro

The applied calculation formulas are:

$$\bar{\Delta} = \frac{y_n - y_1}{n - 1} = \frac{403 - 341,2}{11 - 1} = 6,18 \text{ thousand persons, where } \bar{\Delta} \text{ represents the average growth rate;}$$

$$\bar{y} = \frac{\sum y_i}{n} = \frac{4030,3}{11} = 366,39 \text{ thousands of people, where } \bar{y} \text{ represents the average of the series;}$$

$$A = \sqrt{\frac{\sum (y_i - \hat{y}_i)^2}{n}} = \sqrt{\frac{14719,02}{11}} = 12,88, \text{ where } A \text{ is the mean square deviation;}$$

$$v = \frac{A}{\bar{y}} * 100 = \frac{12,88}{366,39} * 100 = 3,51\%, \text{ where } v \text{ represents the coefficient of variation; the value of } 3,51\% \text{ being less than } 5\% \text{ shows that by this method the series is well adjusted.}$$

Table no. 2. The linear trend method for the employed population

Years	$y_i$ - thousands of people -	$t_i$	$t_i^2$	$y_i * t_i$	$\hat{y}_i = a + b * t_i$	$(y_i - \hat{y}_i)^2$
2005	341,8	-5	29	-1706	342,09	1,1892
2006	346,9	-4	18	-1386	346,95	0,208
2007	358,2	-3	11	-1074,9	380,97	513,87
2008	358,9	-2	5	-717,4	356,67	4,1208
2009	369,3	-1	2	-366,6	361,53	25,812
2010	354,4	0	0	0	366,39	179,34
2011	378,4	1	3	379	371,25	60,11
2012	374,4	2	5	750	376,11	1,238
2013	353,9	3	11	1062	380,97	727,41
2014	391,7	4	19	1580	385,83	84,11

2015	401,6	5	28	2015	390,69	151,56
Total	4033,8	0	118	535,1	-	1748,742

Source: National Institute of Statistics: www.insse.ro

The applied calculation formulas are:

$\hat{y}_i = a + b * t_i$ , where:  $a = \bar{y} = 366,39$  thousands of people

$$b = \frac{\sum y_i * t_i}{t_i^2} = \frac{535,1}{110} = 4,86$$

$$A = \sqrt{\frac{\sum (y_i - \hat{y}_i)^2}{n}} = \sqrt{\frac{1748,737}{11}} = 12,60, \text{ where } A \text{ represents the average square deviation;}$$

$v = \frac{A}{\bar{y}} * 100 = \frac{12,60}{366,39} * 100 = 3,43\%$ , where  $v$  represents the coefficient of variation; the value of 3, 43% being less than 5% shows that even by this method the series is well adjusted.

### The gross domestic product

Table no 3. Method average GDP growth rate

Years	$y_i$ - Billion RON -	$t_i$	$\hat{y}_i = y_1 + \bar{\Delta} * t_i$	$(y_i - \hat{y}_i)^2$
2005	1,98	0	1,96	0
2006	1,62	1	2,78	1,53
2007	1,93	2	3,6	2,65
2008	2,53	3	4,42	3,96
2009	2,59	4	5,24	7,23
2010	2,81	5	6,06	11,08
2011	3,42	6	6,88	12,39
2012	11,71	7	7,7	15,68
2013	10,33	8	8,52	2,85
2014	10,27	9	9,34	0,73
2015	10,21	10	10,16	0
Total	62,85	-	-	68,5

Source: National Institute of Statistics: www.insse.ro

The applied calculation formulas are:

$$\bar{\Delta} = \frac{y_n - y_1}{n - 1} = \frac{10,17 - 1,96}{11 - 1} = 0,821 \text{ billion RON where } \bar{\Delta} \text{ represents the average growth rate;}$$

$$\bar{y} = \frac{\sum y_i}{n} = \frac{58,78}{11} = 5,34 \text{ billion RON, where } \bar{y} \text{ is the average of the series;}$$

$$A = \sqrt{\frac{\sum (y_i - \bar{y})^2}{n}} = \sqrt{\frac{58,1}{11}} = 2,29, \text{ where } A \text{ represents the mean square deviation;}$$

$v = \frac{A}{\bar{y}} * 100 = \frac{2,29}{5,34} * 100 = 42,88\%$ , where  $v$  is the coefficient of variation; the value of 42.88% being less than 5% shows that through this method the series is well adjusted.

Table 4. The linear trend method for the Gross Domestic Product

Years	$y_i$ - Billion RON -	$t_i$	$t_i^2$	$y_i * t_i$	$\hat{y}_i = a + b * t_i$	$(y_i - \hat{y}_i)^2$
2005	1,98	-5	26	-9,84	53,34	2639,90
2006	1,62	-4	17	-6,22	54,42	2796,29
2007	1,96	-3	11	-5,97	55,50	2865,46
2008	2,51	-2	6	-4,88	56,59	2933,30
2009	2,58	-1	2	-2,75	57,68	3039,31
2010	2,81	0	0	0	58,77	3140,48
2011	3,41	1	1	3,39	59,86	3192,25
2012	11,71	2	4	23,36	60,94	2428,51

2013	10,2	3	9	30,69	62,03	2685,31
2014	10,5	4	16	40,84	63,12	2800,52
2015	10,3	5	25	50,88	64,21	2920,32
<b>Total</b>	<b>65,81</b>	<b>-</b>	<b>110</b>	<b>119,68</b>	<b>-</b>	<b>31441,65</b>

Source: National Institute of Statistics: [www.insse.ro](http://www.insse.ro)

The applied calculation formulas are:

$\hat{y}_i = a + b * t_i$ , where:  $a = \bar{y} = 58,78$  Billion RON

$$b = \frac{\sum y_i * t_i}{t_i^2} = \frac{119,68}{110} = 1,088, \text{ where } \hat{y}_i \text{ is the adjusted series;}$$

$$A = \sqrt{\frac{\sum (y_i - \hat{y}_i)^2}{n}} = \sqrt{\frac{31441,65}{11}} = 2858,33, \text{ where A represents the average square deviation;}$$

$$v = \frac{A}{\bar{y}} * 100 = \frac{2858,33}{58,78} * 100 = 4862,75\%, \text{ where v represents the coefficient of variation; the value of } 44.66\% \text{ being much higher than } 5\% \text{ shows that even by this method the series is not well adjusted.}$$

## 5. Conclusions

In Romania, the number of impact studies on the adoption of normative acts regulating various social benefits is relatively low and predominantly directed towards the study of certain social benefits, most often the guaranteed minimum income. We note the consistency of making statistical reports rather than critical impact and evaluation analyzes, identifying general trends and possible adverse effects of adopted social protection measures.

However, statistical reporting is only a very useful first step in the evaluation process and is not a real monitoring of the factual situation. Assessing the evolution of the national social assistance system in Romania leaves the impression that this system is developed. In fact, at the base of the pyramid, where we should encounter institutions, services, benefits and social assistance specialists, we find a chronic underdevelopment of these structural elements.

One of the options in reforming social policy has been the methodology for setting the level of benefits both from the point of view of reporting on existing resources and from the point of view of the expected effect on the beneficiaries.

To speed up the 100% implementation and operation of the management information system in the field of social benefits in order to achieve correct administration, accurate verification of the way in which benefits are provided, etc. it's necessary. The development of a permanent system of monitoring and evaluating how to implement social benefits legislation through the existence / development of system-appropriate impact indicators, to be interpreted independently and professionally, could lead to the emergence of viable proposals for improving social policies in Romania and especially those on the achievement of the Europe 2020 target.

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## European Fiscal Policy and Taxation System in Italy

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### Abstract

*The budget of all countries, large or small, developed or developing, are supplied mainly from compulsory levies. Everywhere, so budget revenues is about tax, by compulsory taxes. Collection of these requirements may be: tax (tax on the exact meaning of the word) or para (contributions). It can be seen that the range of fiscal instruments is very wide and, as things stand everywhere, does not seem to stop here. This is because fiscal instruments are less politically risky and more financially profitable. In this regard, the number and size of taxes, there are countries that are part of the so-called tax haven countries and living a true fiscal nightmare.*

**Key words:** taxes, fiscal instrument, fiscal policy, taxation system

**J.E.L. classification:** E62, F36

### 1. Introduction

As an essential component of economic policy of each state fiscal policy is contributing to the financing of public expenditure, thus becoming an attribute of national sovereignty. (Angelescu C, 2006).

From this perspective, we are always looking for the answer to whether or not there is a European fiscal policy.

European fiscal policy cannot institute a global standardization on Member States' tax systems (Baldwin R, Wyplosz C, 2006).

The action of European fiscal policy can be observed, on the basis of the common objectives set out in the treaties concluded..

Significant tax differentiation in EU countries determines the involvement of the European Commission through fiscal coordination, not to attack national fiscal sovereignty, but to enable companies and individuals to take full advantage of the single market, by supporting the overall EU policy objectives and the alignment of policy EU tax and other employment policies, consumer protection, energy, the environment, etc (Marin D., 2006).

The different structure of national tax systems in the UE, determine the appropriate choice of taxes and fees that will fall under the tax harmonization and those that will be subject to tax coordination.

The term harmonizing means the action of (harmonizing) (respectively harmonizing), making it or being consistent (Popeangă Vasile, Popeangă Vasile Nicolae, Crăciunescu Daniel Viorel, 2006).

The notion of coordination is the action to coordinate and its outcome. Coordination (coming from the fr coordinator) involves agreeing the parts of everything, guiding in a unitary sense a series of activities for the same purpose in order to obtain a coherent ensemble (Brezeanu P.,2005).

## **2. The tax system in Italy**

The Italian tax system has experienced a major change, with further changes being made. Thus, the characteristics of the new changes in the Italian tax system are:

- the rate of tax on profit was reduced to 27%;
- capital gains were cleared by 95%;
- the dividend tax was replaced by an exemption of 95% for companies registered in Italy or abroad;
- the introduction of a global tax by which both Italian and foreign companies taken together can calculate a single source of taxable income for the parent company resident in Italy;
- exemption from capital gains reinvested in start-ups.

There is no wealth tax as such, but there are stamp duties that are charged on bank accounts and securities (0.1%, with an increase to 0.15 in 2013). Replacing the property tax will result in significantly higher revenue due to higher values of land and also repeal the exemption of owner's residence in 2008.

## **3. Personal income tax**

Taxation of individuals' income is now governed by consolidated corporate tax. (Testo Unico delle imposte sui Redditi - TUIR). Now there is no double taxation.

Individuals who are not resident in Italy will be taxed only for the income they will earn in Italy. Progressive tax rates (from 23% to 43%) will apply to income.

## **4. Property Transfer Fees**

With the new changes in the new Italian tax code, the transfer of ownership begins to be subject to taxation in accordance with cadastral registers.

There is a unique tax of 168 EUR on the transfer of ownership, but also other quotas: proportionate to the value of the transferred asset (3%) and the 15% share of the registration and stamp duties.

## **5. Property Tax**

Annual municipal property tax is due by the owners and holders (resident in Italy or abroad), with real rights over immovable property situated in Italy, except households.

The tax base of this tax is represented by the value of the property taken from the property registers, a value that results from the multiplication of the income obtained from the property with a legal data.

The rate is set by each municipality within a period ranging between 0.4% and 0.7%.

## **6. Inheritance tax**

Inheritance tax applies to transfers of assets or rights on death (except in transfer state securities Italian claims to the Italian State or units of investment funds in the amount of any Italian government securities held). Inheritance tax is levied on the value of individual shares allocated to each heir, at a rate ranging between 4% and 8%.

## **7. Taxes on donations**

The new Italian tax code will charge a tax on donations, transfers of assets or free transfers, which provides for certain restrictions on the destination of funds. If real estate, mortgage imposta (2%) and cadastral imposta (1%) are due in addition to the inheritance tax or donor. As regards the transfer of ownership or majority of shares in companies, it is exempt from donation tax. Beneficiary of the control is necessary to continue to maintain for five years from the date of transfer.

## 8. Conclusions

In a global economy in which labor and capital movements go beyond national borders, the fiscal policies adopted by each state have become increasingly important in attempts to attract international financial resources. In recent years, emerging countries have sought to attract foreign investment by reducing taxation, while developed countries impose high taxation in order to protect the national economy.

Although there are many who argue that in a modern society and decent is better than the rich to pay more will not solve any problem. Trying to extract too much money from taxpayers by avalanche gear cumbersome tax, finance ministry incentive to find other ways to disguise income (Brezeanu P., 2005). More specifically the wealthy and high income have the means and expertise to make (by companies, investments, insurance) and State vainly chasing after them, that will always be an inventive step; This shows that the higher the tax system is more complicated and progressive, the more he will push harder, paradoxically, those with low incomes.. The more he includes several exceptions, deductions, special arrangements, etc., so it can be easily exploited by the wealthy, who have the advantage of material, knowledge and a strong motivation to do so. This explains why a simpler tax, light and neutral in Russia led to a spectacular increase revenues to the state budget.

In conclusion, it can be said that the Italian tax system is always characterized by intense normative production, from the fiscal policy alternative, due to the frequent succession of governments with different political orientations and to their consequence by the lack of tax programs, which will take time, not contributed to an efficient pursuit of the objectives of efficiency and fiscal correctness, initially required.

The future objectives of the Italian Fiscal System are as follows:

- liberating the country's resources by the fiscal weight;
- reducing investment and employment, while respecting the need to strengthen the balance sheet.
- interventions to combat evasion;
- simplification of the tax system;
- better fiscal transparency.

The purpose of Personal Income Tax was to achieve the principle of universality and progression, worsening of the incomes and the exemption of the small ones, the opposite happened, and the tax on the income of individuals was transformed into a fragmented and selective tax, where progressiveness is only adjacent with labor incomes, with a reversal of the starting point and a qualified contronature description.

Behind the facade of general income tax complexity, or chaotic multiplied substitution regime and exceptional rules, without any idea recognized by tax design.

It is therefore necessary to exploit the possibility of uniting the consensus around another hypothesis that could be achieved provided it goes beyond the dogma of the gradual rates, in favor of a progressive deduction, obtained with flat tax: a fixed rate tax.

As has already happened in other countries (Germany and Poland), political debates have brought to the forefront a flat tax that Italian politicians say would bring enormous benefits, especially for the Budget.

In fact, the axiom of this lower-cost taxation methodology, and the same for all, would correspond to the outflow of all undeclared revenues in order to avoid the taxing mechanism considered excessive and penalizing for taxpayers. By the effect of the application of the single tax rate, to the surface with a less onerous tax system, guaranteeing higher tax revenues.

In Western Europe, the single tax rate cannot have the same success as the eastern countries, but without any doubt the tax competition, even with the consequences of introducing this kind of taxation, is burning, especially for companies' taxes.

This is an inevitable consequence of the relocation of societies, where they are subject to a more favorable tax regime. Societies tend to transfer where environmental conditions are more welcoming, especially fiscal and single tax rates with more simplified and lower tax rates may be an important element of migration.

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# Designing a Complete Model for Evaluating Companies in "The Modern Economy" and Refining Financial-Accounting Information

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## Abstract

*The limitations of current evaluation methods call for the expansion of approaches to identifying new solutions for representing the value of ICT companies. Features "The modern economy", the imperative of eliminating the inflection points, the necessity formulating an equidistant definition of value and the absence of a degree correlation refining the accounting regulations on intangible assets with development economic and social based on intellectual capital are as many arguments for the emergence of a new representation of value. The new FMV (Future Market Value) method provides economic information in its dynamics and value in its evolution .Concerns practitioners in the field over the last decade reflect a consistency with the premises of our research.*

**Key words:** evaluation, intangible assets, goodwill, intellectual capital

**J.E.L. classification:** M41, G11

## 1. Introduction

Within this chapter we will realize the logical construction of a complete model of a companies in the "new economy" stricto sensu for the companies in the field IT, and lato sensu, of companies that record an important amount of invisible (or intangible) assets. The investigative analysis carried out in view of achieving the above goals will allow the identification of specific factors determines the performance of companies in the "new economy," will validate its existence a new evaluation model for these companies and will isolate and exemplify it the implications for the presentation of the information in order to provide the data for applying the new model. Companies whose operations are based on knowledge have identified in the theories of intellectual capital the opportunity to report intangible resources that are not disclosed in the financial statements in related documents by means of particular mechanisms and methods (Andrikopoulos, 2005). These related documents have the quality to provide information additional to those permitted by international accounting standards (de example IAS 38), while raising the issue of relevance from the point of view of value of financial statements complying with national or international standards accounting. (Zambon et al. 2003, p. 15) seeks the source of this problem on three dimensions: a first dimension consisting in the absence of a conceptual framework for identifying, collecting and analyzing data for purposes the company's internal management; a second dimension of reporting external financial assets, represented by the difficulty the determination of costs for the recognition of intangible assets and the third one dimension, absent at the time of study, of conceptual frameworks, instruments and agencies for collecting microeconomic data and Macroeconomic. The difficulty in determining costs is resumed by ( Bessieux - Ollier et al. 2006) which emphasizes the restrictiveness of the recognition required by IFRS, making it the main impediment of the recognition of intangible assets relative to human capital and identifies 5 future research directions (Bessieux-Ollier et al., p. 50):

- integrating existing guides into a commonly agreed framework
- worldwide allowing the valuation and publication of intangible assets;



- studying the efforts to innovate personal experience and skills to improve the competitiveness of enterprises;
- developing models that allow structured information on intangible assets and representation of how they interact with other assets of companies in value creation processes;
- assessing organizational factors that stimulate or inhibit transmission of knowledge;
- researching the way in which the assessment of intangible assets responds the needs of companies and, at the same time, the need for standardization of the information published in the ICS.

We note that the first three directions suggested by Bessieux-Ollier et al. correspond our investigation during this chapter. Importance of generators value not captured by financial-accounting information is also noted by Lee and (Lin .2010) showing the relationship between the company 's governance skills and market value of Taiwanese companies. In the same range, we retain the study conducted by (Kallunki et al. 2007) whose efforts are directed at determining the influence of the R & D activities on the market value of the companies in merger and acquisition processes. In our opinion, the examples above provides the basics necessary for the development of our study proposes to identify the main terms responsible for company performance in the ICT sector thus directly contributing to the determination of a new one evaluation model.

## 2. Literature review

Investigation of specialized literature and aspects encountered in practice reveals a number of prerequisites commonly accepted as follows:

1. observing a relationship between the information included in the financial reports and market value of tradable securities issued by companies;
2. Variations in the value of titles in relation to internal life events companies and external macroeconomic events;
3. the existence of a relationship between temporality and the value of titles;
4. the existence of an influence of the perception of the public and of their influence with the value of titles;
5. an influence of the level of standardization of the presentation of information on premises referred to in point 3.

If for the first 4 premises their validation can occur from determinations made over longer periods of time (such as decades), last the premise demonstrated its validity especially during the period 2000-2008 punctuated by the emergence of the Sarbanes-Oxley (2002) law or the identification of causes crisis occurred in the last quarter of 2008, in the absence of regulations specific operational or regulatory relaxation financial-accounting reporting in the U.S. In this situation, the lack of standardization in the field may, in our opinion, be manifested in the matter perception of PER or other terms, discussion of the relationship between the predicted future value of a company and its market value. note, also a tendency to omit the evaluation process through other approaches and related methods when the company is quoted on a stock market. Even the issue of liquidity on a certain stock market was many times omitted in the context of the free movement of capital. In this context we consider that identifying and formalizing a cumulative and explanatory causal relationship for premise 1-5 is timely and beneficial. To determine this, we'll use a construct that includes statements and determinations based on the empirical study. The ads have their origins the absorption in the present work of the subjective theory of the value that is the more appropriate value theory that can explain the presence of elements like the background commercial goodwill and intangible assets identified at that time business combinations. Expanding in terms of typology and others the amount of intangible assets to the detriment or complementarity goodwill requires migration to an equidistant value theory , but it does not eliminate the character of subjectivity the perception of value, possibly when the characteristics are incorporated the perception of time in the economy. So the standardization surplus that would resulting from the use of a new model and, implicitly, of a new method would not eliminate the advantages of temporal use but would use, in a simplified way: a reduction in the risk of determining the value of the company on a term

long; a goodwill substitution with clear components identified, controlled and evaluable as intangible assets of the company at the time of its trading and anticipating the evolution of these elements by component time.

We will continue to build the complete company rating model of the new economy with an emphasis on the ICT sector based on the following conclusions from the study of value theories.

C 1. The value is dependent on a complex of endogenous and exogenous factors in this is contextual. Present value coincides with future value only in exceptionally. The logic of this statement lies in the clear difference between the active and income-based. Starting from the latter, the DCF method confirms, on an axis of time that does not extend to infinity, that for different values in time the projection will be different. In the presence of a system with very positive entropy all terms of the calculation will undergo changes. However, this has only a beneficial influence on stock markets as the differences between real and presumed diminishes by correlating with the lower probability of some possible shocks or crises. Economic liberalism is not undermined the question as endogenous factors (controllable at a higher level by company) may be the subject of variations resulting from strategic or tactical management. But the question is whether the sum of the internal variations of companies does not actually mean changing market conditions. In these conditions the solution comes from designing the presumed value on the time axis.

C 2. Companies are doing activities that create or destroy value both both present and future. These activities involve the exploitation of some resources combines in operational processes. Interpreting the above assertion does not exclude the simultaneous creation and destruction within the perimeter of the same company. Ideally any company could to be unique in the value-generating processes. This thing but would exclude two important prerequisites for the new economy: a search heuristic methods and imperfect and inhomogeneous markets. The above provides migration from the ideal plan into the concrete one for economies, markets and companies. Extreme optimization would lead exclusively to processes creating value, which in turn would lead to the achievement of the framework perfect markets. Consequently, within the same company, we will find it with great probability large, both value-creating processes and value-loss processes. It remains questionable to determine the value of the landmark, namely that in the ratio with which the positive or negative variation can be identified. Of course, the answer is obvious, that is, this value is the sum of the values reference intermediates for those processes. Determining this values are made by reference to market momentum conditions. For example, the conclusion of a loan agreement to finance an investment may oscillation between positive and negative by reference to the conditions of the financial market (as would be an average cost relative to the borrowed amount). A financing obtained at cost higher than those applicable in the market for similar situations would result in a negative influence on the value of the company.

C 3. Profit generation is based on competitiveness through optimizing client access procedures, type - dependent procedures markets, disposable income and macroeconomic forecasts Specialty literature has established the link between customer satisfaction and the stability of the company's market. In our opinion, this is just one criterion to determine the potential generating future benefits and not a fact determinant. The feature of the current economy is the stratification of markets and, in As a consequence, the attack of the market must be refined and adapted. The specialization of products and services, the provision of integrated services lead to identify companies and reduce the number of actors in the market through the tendency to individualize and the procurement operations.

The relationship between generating future benefits and disposable income is direct as customers, under the conditions of the new economy characterized by innovation at the level of the products but and distribution methods (such as e-commerce) do not have one a clear and unequivocal reference in price appreciation, but rather a comparison the asking price with the available revenue to buy the necessary products. In fact, this precept can also be included in the tendency to create a monopoly to obtain the corresponding overlapping. Positive macroeconomic forecasts may show decisive influence on distribution policy and competitiveness. The simple reason of economic growth creates the premises for an income available higher correlated with the

increased opportunity of leverage leading to a higher appetite for consumption and consequently increase the company's market.

C 4. There is a causal ratio deduced from a correlation high enough to be formalized between generating economic benefits, resource management, the value of the company and the trading price on a stock market. The generation of future benefits lies not only in revenue growth but also in reducing costs based in particular on cost reductions. Therefore resource management is crucial to optimizing the flow of benefits. The way the company's resources (which we do not determine on the basis of that the classical approach to the factors of production) are used can decisively influence on future benefits. For this reason, the company can be regarded as one a set of projects that produce its value and the resource allocation ratio, which are limited, must be optimized. Often, especially at the onset of new ones projects that are viewed with confidence by the public or investors, the value the company's stock exchange is positively influenced, as estimated projects have low chances of success have a negative echo in the stock market performance.

C 5. A modern management system is built starting from identification strategic (measurable) objectives, allocation of resources to generating elements value based on strategic objectives and identifying correlations between value generators and EGR. Since in the new economy classical production factors are filled in the inclusion of information and intellectual capital, and the laws of the economy classical, respectively decreasing yield laws are no longer validated, it is it is necessary that the correlation between objectives and resources is correctly determined. Thus, strategic objectives need to be evaluated before determines how the allocation of resources will be achieved. The value is not proportional to the way resources are combined, it can records polynomial variations, it is important for the organization to be in measure these variations and set their goals according to opportunities to maximize the value function. In a stable environment with projects reached the maturity phase, the values of the value function are flattened by leading to a proportional evolution. That is why identifying objectives must be achieved before the allocation of resources. How to allocate a they can be a determinant for exploiting the points of which the ratio is value - resources is no longer proportional. EGR is dependent on a series of factors that represent the growth potential of the company. EGR expresses two main trends of company activity:

- increasing efficiency by optimizing output
- consuming resources;
- a degree of growth determined on the basis of the project portfolio stages which represents the company's operations.

C 6. Observing the tendency to use financial-accounting reports it is necessary to evaluate the company's performance potential includes in these reports the presentation of the estimated value of the business on a temporal scale The correlation between the items presented in the financial statements and the stock exchange value of a company is relevant in terms of the value of the situations financial. A number of studies show little relevance in terms of value especially for ICT companies. The model you are going to we will continue to detail this work in order to increase this relevance by introducing the results obtained by applying the model proposed in the financial statements.

### 3. Construction of the evaluation model

We will build the new model of evaluation based on three principles:

#### Principle I

1) Observing how resources are used at a companies, and formalize the generating value of the company.

Determining the generation of value based on the elements obtains the following set of equations:

$${}^t V = j_t V (\text{NET RESOURCES}) + j_t V (\text{RESOURCES PROCESSING}) \quad (1.1),$$

where:

${}^t V$  = the value of the company at time  $t$ ,

$j_t$  = the value generated by the NET AND RESOURCES contribution items

PROCESSING RESOURCES at time  $t$ ,

Transforming the equation (1.1) according to the following, we obtain the following equality:  
 $t V = j t V (\text{NET ACTIVE}) + j t V (\text{RESULTS NERECUNOSCUTE}) + j t V (\text{RESULTS})$  (1.2) and  
 $t V = j t V (\text{ACTIVE NETE}) + j t V (\text{RESURSE NERECUNOSCUTE}) + j t V (\text{RESURSE NETE } 2)$  (1.3),

where:

NET RESOURCES 2 are the net resources obtained from the results less the flows leaving the company following the assignment processes

$$t V = j t V (\text{ACTIVE NETE } 1) + j t V (\text{RESERVE NERECUNOSCUTE } 1) + j t V (\text{ACTIVE NETE } 2) + j t V (\text{RESOURCES NERECUNOSCUTE } 2)$$
 (1.4)

Equation (4.2) is a synthetic version of the model's "foundation equation"  
 LID (Ohlson, 1995):

$$(1), \text{ where } P = 0 \text{ and } + 1 b j t B + 2 b j t X + 3 b j t u + j t e$$
 (1.5)

where:

$j P$  is the value of a company, and the terms dependent on the information accounting, namely:  
 $j t B$  represents the carrying amount of equity (net asset),  
 $j t X$  represents the net profit,  
 $j t$  represents "additional information" available to the public but not included in the financial statements and is the residual variable of mean 0.

The above assertion is based on the following assimilations:

$j t V (\text{ACTIVE NETE})$  is  $1 b j t B$   
 $j t V (\text{URGENT RESOURCES})$  is  $3 b j t u$   
 $j t V (\text{RESULT})$  is  $2 b j t X$ .

In this context, it remains to determine the influence of resources unrecognized. This influence must be determined in a way separate and sufficiently detailed to remove significant disturbances induced by subjective components. For this reason we will identify in the row unrecognized resources and the influences of exogenous factors. One such the approach would ensure comparability at company, sector and on - level levels time intervals. Andrikopoulos (2005), conducts an investigation into ICS in to determine value generators for companies with operations centered on knowledge starting from the equation (also recognized through Tobin's indicator  $q$ ):

$$IC = MV - BV$$
 (1.6)

where:

IC is the intellectual capital,

MV is the market value and

BV is the net asset value of the accounting, providing a calculation solution for calculating the subjective component of the investor (investor sentiment).

Synthesizing the above, we identify on the basis of the Ohlson Model (1995) adapted by the author, four categories at which we will investigate the existence and influences of value generators: Net Assets, Results, Resources unrecognized (on balance sheet) and Exogenous Factors.

## Principle II

Use the equation (1.2) and the LID model in determining the value of companies has been proven by a number of authors in papers I have considered relevant for our purpose of determining valuable generators related to the ICT sector, the results of which are summarized below:

Park and Park (2004) support the development of a new a technologies using the notion of technology evaluation (VOT) and technology market value (VOM) identifying value generators whose share is determined according to the opinions of the specialists, the value from the capacity technology to create profit surplus through additional revenue or through cost reduction. Value generators have an intrinsic, assimilable factor of the net resources from the above proposed equations (degree of protection, level technology, lifetime of technology, degree of standardization) and a factor dependent on the application of technology assimilable to the processing of resources (type technology, contribution rate, applicability area and completeness). The importance of e -

commerce is also recognized by Evanschitzky et al. (2004, p. 245) which in their study finds that the indicators proposed by Szymanski and Hise (2000) can represent to a moderate the perceptions of German consumers. These indicators are grouped in five categories (transaction convenience, product offer, level of information on products, site design, financial security of the transaction). Number of theoretical value generators used in the 2008 study of Joshi and Ubha (2010) is extended to a cardinal of 39 of which only 14 are detained in situations information provided by the sample of 15 ICT companies in India. Zambon et al. (2003) reaffirms the importance of intellectual capital in explaining of the value of companies quoting the results of investigations conducted by Edvinsson and Malone (1997) starting from the equation: Organizational Intellectual Capital =  $i * C$  (1.7), where:

- i is the coefficient representing the organization's efficiency in capital use intellectually and,
- C is the optimal intellectual capital.

Edvinsson and Malone (1997) group the 21 contributing indicators determining C in six categories, as follows: the development of new business, investment in computer systems, development of customer relationships, development human resources, partnerships, intellectual property and branding. Baklouti et al. (2007) lead a study that highlights the importance of investment in fixed assets intangible or intangible assets in relation to the share price starting from the constituent elements of intellectual capital according to the classical definition: human capital, structural capital and relational capital. In order to determine an appropriate model of evaluation we will take into account value generators identified to provide an equidistant definition of the value (definition which, in our opinion, offers a perspective that may have the advantage of limiting the occurrence of inflection points) and we will include the proposed generators in the works mentioned above in order to determine a value dependency relationship quantifiable generators and to formulate the necessary statistical regression.

### Principle III

The measure of the feasibility of constructing a system that allows projection of value on temporal units have been given, in our opinion, early on by Abrams (2005). The method allows the creation of an instrumentation that also includes the methodology management of growth strategies, contributing to our investigation through completing the set of value generators. Thus, Future Market Value, FMV (Future Market Value) at the time n, it is

$$FMV_n @ 1.10 \times 0 \text{ Inc} \times x \times n \text{ g} \text{ } 1 (+ x \acute{u})$$

where:

Inc. represents the income, g is the growth rate, CapExpend represents the capital expenditures, Since depreciation, IncrNWC is the increase in net working capital and r represents the discount rate.

## 4. Conclusions

This method has an advantage which consists in the fact that if the majority traditional methods offer calculation methods for current value, value useful for tax, legal or merger and acquisition purposes, FMV offers managers or investors tools for managing value creation. The applicative feature of the model is to identify a balance that should be reached by developing companies. This balance is manifests both at the level of income growth (growth that should ideally be to be accelerated), but also to managing cash flows (which also in ideally they should not be adversely affected by revenue growth). The usefulness of Abrams' approach from the point of view of our research is a complement to the portfolio of value generators.

The information presented in Principles I, II and III helps us to build an appropriate set of value generators whose influence on the change in market value we will use it in constructing our model, also relying on the Model LID of Ohlson (1995) and the division of the company's breakdown into a portfolio concurrently running projects, a portfolio where we identify a number of value generators, used on the value of companies in the new economy.

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# Financial Investments in Romania. A Comparative Analysis between Open-end Mutual Funds and Bank Deposits

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## Abstract

*Despite the failures that investment funds have registered in Romania by the year 2000, they are a financial instrument chosen by more and more people to capitalize on their savings. Therefore, open-end investment funds have had a steady growth trend in Romania over the past 10 years; their net asset value increased by 24 times and the number of investors tripled. In this context, the purpose of our paper is to present possible factors that have caused this increase. Particularly, the empirical research focuses on studying the links that might exist between open-end investment funds, bank deposits and interest rates on bank deposits. The correlations between these variables were analysed by computing the Pearson's correlation coefficient. The results highlight a high negative relationship that exist between net asset value of investment funds and bank interest. Nevertheless, it has been found that bank deposits are related neither to the interest rate nor to the open-end investment funds.*

**Key words:** return of investment, interest rate, open-end mutual fund, retail investors, bank deposits

**J.E.L. classification:** E21, E22, E43

## 1. Theoretical background

Bank deposits have been until recently the most common solution for the wider population to invest their money. These are usually guaranteed by the state up to a certain amount, which is why the risk of losing money is very low, but at the same time the yield is quite low. An alternative solution for people seeking higher earnings is open-end mutual investment funds. Open-end funds collect money from shareholders, invest this money in securities and promise to issue and redeem investor shares at net asset value (NAV) on a daily basis (Rohleder et al., 2017). In contrast to closed-end funds, open-end funds are available for subscription and repurchase on a continuous basis (Prakash, 2017). They do not have any restrictions on the number of units a fund will issue. Thus, an open-end fund manager will issue units as long as there is demand from investors. Also, these types of funds do not have a fixed maturity period and their key feature is liquidity. While an investment in a close-end fund is redeemable only at maturity, by choosing an open-end fund (OEF) an investor may withdraw his money whenever he wants. Open-ended funds are therefore one of the best investment solutions for small investors, as it offers them the opportunity to have a diversified portfolio at an affordable cost, without having all the financial knowledge required to directly invest money on the stock exchange (Mishra & Sharma, 2017).

Even though mutual funds have started to be analysed since the 1960s (Sharpe, 1966), public interest in this form of investment has been increasing in recent years, and OEFs levels have reached record values in more European countries (Cozma Ighian, 2012). For instance, in Italy this type of funds increased by 95% in 2015 compared to 2011 (Crespi, 2017). In Romania, the number of OEFs increased from 52 to 75, and their net asset value increased from 940 million lei to 21,874.82 million lei during the period 2008-2016. In China, the first open-ended fund was

established in 2001, and by 2013 the number of OEFs increased to 1421 (Yin et al., 2017). Thus, given these international developments, we come to ask ourselves what are the factors that have led to such a rapid and major increase of investments in open-end funds. In Crespi's opinion (2017), retail investors have turned to other types of investments because interest rates on bank deposits have become almost zero, while Yin et al., (2017) argue that investment style has drifted into open-end funds due to the shock effects of stock price volatility.

Other possible questions are how long these funds will continue to grow and how their future performance will look like. Regarding this, Mishra & Sharma (2017) have identified that the return on investment and the level of risk is influenced by the period of investment. According to the authors, both risk and return tend to become higher as the time horizon increases (Mishra & Sharma, 2017). Chen & Chen (2017) have examined the performance of Chinese mutual funds and concluded that these funds had significant superior risk-adjusted returns due to stock-picking abilities of Chinese equity fund managers. De Mingo-López & Matallín-Sáez (2017) consider that an important role in the OEFs management is played by the ability to estimate the fund investors' demand based on the total net cash flows experienced by a fund during a period. Other authors have argued that high investor flows may have a negative impact on the performance of mutual funds and suggested the use of complex tools such as derivatives or leverage strategies to manage the negative effects (Rohleder et al., 2017).

At the same time, researchers have focused on studying new ways of building an investment portfolio in order to increase the returns of open-end funds. In this respect, Crespi (2017) discusses the possibility of using the financial resources attracted by open-end investment funds to finance SMEs. The same idea is supported by Chernenko et al. (2017) who show that there is a recent trend of OEFs to invest in convertible preferred stocks issued by highly valued, private-owned start-ups.

Despite numerous studies in this field, the factors on which to predict whether the value of OEFs will further increase and how much it will increase have not yet been clarified. Thus, starting from Crespi's (2017) opinion that the decline in interest rate is an important cause of OEFs growth, we have analysed these two variables in the Romanian economic context, with the purpose to give an answer to the following questions: what effect had the decline of interest rate on the saving behaviour of Romanians? Have people quit to keep their money in bank deposits in favour of higher-yielding investments? What is the evolution of open-end funds compared to bank deposits? Is there a correlation between these two forms of investment? What influence does the economic context have on the structure of OEFs? At the same time, presuming that bank deposits became an uninteresting investment for people due to their very low interest rates, the empirical research aimed at verifying the following hypotheses:

- H1: There is a relationship between open-end investment funds and bank deposits;
- H2: There is a negative relationship between the net asset value of open-end investment funds and the interest rate on bank deposits;
- H3: There is a negative relationship between the number of investors in OEFs and the interest rate on bank deposits;
- H4: There is a negative relationship between the interest rate and the amount of the bank deposits.

## **2. Research methods**

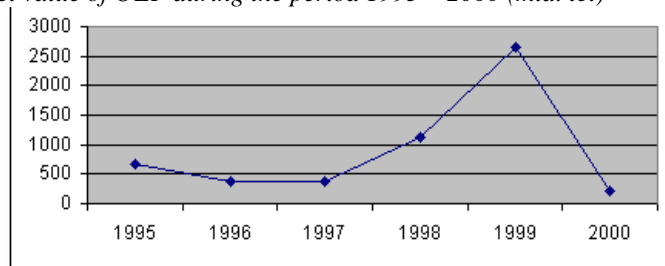
To test the above hypotheses, we first created a database with the values recorded in the last ten years (2008-2017) by the following variables: the net asset value of the Romanian OEFs, the number of investors in different types of OEFs, the average value of bank deposits and the average interest rates on bank deposits. The data were collected from the reports of the National Securities Commission (NSC) and Financial Supervisory Authority (FSA), as well as from the interactive database provided by the National Bank of Romania (NBR). After collecting the data set, the next step was to analyse them with the help of IBM SPSS 22 and Microsoft Excel 2013 programmes. The most important results and conclusions are presented in the next sections.



### 3. Results and discussions

In Romania, the history of investment funds has started in 1993 when the Mutual Fund of Business People (MFBP) is established based on Ordinance no. 24/1993. In April 1996, shortly after its establishment, the net asset value of this investment fund decreased by more than 40% due to bad management. Despite this, the Romanians continued to invest in mutual funds probably because of the desire to achieve significant gains on their savings. Thus, between 1997 and 1999, the number of investors increased exponentially due to the mirage created by the huge but unreal yields reported by the National Investment Fund (NIF). As the net asset value was increased artificially, NIF soon failed to cover withdrawals from the new capital attracted from the investors, which is why it collapsed in April 2000. This led to a decrease in the number of investors from 239,382 registered at the end of 1999 to 46,736 in December 2000.

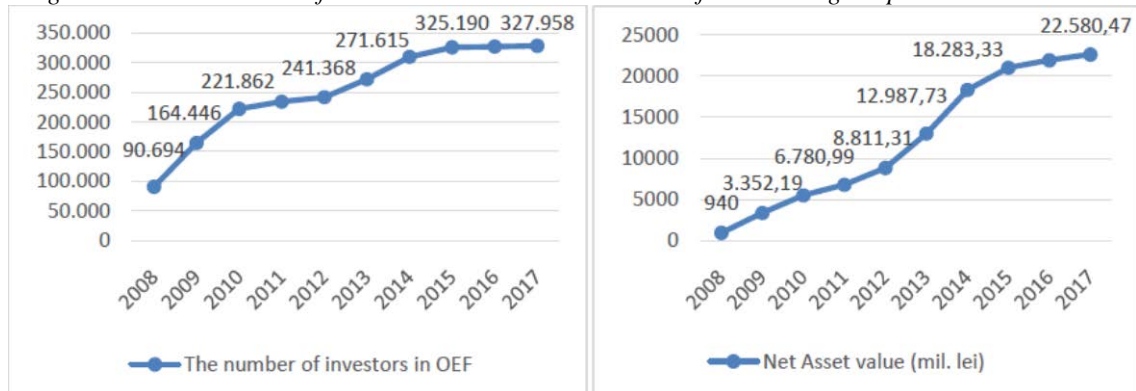
Figure no. 1. Net asset value of OEF during the period 1995 – 2000 (mld. lei)



Source: (NSC, 2000)

Romanian OEFs rebounded on a slightly upward trend after the major fall encountered in 2000. Therefore, the number of investors doubled in 2008 compared to 2000. Also, figure no. 2 shows that this growing trend continued until today.

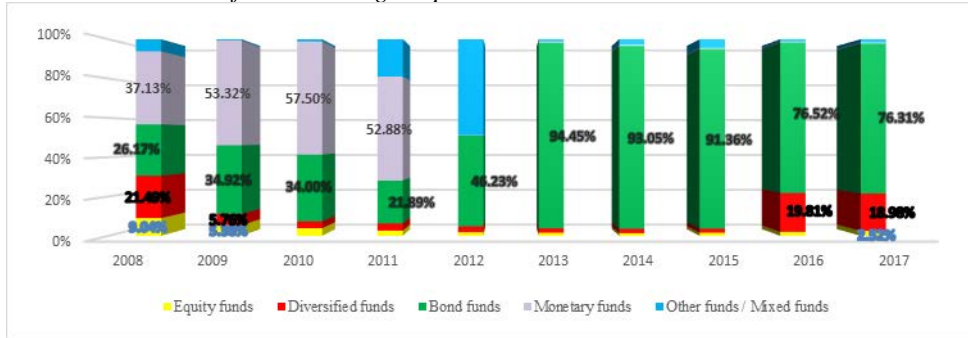
Figure no. 2. The number of investors and the net asset value of OEF during the period 2008 – 2017



Source: adapted after FSA (2017) and NSC (2017)

It is worth to mention that during the economic crisis of 2008-2010 the Romanian OEFs experienced an exponential growth comparable to the increase recorded in the period 1997-1999. Fortunately, this rise was not preceded by a fall of OEFs as happened in 2000. Thus, this major growth in times of crisis can be interpreted as an improvement in the level of financial education of Romanian investors. The decrease of stock price as a result of the stock market collapse in 2008 was a good opportunity to invest, and the OEFs evolution shows that many investors have chosen to take advantage of this opportunity.

Figure no. 3. The structure of OEFs during the period 2008 – 2017

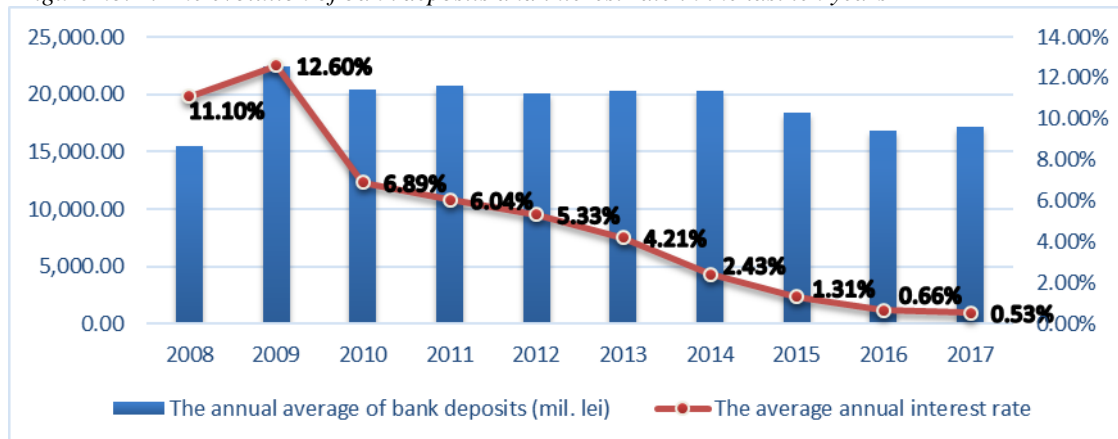


Source: adapted after FSA (2017) and NSC (2017)

Regarding the structure of OEFs, from figure no. 3 we can see that investments in monetary funds prevailed as long as interest rates on deposits were high. Subsequently, as interest rates have started to fall, it can be noticed that bond funds have reached more than 90% of OEFs' net assets. Also, starting from 2016 there has been an increase in placements made in diversified funds and in equity funds, to the detriment of bond funds.

During the period 2016-2017 the interest on bank deposits reached the lowest level in the last 10 years as well. Despite the dramatic drop in interest rates, it is noticed that the value of deposits has fallen to a much lower extent. Therefore, by correlating the data from figures 2 and 4 we can conclude that the major increase of the OEFs cannot be attributed to a decrease of bank deposits. However, we can notice a negative relationship between the interest rate on deposits and the growth of the OEFs.

Figure no. 4. The evolution of bank deposits and interest rate in the last ten years



Source: adapted after NBR (2017)

Given these preliminary conclusions, we wanted to find out the intensity of the relationships between variables. In this respect, we have done the statistical data processing in the IBM SPSS 22.0 programme. Firstly, we analysed the normality and symmetry of the data distribution using the Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW) tests, as well as the Skewness and Kurtosis coefficients. The results of the KS and SW tests indicate that the significance threshold of all variables is above the minimum level of 0.05. Hence, since the two tests are insignificant, we accept the null hypothesis that there is no difference between empirical distribution and normal distribution (Opariuc-Dan, 2011). Also, both for the Skewness coefficient and for the Kurtosis coefficient, the ratio between their values and the standard error returns values below the acceptable maximum threshold of 1.58 for each variable (Opariuc-Dan, 2009: 194), which allows us to say with 95% probability that we are dealing with an approximate symmetrical distribution.

Table no. 1 Normality and symmetry of data distribution

Variable	Kolmogorov-Smirnov			Shapiro-Wilk			Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
	Statistic	df	Sig.	Statistic	df	Sig.				
Average interest on bank deposits	.138	10	.200	.911	10	.286	0.714	0.687	-0.48	1.334
Number of investors in OEFs	.170	10	.200	.891	10	.172	-0.961	0.687	0.448	1.334
Net asset value of OEFs	.170	10	.200	.903	10	.235	0.073	0.687	-1.801	1.334
Average value of bank deposits	.261	10	.051	.924	10	.390	-0.446	0.687	-0.713	1.334

Source: Authors' contribution

Because the data distribution is relatively normal, we used the Pearson product-moment correlation coefficient to verify the hypotheses.

Table no. 2 The correlations between variables

		Average interest on bank deposits	Number of investors in OEFs	Net asset value of OEFs	Average value of bank deposits
Average interest on bank deposits	Pearson Correlation	1	-.951**	-.940**	.307
	Sig. (2-tailed)		.000	.000	.388
	N	10	10	10	10
Average value of bank deposits	Pearson Correlation	.307	-.046	-.317	1
	Sig. (2-tailed)	.388	.899	.371	
	N	10	10	10	10

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' contribution

From table no. 2 we see that there is a significant and very strong negative correlation between the number of investors in OEFs and the average interest on bank deposits ( $r = -0.951$ ,  $n = 10$ ,  $p < .001$ ), allowing us to accept the hypothesis 3 with a 99% degree of certainty. We can also notice a negative and strong correlation between the net asset value of OEFs and the average interest on bank deposits ( $r = -0.940$ ,  $n = 10$ ,  $p < .001$ ), which is why the hypothesis 2 is confirmed as well.

As regards the average value of bank deposits, we have found that this variable shows significant correlations neither with the net asset value of OEFs ( $r = -0.317$ ,  $n = 10$ ,  $p = .371$ ), nor with the interest rates on deposits ( $r = .307$ ,  $n = 10$ ,  $p = .388$ ). For this reason, hypothesis 1 and 4 are rejected. Surprisingly, we can notice that a relatively stable part of the Romanians prefers to keep their money in bank deposits despite the low interest rates. At the same time, the increase of OEFs while the value of bank deposits remained almost unchanged shows that the number of people who decide to invest their money in the financial market has risen over the last 10 years. Hence, if in other countries the two investment instruments compete to attract more savings, we notice that this competition is almost non-existent in Romania. A possible explanation is the fact that deposits and OEFs may have different target segments. More precisely, older people who suffered from irresponsible management of mutual funds in the time frame 1993-2000 are afraid that there is a high probability of losing all their money by investing again in OEFs. In this regard, they prefer to earn less by placing money in bank deposits, but to be sure that their savings are safe. On the other hand, there might be some young people with relatively high incomes (for instance, those who are working in the IT sector) who choose to invest their money in the OEFs due to the higher returns they have compared to bank deposits. These people are willing to take higher risks, have a different financial education, and their trust in the management system of mutual funds has not been affected by a direct contact with the crises that occurred between 1993 and 2000.

#### 4. Conclusions

Empirical research revealed a strong negative correlation between open-end investment funds and interest rates, but this link cannot be explained by a decrease of bank deposits. Another important output of the research is that interest rate does not have a significant correlation with the level of bank deposits, which means that the demand / supply of bank deposits on the Romanian market have a very low price (interest rate) elasticity.

However, these results cannot be generalized and should be considered through their limits. One of the most important is that our data reflected the evolution recorded by OEFs and bank deposits only on the Romanian market and over a short period of time. Therefore, we consider that our findings should be expanded through future research focused on analysing data from more countries and from a longer period. A high attention should also be given to the role played by economic crises in the increase of the net asset value of OEFs. As we could see, the most significant increases of the Romanian OEFs overlapped with the economic crisis that occurred between 1997-1998 and 2008-2009. Today, there are almost 10 years since the last economic recession and many economists speak about the possibility of having a new crisis in the next two years due to the current economic context. Thus, an important question is how mutual funds will evolve in case that a new crisis occurs and the interest rate starts to rise. At the same time, given the fact that the net asset value of investment funds did not become higher due to a decrease in bank deposits, the question is from where came the money that generated this increase. One possible explanation was that the new generations opt for placing their savings in OEFs rather than in bank deposits. However, considering the historical background of Romanian investment funds and the fact that the number of investors has grown only by 3.62 times while the net asset value of OEFs has increased about 24 times, we are wondering if this increase is justified by the new funds attracted from the investors or by the high returns on investments. Also, in case that NAV has increased mainly because of a high yield, we are wondering how much we can talk about a real and sustainable growth that will not lead to a new disaster (like the one from 1996 or 2000), in case that certain favourable factors emerge (such as the impossibility of covering withdrawals from the new funds attracted).

Therefore, given that open-end investment funds are a very new financial instrument on the Romanian market, with a history of less than 30 years, their functioning mechanism is still not well known by the large public and by those who choose to place their money in these funds. Based on these considerations, we believe that the results of our research may prove useful to those who want to invest in the financial market. By being aware of different factors that might influence the evolution of mutual funds, investors have a better chance of knowing when to enter an investment fund and when to leave it to avoid losses and maximize their returns. At the same time, this paper justifies its usefulness by the contribution it brings to the expansion of literature in the field of investment funds and by opening new research directions based on the findings that occurred by analysing open-end investment funds in Romania.

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## **Cost - Volume - Profit Analysis – An Instrument of Managerial Control of the Economic Entities in the Extractive Industry**

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### **Abstract**

*This study intends to demonstrate that the cost-volume-profit analysis is based on the analysis of the balance point, of the relations between the prices of goods, the activity's volume, the unit variable cost, the total fixed costs, the balance of the mixed production, the managerial planning and the decision making is actually a financial model which highlights the changes occurred in the profit size as a consequence of the amendment of the sold volume of good, of the selling price and of the manufacturing costs. The case study was conducted in Mol Romania, an economic entity with integrated activity on oil and natural gas. The CPV relation offers a general model of the economic activity. The study ends up with conclusions in what concerns the advantages offered by the analysis which can be made on the basis of the cost-volume-profit relation and that can be implemented in the decision making process.*

**Key words:** variable costs, fixed costs, cost-volume-profit, economic entity, breakeven level

**J.E.L. classification:** M21

### **1. Introduction**

Earth's natural resources have been the base of the economic development of the society in the last century. It is extremely difficult to estimate exactly which are the primary resources reserves existing in the world and when exactly they will run short, but the tendency is very clear: we are heading toward a great global energy crisis!!!

In what concerns Romania, all the existing information sources referring to the exhaustible energy resources acknowledge the fact that our country has limited resources of oil and natural gas.

Perhaps the future of the Romanian extractive industry depends in a high degree also on the research sector, but the privatisation of a great number of research-designing institutes activating in the field of the useful mineral resources and the change of the purpose of the land and buildings in question generated today situation that is characterized by the very little influence of present research sector, this facts determining us to consider that the recommencement of it on all the national economy levels is of high importance.

### **2. Specialized literature**

Direct-costing method is a cost calculation method applied by taking into account the advantages and disadvantages offered by its implementation in various fields of activity or branches of the economy of a nation. According to the Romanian researchers Mr. Budugan and Mr. Georgescu (2008, pp.3-8) "the analysis cost-volume-profit is very useful in the prognosis work, being a managerial control instrument that highlights the relations between costs, production amount (volume) and profit".

### 3. Research methodology

The consultations (talks) with the staff in the accountancy department highlighted the fact that the optimal method of cost calculation in the given market situation is the direct-costing method. This method includes a set of techniques intended for solving certain issues based on understanding the cost evolution model characteristics of an economic entity, therefore we illustrate this analysis (CVP) with a case study on Mol Romania Holding. We will answer to the following questions in this case study: 1. Which is the most simple, viable and efficient method of cost calculation that will help Mol Romania in profit optimization in the actual global market economy conditions? 2. Which are the advantages of the identified method?

### 4. Cost-volume-profit analysis - general aspects

Hereunder we succinctly present some aspects related to the Direct-Costing method of costs calculation in what concerns its axiology and index numbers. This method's essence resides in the separation of the manufacturing and distribution expenses related to their character in what concerns the manufacturing and distribution physical amount variation, in variable and fixed costs, while considering for the unit cost of a manufactured article only the variable expenses. Getting to know the breakeven level or the balance point, this helps us to determine the starting point from which an economic entity gains profit and covers its fixed and variable costs.

### 5. Profit optimization process by using the instruments for evaluation of economic entity's performance

Mol Romania is a company with an integrated activity activating in the field of oil and natural gas industry, focused on the following sectors: Exploration and Production (E&P), Gas and Energy (G&E), Refining and Marketing (R&M). Because the sector R&M has the biggest share in the consolidated incomes of the company, the case study was made in this sector. In the next place we present the global statement of the incomes and expenditures for the three sectors of the Mol Romania Holding (E&P, G&E, R&M) (See Table 1).

Table no.1. Global statement of the incomes and expenditures for the three sectors

Specification	2016	2017 (first 10 months)	Δ%
Sales incomes	24.185,00	21.541,00	-11
Distribution direct expenditures	-646,00	-480,00	-26
Sales cost	-15.485,00	-15.815,00	2
Other exploitation incomes	298,00	316,00	6
Administrative and distribution expenses	-1.284,00	-1.267,00	-1
Operating expenses	-423,00	-156,00	-63
Other operating expenses	-687,00	-801,00	17
Profit before interest and taxes (EBIT)	5.958,00	3.338,00	-44
Net financial outcome	-259,00	-429,00	66
Corporate tax expenses	-875,00	-810,00	-7
Net profit	4.824,00	2.100,00	-56
Minus profit net /(loss) assigned to the private stockholders	3,00	-3,00	-
Net profit assigned to the majority stockholders	4.821,00	2.103,00	-56

Source: Own projection based on the Annual Report of Mol Romania

In order to highlight the profit optimization process in the conditions of the present-day global market, we will bring forward the situation of the two cases which are usually encountered in the current practice of the economic entities that are activating in the oil extractive industry sector (See Table 2).

Table no. 2. Initial Report of the Mol Romania Holding in R&M sector from Romania

- Thousand lei -

No crt.	Explanations	Gasoline	Diesel oil	Kerosene	Black oil	Total
1.	Sales volume (qv) thousand tons	838	2.085	245	71	3.239
2.	Unit price (p) thousand lei/ton	3	3	3	1	12
3.	Turnover (CA) thousand lei	3.114.008	7.260.603	823.350	115.128	11.313.090
4.	Fixed expenses (Cf) mii lei	1.665.247	3.882.353	440.258	61.560	6.049.420
5.	Variable expenses (Cv) thousand lei	1.463.707	3.412.483	386.974	54.110	5.317.276
6.	Unit variable expenses (v) thousand lei/ton	1	1	1	0,762	5
7.	Critical volume (qcritic) thousand tons	845	2.103	247	71	3.267
8.	Critical CA thousand lei	3.142.211	7.325.195	830.675	116.152	11.414.235
9.	Safety margin (Ms) thousand tons	-7	-18	-2	-0,632	-28
10.	Safety margin (Ms) thousand lei	-28.203	-64.592	-7.324	-1.024	-101.144
11.	Safety range (Is) %	-0,001	-0,001	-0,001	-0,001	-0,004
12.	Efficiency gain (Se) %	-0,001	-0,001	-0,001	-0,001	-0,004
13.	Profit /loss thousand lei	-14.946	-34.233	-3.882	-542	-53.605

Source: Own projection based on the Annual Report of Mol Romania

The two cases are as follows:

1. The variable manufacturing costs grow by 10% and the fixed manufacturing costs raise by 5%.
2. The goods sale prices grow by 10%, the total fixed costs raise by 10%, the manufacturing variable costs decrease by 5%, and also the volume of goods decrease by 10%.

Starting from the initial situation, the changes requested by the above mentioned cases were determined as follows:

Case 1. The variable manufacturing costs grow by 10% and the fixed manufacturing costs raise by 5%. (See Table 3).

Table no. 3. The situation of the incomes, costs and the outcome generated by Case 1

No crt.	Explanations	Gasoline	Diesel oil	Kerosene	Black oil	Total
1	Sales volume (qv) thousand tons	838	2.085	245	71	3.239
2	Unit price (p) thousand lei/ton	3	3	3	1	12
3	Turnover (CA) thousand lei	3.114.008	7.260.603	823.350	115.128	11.313.090
4	Fixed expenses (Cf) mii lei	1.748.509	4.076.471	462.271	64.638	6.351.891
5	Variable expenses (Cv) thousand lei	1.610.078	3.753.732	425.672	59.521	5.849.003
6	Unit variable expenses (v) thousand lei/ton	1	1	1	0,838	6
7	Critical volume (qcritic) thousand tons	974	2.423	284	82	3.765
8	Critical CA thousand lei	3.620.430	8.439.899	957.082	133.827	13.151.240
9	Safety margin (Ms) thousand tons	-136	-338	-39	-11	-526
10	Safety margin (Ms) thousand lei	-506.422	-1.179.295	-133.731	-18.699	-1.838.150
11	Safety range (Is) %	-0,014	-0,014	-0,014	-0,014	-0,014
12	Efficiency gain (Se) %	-0,016	-0,016	-0,016	-0,016	-0,014
13	Profit /loss thousand lei	-244.580	-569.599	-64.592	-9.031	-887.804

Source: Own projection based on the Annual Report



Case 2. The goods sale prices grow by 10%, the total fixed costs raise by 10%, the manufacturing variable costs decrease by 5%, and also the volume of goods decrease by 10%. (See Table 4).

Table no.4. The situation of the incomes, costs and the outcome generated by Case 2

No crt.	Explanations	Gasoline	Diesel oil	Kerosene	Black oil	Total
1	Sales volume (qv) thousand tons	754	1.876	220	63	2.915
2	Unit price (p) thousand lei/ton	4	3	3	1	13
3	Turnover (CA) thousand lei	3.082.867	7.187.997	815.117	113.976	11.199.959
4	Fixed expenses (Cf) mii lei	1.831.772	4.270.589	484.283	67.716	6.654.362
5	Variable expenses (Cv) thousand lei	1.390.522	3.241.859	367.626	51.404	5.051.412
6	Unit variable expenses (v) thousand lei/ton	1	1	1	0,804	6
7	Critical volume (qcritic) thousand tons	816	2.030	238	69	3.154
8	Critical CA thousand lei	3.336.854	7.778.994	882.136	123.347	12.121.332
9	Safety margin (Ms) thousand tons	-62	-154	-18	-5	-239
10	Safety margin (Ms) thousand lei	-253.986	-590.996	-67.018	-9.371	-921.373
11	Safety range (Is) %	-0,008	-0,008	-0,008	-0,008	-0,008
12	Efficiency gain (Se) %	-0,008	-0,008	-0,008	-0,008	-0,008
13	Profit /loss thousand lei	-139.426	-324.451	-36.792	-5.144	-505.814

Source: Own projection based on the Annual Report

### Observations based on the presented and analysed cases

In order to highlight the evolution of prices, costs and production physical volume based on the four studied cases we present below the evolution of incomes, costs and outcome for each of the analysed cases (See tables 5, 6,7 and 8).

Table no.5. The evolution of the incomes, costs and outcome based on the test of the four cases for gasoline - Thousand lei -

No crt.	Explanations	Case 1	Case 2
		Gasoline	Gasoline
1	Turnover (CA)	3.114.008	3.082.867
2	Fixed expenses (Cf)	1.748.509	1.831.772
3	Variable expenses (Cv)	1.390.522	1.390.522
4	Critical CA	3.620.430	3.336.854
5	Profit /loss	-244.580	-139.426

Source: Own projection based on the Annual Report

Table 6. The evolution of the incomes, costs and outcome based on the test of the four cases for Diesel oil - Thousand lei -

No crt.	Explanations	Case 1	Case 2
		Diesel oil	Diesel oil
1	Turnover (CA)	7.260	7.187
2	Fixed expenses (Cf)	4.076	4.270
3	Variable expenses (Cv)	3.241	3.241
4	Critical CA	8.439	7.778
5	Profit /loss	-569	-324

Source: Own projection based on the Annual Report

Table 7. The evolution of the incomes, costs and outcome based on the test of the four cases for kerosene  
- Thousand lei -

No crt.	Explanations	Case 1	Case 2
		Kerosene	Kerosene
1	Turnover (CA)	823.350.920	815.117.411
2	Fixed expenses (Cf)	462.271.000	484.283.905
3	Variable expenses (Cv)	367.626.185	367.626.185
4	Critical CA	957.082.814	882.136.274
5	Profit /loss	-64.592.505	-36.792.679

Source: Own projection based on the Annual Report

Table no.8. The evolution of the incomes, costs and outcome based on the test of the four cases for black oil  
- Thousand lei -

No crt.	Explanations	Case 1	Case 2
		Black oil	Black oil
1	Turnover (CA)	115.128.062	113.976.781
2	Fixed expenses (Cf)	64.638.737	67.716.772
3	Variable expenses (Cv)	51.404.680	51.404.680
4	Critical CA	133.827.613	123.347.938
5	Profit /loss	-9.031.883	-5.144.670

Source: Own projection based on the Annual Report

We can observe a significant growth of the outcome in Case 3 when we study the centralised situation of the four products (See Table 9).

Table no.9. Centralised situation of the case studies 1-2 for the R&M sector

No crt.	Explanations	Initial data	Case 1	Case 2
1	Sales volume (qv) thousand tons	3.239	3.239	2.915
2	Unit price (p) thousand lei/ton	12	12	13
3	Turnover (CA) thousand lei	11.313.090	11.313.090	11.199.959
4	Fixed expenses (Cf) mii lei	6.049.420	6.351.891	6.654.362
5	Variable expenses (Cv) thousand lei	5.317.276	5.849.003	5.051.412
6	Unit variable expenses (v) thousand lei/ton	5	6	6
7	Critical volume (qcritic) thousand tons	3.267	3.765	3.154
8	Critical CA thousand lei	11.414.235	13.151.240	12.121.332
9	Safety margin (Ms) thousand tons	-28	-526	-239
10	Safety margin (Ms) thousand lei	-101.144	-1.838.150	-921.373
11	Safety range (Is) %	-0,001	-0,014	-0,008
12	Efficiency gain (Se) %	-0,001	-0,016	-0,008
13	Profit /loss thousand lei	-53.605.710	-887.804.354	-505.814.818

Source: Own projection based on the Annual Report

Because it is considered to be an ideal case of profit optimization, we used it in the calculation of the specific indicators of the Direct-Costing method and we prepared the scoreboard based on the given data. We can draw the following general observations based on the presented and analysed above case studies (case 1 to 2): The manufacturing variable costs grow by 10% and the manufacturing fixed costs grow by 5%.

The percentage controlled growth (a certain percent) of the manufacturing variable costs and of the fixed costs determines the following: the growth of balance point; the decrease of the coverage factor; the decrease of the dynamic safety coefficient; the decrease of the profit.

The rise of the selling prices of the goods by 10%, the growth of the total fixed costs by 10%, the decrease of the manufacturing variable costs by 5% and the decrease of the goods volume by 10% take place.

The rise of the selling prices of the goods, the growth of the total fixed costs, the decrease of the variable costs and the decrease of the goods volume generates the following: the growth of balance point; the decrease of the coverage factor; the decrease of the safety coefficient and of the safety range; the decrease of the profit.

## 6. Conclusions

By using the cost-volume-profit method we consider that this can be a performance managerial system for the economic entities in this field of activity. After the issuing of the Accountancy Law no 82/1991, the management accounting remained in a "shadowed place" (Dumitru & Calu, 2008), because managers and accountants had considered that its implementation is not mandatory, this being the reason that neither the specialized literature had given too much significance to this aspect. In an uncertain and highly competitive environment, the economic entities stay competitive only if they have an adequate management of the managers' knowledge meant to plan, analyse and control the internal activities and processes, in order to issue short, medium and/or long term strategies and to manage the sources in a highly efficient manner, being able to eliminate those activities which do not add value to the company.

Using an integrated cost management system managers have the possibility to integrate the cost calculation and analysis in the strategic activity of the economic entity, in order to create a sustainable competitive advantage, contributing this way not only to the decision making in what concerns the goods portfolio, but also to a set of micro-decisions that lead progressively to the change of the economic entity's position, meant to make the entity competitive on an international and national level.

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## Budgetary Consolidation – Expression of Fiscal-Budgetary Policy

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### Abstract

*This work aims for a better knowledge of the concept of budgetary consolidation, representing in fact, according to the authors, the elimination of transfers of sums, between the budgets of the budget system components, in order to avoid double highlights. At the same time, seen from a different perspective, the budget consolidation can be interpreted, and as a result of fiscal-budgetary policy, revealing the aspect of mutual relations and the link between this and the growth at the national level. The issue of economic growth of a nation will be put under discussion in connection with the manifestation of political entities, namely from the perspective of public interventions on the government policy, in particular regarding the financial nature. The purpose of this paper is to highlight the influence of certain factors, some with high goals, others with subjective fundamentals, over budgetary consolidation at the level of our country.*

**Key words:** economic growth, public financial policy, budgetary consolidation strategies, sustainability, budget vulnerabilities

**J.E.L. classification:** H50, H60, H70

### 1. Introduction

Amid the economic and financial crisis that started in the year 2007 in the U.S.A., since 2009, at the level of our country have been scientific and doctrinal foundations with respect to budgetary consolidation, as the expression of public government policy requirements and financial factors that influence such an approach.

If by the time of the first world war, the budget process had as its starting point the revenue available, the State limiting the spending to this income level, subsequently, taking account of the political, economic and social background have prompted the State increasing intervention in all fields, thus creating the false impression that the State has unlimited possibilities to spend. Therefore, aimed at restoring economic and social balances, governments have turned to the use of constant public budgets as active instruments of influencing concrete activities, becoming evident their ability to contribute to economic and social stabilization of the country.

The public budget has complex meanings, due to the two senses, one economic, which emphasizes macroeconomic correlations, particularly in touch with the evolution of the gross domestic product of economic relations, expressing in the monetary form and who take birth during the distribution of gross domestic product, according to the objectives of social, economic and financial policy, and the other legal relates to budget - as the main management economic-financial tool (for the purposes of the authorisation to carry out expenditure and revenue collection and to ensure their effective control).

The financial crisis has subjected the governments that followed a series of challenges, such as: a new approach to fiscal policy that determines rational budgetary choice in spending the public money for the purposes of analysis of cost undertaken actions, as well as a redesign of the costs for obtaining maximum effects, under the ownership of limited resources; the need to reform public services and concerted effort of all of the governments for the purposes of the global economic

downturn. We can say that the last financial crisis was a lesson for all the world's governments, this affecting different countries economy, depending on available resources and tools used by the State institutions for economic recovery.

## **2. Research methodology**

Investigating the subject of the theme dealt sprang from with the need for knowledge in the budgetary field. The research approach taken with respect to budgetary consolidation, the study of the outlined relations was achieved by applying a methodology based on the constructivist model based on the principle of "coherent truth". In the context of its many dimensions, based on ideas found in the literature and normative framework was achieved a synthesis and an antithesis to budgetary consolidation issues. The methodology used in this research consists in observing the non-participative scientific research, i.e. discrete analysis method - content analysis of existing statistics, inductive and deductive method, the method of economic analysis, the statistical method, the synthesis and analysis of data.

## **3. Literature review**

Public financial policy issue has been addressed in a number of studies, but the budgetary consolidation was handled in a narrower area of works, which does not diminish the possibilities in detail budget deficit and its implications. Different sides of the issue were addressed by foreign specialists (Alesina, 2010; Aiginger and Schratzenstaller, 2011; Polito and Wickens, 2011; Blöchliger, Song and Sutherland, 2012), and the peculiarities and its success factors were dealt with in different States (Gupta, Baldacci, Clements and Tiongson, 2005; Veld, Larch and Vandeweyer, 2012, Oprea and Bilan, 2012). A series of studies are focused on comparing the situation, measures and the results obtained in different States or groups of States to identify common elements so that could constitute the best practice benchmarks in the field of budgetary consolidation (Heise and Lierse, 2011). Other studies aim at fiscal vulnerabilities issues and their implications in the context of the manifestation of a financial crisis (Aizenman and Pasricha, 2010; Bagaria, Holland and Van Reenenand, 2012), a more interesting approach made the works (Eller Mooslechner, and Grunwald, Ritzberger-2011; Bakker and Christiansen, 2011; Leiner-Killing, 2011 or Jedrzejowicz, 2011).

In the case of Romania, the lack of fiscal discipline in the period before the crisis and the negative effects of its economic growth plan is found in several works (Dumitru and Stanca, 2010; Socol and Măntescu, 2011; Oprea, Bilan and Stoica, 2012b) and other studies treat the particular aspects related to our issues, identifying shortcomings in the pension system (Preda and Grigoraş, 2011; Dragotă and Mircescu, 2009) of the inter- administrative transfer system (Dincă and Dincă, 2009; Oprea and Bilan, 2011a) or the notion of evolution or public debt sustainability (Oprea and Bilan, 2011b; Oprea, Bilan and Stoica, 2012a, Zaman and Georgescu, 2010 and 2011).

## **4. Budgetary consolidation - factors of influence**

Most often the phrase "budget consolidation" is used in a technical-accounting sense with reference to the operation of removing transfers of the public budgets, in connection with the elaboration of the general consolidated budget, in order to highlight the state of balance or unbalance of the general consolidated budget. On the other hand, this phrase is used to refer to the purpose and nature of measures of financial policy adopted in order to reduce the budget deficit through empowering the income to cover the part of the budget expenditure for a longer time with the sustainability implications within the meaning of "reducing our dependence" on public incomes of extraordinary financial resources, reflected generically in the dimensions and dynamics of the relationship between the public debt and gross domestic product.

Seen from another perspective, "the budgetary consolidation" can be interpreted as a result of fiscal-budgetary policy promulgated in this regard, revealing its economic growth.

All these approaches have a common element, namely the problem of positioning in the context of the public financial politics whose appreciation within the meaning of the three E - efficiency, effectiveness, economicity must be deductive, from packages measures promoted by the public authorities during certain periods. Thus, the correlation between the economic growth and budgetary consolidation first assert by making some clear distinctions between public financial policy measures aimed at strengthening the budgeting and linking them with the results of other measures which subsumes the other objectives.

In principle, the budgetary consolidation may be affected by a number of factors (table no.1), such as:

*Table no. 1. Factors influencing budgetary consolidation*

No. crt.	The name of the factor of influence	Explanations
1.	Electoral calendar	
2.	The economic situation including the financial policies public, consistent with the commitments and objectives assumed by the policy makers	-as the determinant of the economic budgetary conjuncture consolidation triggers the government action when the macroeconomic variables or indicators used in appraisals (the balance of consolidated budget, the unemployment, the growth of gross domestic product, the level of public debt, etc.) register "unsatisfactory" values, and their qualification as such shall be in the discretion of the government group. From this point of view, dealing with the budgetary imbalances within the limit of sustainability, set against the backdrop of the economic stagnation, regarding decreasing or unsatisfactory growth compels the decision authorities to applying some specific measures for strengthening the budget (tax increases or reductions in public spending), their behavior being shared (converging) through the pursued aim, basically though, although any of the decision-makers involved shall act with the same goal (of budgetary consolidation), the composition of the adjustment measures will be a personalized one (either with regard to the budgetary revenue, either at the public expense in a mix of measures), the application time of the measures and the their macroeconomic consequences being different;
3.	The accumulated government debt level;	
	The composition of the adjustment measures	-consolidation oriented on public expenditure; adjustment of public expenditure in the context of budgetary consolidation would be a simple mission (simplified), orientation towards investment spending emphasis, followed automatically by the stabilization and economic growth. The amplitude of the manoeuvre and concrete manner of public investment can dilute this effort, sometimes up to full compensation, the actual effects in the economic growth being minimal or non-existent. Regarding the option for consolidation through public spending cuts should avoid reducing those categories of expenditure that are presented as investment in human capital, they are representing an element of major impact for the longer-term economic growth. Along with spending on education, the research and development spending should have a privileged position, technology creation having a favourable impact for lasting economic growth. On the other hand, the budgetary consolidation by raising public revenue, either by increasing the share of taxation, or by resizing the tax base, we should move towards environmentally harmful activities, thereby supporting a component essential to sustainable growth;
4.	Political composition	-at the level of the government and ministries;
5.	Legal regulation and the effectiveness of its application	-practice shows that in the absence of any indication or limitation of reference values for such indicators, the government's action is likely to be less convenient in terms of the time of onset, intensity or duration of application of different reasons. In this regard, even if science consistently recommended financial orientation towards budgetary balance in different variations (annual, cyclic etc.), and proposing

No. crt.	The name of the factor of influence	Explanations
		appropriate ways of reaching the objective (the cyclic theory of systematic deficit budgets, etc.), the regulation has provided for the legal impossibility of providing only some expenditure public budgets without covering the provision of resources, regardless of their status as ordinary or extraordinary;
6.	The ideology of the government group	-influencing factor for the budgetary consolidation represented by the doctrine assumed by the governance programme endorsed by the legislature, in the structure and dimensions of the budgetary revenue and expenditure as main elements of impact on strengthening budget. Our opinion is that the ideology of the government group should not compete with the economic rationality, but it must be complementary; in terms of correlations between government interventions and budgetary consolidation, in the literature are put in direct relationship the diminishing efforts of public budgetary deficits and public debt, the growth and robustness of the budget being treated as possible effects caused by public intervention. The size of the public sector in relation to the private sector is another element that influence the relationship between government intervention and reinforcement of the budget.
7.	The correlation approach of public financial policies of different types	-linking tax policy with monetary policy, so for the purposes of ensuring complementarity of objectives and measures implemented regarding the definition (personalization) of their appropriate mix, consistent with the needs of development; the complementarity of the action of public financial policies with structural adjustments required for the purposes of ensuring the potentiation of the effects of the therapy for the budgetary and fiscal nature and their long-term viability through action at the level of the case, not to the effect level, as sometimes from different reasons the process is followed;
8.	Scientific substantiation of the decisions	-this would imply that decisions should be based on rigorous argument, prepared by technocrats, any action being preceded by a scientific study of impact. In practice, the danger is that of tolerating "forms without the background", both in the sense of adopting and practising specific rules only on the surface, the effect of the legal requirements, as well as in the sense of resorting to adopting mechanical models or best practices from other systems. In case of Romania, it is desirable a closer connection between public decision-makers and academia and more consistent recourse to the views of specialists established in areas such as monetary, fiscal, etc.

All these factors have implications and a close connection with the development of the national economy.

## 5. Conclusions

The usefulness of the establishment and use of the consolidated budget for judgments relating to budgetary consolidation derives from the fact that this synthesis document allows observation in dynamics of the budget system components manifestation and the relationship among them. This image, often regarded as the global expression in terms of budgetary surpluses or deficits recorded by each of the components of the budget system reflected in the consolidated general budget provides an appropriate and useful support for budgetary decision-making, but not only.

Broadly, in terms of general policy, public authorities should note that the consolidated general budget does not serve as a decision-making support tool just to the fiscal-budgetary policy, but also to that of the monetary or exchange policy which are interconnected with. In addition, the consolidated general budget shall constitute an appropriate tool and indispensable to the formulation of value judgements regarding the tax system and its effectiveness, allowing the justification restructuring decisions. Under the practical usefulness of the consolidated general budget, it is remarked that the very decisions on restructuring public budgeting systems in terms of

components or of the relationship between these are grounded on the basis of the the information summarized in a document.

Consolidating the budget aims at reducing the budget deficit - a prerequisite for medium-term reduction of the public debt. Maintaining the public budget deficit within limits, ensuring the sustainability must express a concern of public authorities, in particular for the fact that periods of economic growth provides wider margin of manoeuvre for the governmental action, making possible a more "smooth" adjustment, avoiding broad austerity packages and, consequently, lower population sacrifices. We believe that we can talk about the budgetary consolidation and when, in times of prosperity budgetary surpluses are created to ensure some "maneuvers" in times of economic downturn. Incidentally, one of the most important lessons offered by the financial and economic crisis relates precisely to the consistency of government action against the problem of deficits and public debt, neglected in the prosperous period.

Although budgetary consolidation is put into relationship with the role of the budget to influence the socio-economic life through government financial policy, we notice that the "roots" of the budgetary consolidation, involves both the (fair) allocation and redistribution of resources in the economy and society, through divisions, dimensions and the way of the actual specific processes. Budgetary consolidation was well-received as a whole of government financial policy measures designed and applied with the stated goal of reducing the budget deficit, with the use of the sustainability of public finances and economic growth.

Starting from the premise that the effectiveness of the budgetary consolidation depends on a good knowledge of the factors that influence its success, thus were identified and analyzed the potential factors about the economic conjuncture in which are designed the public financial policies implemented in line with the commitments and objectives assumed by the public decision-makers, legal regulation and the effectiveness of its application, the ideology of the government group, the institutional arrangements and political and legal commitments of public authorities, the political and administrative fragmentation (both in terms of the proliferation of the centres of expense, and reflecting in the budget the system components and the relationships between them), the correlation of the public financial policy components with complementary policies, respectively the scientific fundament of the decisions which this specifies.

Long-term budgetary sustainability, and maintaining public budget balance to a positive level or as close to zero as possible, while diminishing the public debt and maintaining it in legally defined boundaries, it becomes in a certain level, in the present conditions, a necessity that should not cause more contradictions, expressing a "budgetary common sense". Getting budgetary consolidation must be permanently linked to the objective of the economic growth, whereas its insurance is the basis of society consolidation at all levels.

In addition to the requirements regarding the proper dimension and structuring the public spending budget, a special attention should be paid to the effectiveness of the use of the powerful positive effects. In this context, the generalization of budgeting - based on performance and its association with the permanent evaluation and monitoring of budgetary capacity (mobilization of budgetary revenues and spending of receivable amounts) are absolutely necessary prerequisites of enhanced efficiency for governmental spending.

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# Threshold Analysis of Fiscal Deficits with Respect to Monetary Growth: Evidence from Nigeria

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## Abstract

*This paper aims at determining the threshold level of fiscal deficits with regards to monetary growth. Data for the study are obtained from Central Bank of Nigeria Statistical publication between 1986 and 2016. The empirical findings suggest that optimal level of fiscal deficits with regards to monetary growth is at the point where the fiscal deficits, as a percentage of GDP is 31. The major conclusion from the study is that continuous accumulation of deficits in the economy by the government should be avoided. This can be done by strengthen fiscal consolidaton and provision of viable institutional fiscal rules so as not reach the threshold level.*

**Key words:** Threshold; Deficits; Monetary Base

**J.E.L classification:** H62, E51

## 1. Introduction

Great deal of attentions have been devoted in economic literature to analysis of interdependence between fiscal and monetary policies in various economies with the intention of investigate the presence or absence of fiscal dominance, (Aiyagari and Gertler, 1985, p.19-44; De Resende, 2007.p.10;Sanusi and Akinlo, 2015, p.125). Evidence from the literature suggests that the relation between fiscal deficits and monetary growth have been largely debatable and remain inconclusive. None of these existing studies has looked into the threshold level of deficits; below which monetary growth would not be stimulated and above which growth of money will be stimulated. This could be a reason for inconclusiveness of the available empirical findings. On the other hand, available studies on threshold analysis of fiscal deficits have been carried out with respect to economic growth. These studies include, among others, (Adam and Bevan, 2003, p.572), (Onwioduokit & Bassey, 2013, p.22), (Olayiwola, 2013, p.7) and (Onwioduoki and Bassey, 2014, p.3). Hence, this study differs from existing studies by examining the threshold level of fiscal deficits with respects to monetary growth in Nigerian economy. This paper is divided into four sections. Section 2 presents the method of estimation. Empirical findings are contained in section 3 while section 4 concludes the study.

## 2. Empirical Method

This study adopts the formulated model of Khan and Sendhaji (2001) to test the threshold level of fiscal deficits with respect to monetary growth. The model to be estimated is of the form:

$$d\log(X_t) = \alpha_0 + \alpha_1 \log(Y_t) + \alpha_2 D[\{\log(Y_t) - \log(Y^*)\}] + U_t \dots \dots \dots 1$$

Where  $Y^*$  is the threshold point for fiscal deficits.

$X_t$  = growth rate of monetary base

$Y_t$  = growth rate of fiscal deficits

$U_t$  = random error term, which represents measurements error in the explanatory variables.

The dummy variable D is defined in the following way:

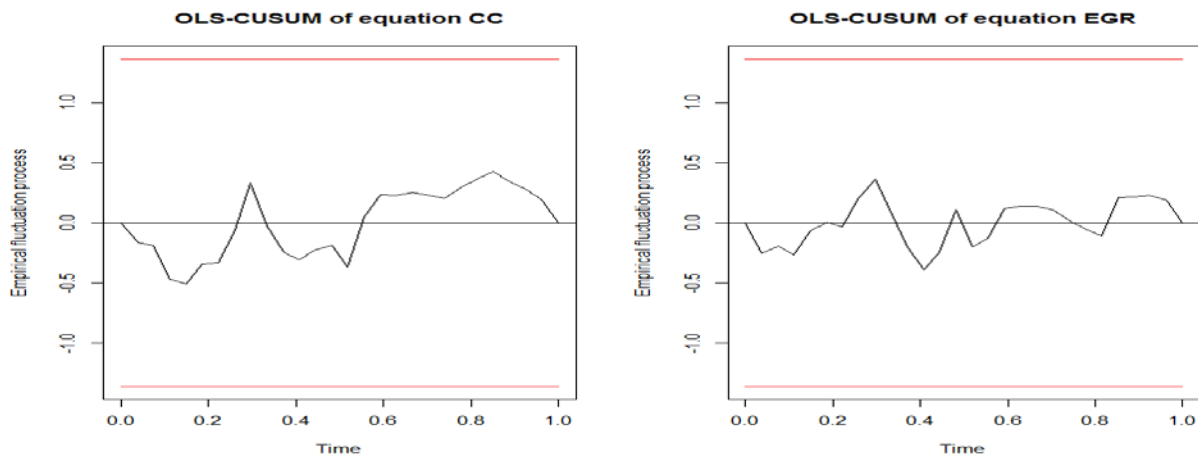
$$D = \{1 \text{ if } Y_t > Y^*\}, \{0 \text{ if } Y_t \leq Y^*\}.$$

The coefficients of the dummy variable  $\alpha_2$  measures the impacts of fiscal deficits on growth rate of monetary base when it is greater than the assumed structural break level (i.e fiscal deficits is high) and opposite for the coefficient of fiscal deficits  $\alpha_1$ . Fiscal deficit is measured by the excess of government spending over the generated revenue and is captured in the estimation process as EGR. While growth rate of monetary base is measured by annual growth rate of high powered money and is captured in the estimation process as CC.

### 3. Empirical Results

Time series data on growth of fiscal deficit and growth of monetary base were used for the study. The data were sourced from Central Bank Statistical Bulletin, 2016. Preliminary tests that were carried out showed the absence of serial correlation among the variables. Model stability is done by means of OLS-based CUSUM process, using R-statistical Package. The OLS-based CUSUM test has better power for structural changes early and late in the sample period (Zeileis, 2000b, p.1-50). The result is presented in figure 1 the OLS-based CUSUM process does not exceed its boundary, our model is adjudged stable.

Figure no. 1: OLS-Based CUSUM Stability Test



Source: (Author, 2017)

The trend of fiscal deficits and monetary growth are examined and they are shown as in figure 2a and figure 2b.

Figure no. 2a: Trend of Fiscal deficits

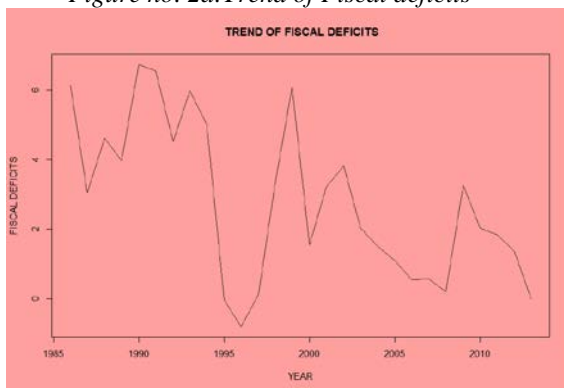
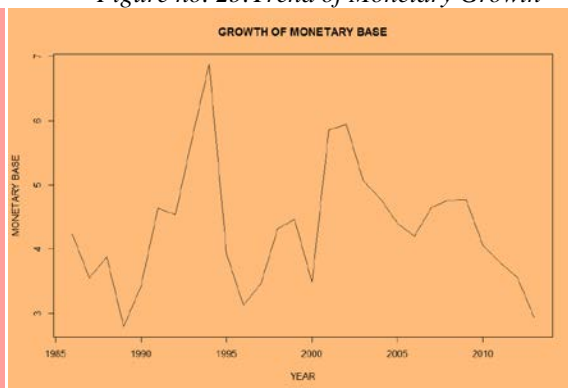


Figure no. 2b: Trend of Monetary Growth



Sources: (Author, 2017)

The results showed that fiscal deficit and growth rate of monetary base in Nigeria swing during the period under analysis. They, on average increased, between 1986 and 1999, and later declined until 2002 and continued to decline.

### Unit Root Results

Table no. 3.1 Unit Root Test for the Variables in Levels

	<b>ADF AT LEVEL</b>	<b>PHILLIPS-PERRON AT LEVEL</b>
Series	ADF Stat	PP Stat
CC	-2.778	-2.820644
EGR	-2.7070	-2.7595

Sources: (Author, 2017)

Table no. 3.2 Unit Root Test for the Variables in 1<sup>st</sup> Difference

	<b>ADF AT 1<sup>st</sup> DIFF</b>	<b>PHILLIPS-PERRON AT 1<sup>st</sup> DIFF</b>
Series	ADF Stat	PP Stat
CC	-4.649530	-6.384563
EGR	-5.8466	-7.1363

Sources: (Author, 2017)

The results of the unit root test of the variables evaluated at both levels and 1<sup>st</sup> difference are presented in Table 3.1 and Table 3.2 Using the ADF and PP tests, all the variables were regarded as non-stationary at their levels, since the reported t-statistic for each of the variables was not greater than the critical values at 5% level of significance. The result was followed by testing whether the first differencing makes the variables stationary. In other words, for each variable, we tested null hypothesis that the variables are I (1). The results presented in table 3.2, however, confirmed that differencing once is what is required to bring these variables to stationary at 5% significance level. The variables were as well rightly signed.

### Cointegration Test

Table no. 3.3a Johansen Co-integration Test Results

<b>Eigen value</b>	<b>Trace Statistic</b>	<b>5 Percent critical Value</b>	<b>Hypothesized NO of CE(s)</b>
0.451223	21.58616	15.49471	None *
0.205605	5.984531	3.841466	At most 1 *

Sources: (Author, 2017)

Table no. 3.3b Johansen Co-integration Test Results

<b>Eigen value</b>	<b>Max-Eigen Statistic</b>	<b>5 Percent critical Value</b>	<b>Hypothesized NO of CE(s)</b>
0.451223	15.60163	14.26460	None *
0.205605	5.984531	3.841466	At most 1 *

Sources: (Author, 2017)

Notes:

- i. Both Trace test and maximum Eigen Statistics indicate two co-integrating equations at 5-percent significant level
- ii. \* denotes rejection of null hypothesis at 0.05 significant level
- iii. Critical Values are from Mckinnon-Haug-Michelis (1999)

Table no. 3.4 Philips and Ouliaris Co-integration Test Results

<b>Deterministic Term</b>	<b>Test Statistic</b>	<b>Critical Values</b>
Without Trend	9.52	-3.5625
With Trend	9.516	-4.1336

Sources: (Author, 2017)

Note: Critical Values are computed from the MacKinnon's table on co-integration

From table 3.3, the null hypothesis of no co-integration was rejected at 0.05 level of significance since there was at least one co-integration relationship between fiscal deficits and growth of monetary base in Nigeria. The existence of co-integration relationship was further confirmed by Philips and Ouliaris co-integration test result available in the software R in package urca. Since the test statistic values are greater than critical values as can be seen in table 3.4, the null hypothesis of no co-integration is rejected. We thus conclude that there is existence of co-integration relationship.

Table no. 3.5 Granger Causality

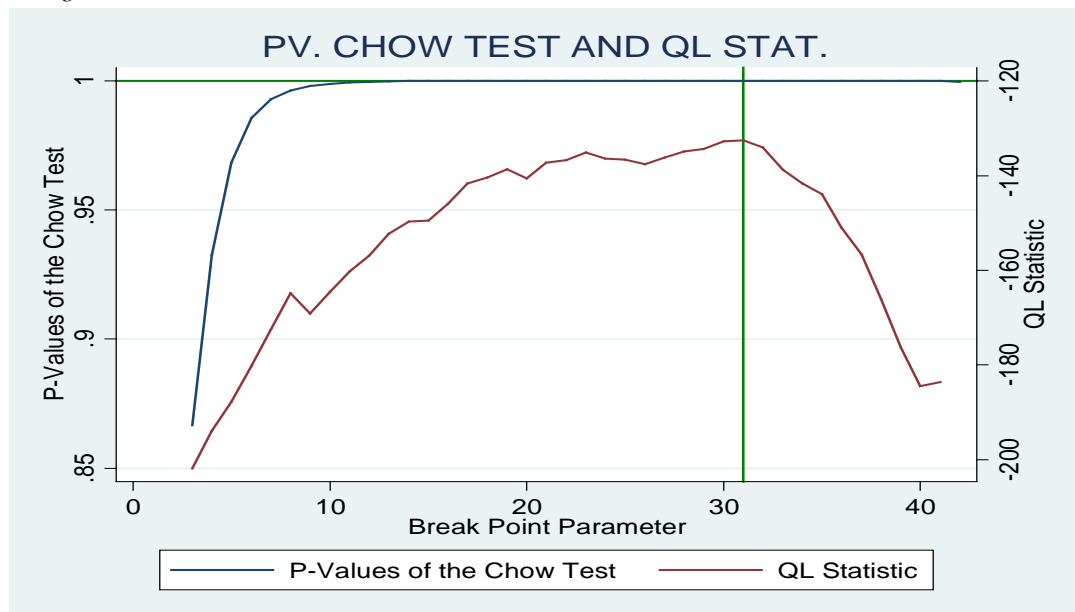
Direction of Causality	Chi-Sq	df	Prob
EGR > CC	12.957161	2	0.0034
CC > EGR	10.44065	2	0.0054

Sources: (Author, 2017)

Empirical evidence from table 3.5 shows that there exists causality running from fiscal deficits to growth of monetary base and vice visa. The task of identifying a precise level of fiscal deficits, above which has implications for monetary policy performance involves estimating the threshold level of fiscal deficits, beyond which it begins to correlate with the growth of monetary base in Nigeria.

The optimal threshold is the level of fiscal deficits or a point at which there is a break-point. The estimation of regression model in 2.1 showed that threshold level occurs at the point where the fiscal deficits, as a percentage of GDP is 31 as shown in the figure 3.

Figure no. 3 Threshold Level



Sources: (Author, 2017)

#### 4. Conclusion

The study investigated the threshold level of fiscal deficits in respect to growth of monetary base in Nigeria. The empirical findings from the study is that optimal level of fiscal deficits with respect to growth of monetarybase occurs at the point where the fiscal deficits, as a percentage of GDP is 31. The study concludes that government should avoid continuous accumulation of deficits in the economy by ensuring stringent fiscal disciplines as not to reach the threshold level.

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## Accounting Changes on Green Certificates in Romania

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### Abstract

*The purpose of green certificates is to get more renewable electric energy into the energy market at the expense of traditional energy, which in most countries is based on fossil fuel. These renewable technologies are too expensive to enter the market on commercial terms. A key feature of the scheme is that producers of energy based on new renewable energy sources receive certificates from the authorities, proportional to their output. The users of electric energy are required to buy a certain amount of these certificates when they buy electricity. Green certificates may in principle contribute to a reduction of the production of traditional energy.*

**Key words:** green certificates, accounting, renewable energy

**J.E.L. classification:** M41, Q40, Q56

### 1. Introduction

A green certificate (GC) is a tradable asset which proves that electricity has been generated by a renewable (green) energy source and represents a form of support for electricity produced from renewable energy sources. The Green Certificates value represents an additional income received by the producers for the "clean" energy that they deliver into the network.

A green certificate is typically issued per 1 MWh of renewable power. Alternatively, the number of green certificates may depend on the source, whereby greener or more innovative technologies may obtain more certificates than other technologies per MWh of power produced.

Green certificates are issued and traded primarily because of governmental policies which require suppliers to have a certain percentage of renewable production in their supply portfolio. With green certificates, governments can set exact targets as to the level of renewable production in a country, while the market finds the most efficient way to meet these targets. It is an alternative to other policy mechanisms, such as renewable investment subsidies, renewable production subsidies, fiscal benefits and feed-in tariffs.

Romania introduced a Tradable Green Certificates (TGC) support mechanism in 2008. The trade of green certificates is done on the bilateral contracts' market and/or the centralized monthly TGC market, between the Renewable Electric Energy Sources (RES-E) producers and the electricity suppliers to end users. The annual RES-E quota that was achieved between 2009 and 2011 was lower than the annual quota legally established by the Romanian regulator (ANRE), in the year 2012 it was very close to the mandatory annual quota and in the year 2013 it exceeded the annual mandatory quota, which resulted in TGC price decrease from €55/certificate in 2009–2012 to €42/certificate in 2013 (Atanasoae, et al 2014). In the face of economic crisis an Emergency Ordinance of July 2013 imposed harsh restrictions for the RES-E sector, such as temporary suspension of the number of TGC granted to some technologies, limitation of RES installed capacity, TGC trading barriers and others. Also ANRE, in order to decrease the electric energy price, changed the method for calculation of the yearly quota for RES-E energy production, effective from 2014. With that change, the quota established for 2014 decreased from 15% (as regulated by the law before) to 11.9%, which led to an overflow of unsold green certificates on the market and further diminished their price to €26/certificate in 2014 (Bozsoki, 2015). Both the development and the startup of RES-E have nearly stopped. The renewable energy disaster has been confirmed by the March 16 trading session on the Green Certificates Market, in which only 5,490 TGC were sold from over 1.7 million offered. Renewable energy producers state that the

authorities' decisions make it impossible for them to sell their green certificates, and many companies will go bankrupt in this sector as a result.

Renewable energy producers received a breath of fresh air in March 2017, after the government approved an Emergency Ordinance 24/2017, modifying the operating rules of the green certificate support scheme. The normative act thus created the legal framework that ensures the demand for green certificates for the profile market that has been affected, starting with 2013, by less favorable regulations.

The amendments contained in the Ordinance refer, on the one hand, to the modification of the calculation method of the mandatory annual quota for the acquisition of green certificates, the extension of the validity of the green certificates and the green certificates trading regime, the moment of recognition of the green certificates in their accounts, their trading but also consumer protection on the other hand.

## **2. The formula for calculating the mandatory annual quota for the acquisition of green certificates**

The Emergency Ordinance introduces a new mechanism for calculating the total number of green certificates that must be purchased by electricity suppliers. In order to secure the demand for the total number of green certificates issued to the renewable electricity producers, the legislator calculates the static annual quantity of green certificates.

This static quantity represents the annual average of the available green certificates (meaning both the certificates that will be issued by 2031, and the certificates deferred from trading from 2013 onwards and which will be progressively reinserted). The static quantity is a fixed number that will be reviewed once every two years, starting with 2018. It is originally established for the period 2017-2018 at 14,910,404 green certificates.

By reference to this number, we observe that in 2016 a total of 14,906,693 green certificates were issued to the producers of renewable energy, but also that in 2017 the number of green certificates issued will be higher (given that the deferral measures to green certificates trading partially ceases, as detailed below). As a result, manufacturers will still be under some pressure with regard to green certificate applications.

The mandatory annual green certificate acquisition quota is established taking into account the static quantity of green certificates and the final consumption of electricity estimated for the following year, without exceeding the average impact in the invoice of 11.1 euro / MWh. Through the ANRE Order no. 27/2017 regarding the establishment of the estimated mandatory quota for the acquisition of green certificates, for the period April 1 – December 31, 2017, the related mandatory quota was fixed at 0.358 green certificates MWh. It is a higher quota than the 0,320 previously established by ANRE Order no. 119/2016, which shall remain applicable for the period January 1, 2017 to March 31, 2017.

## **3. The validity period of green certificates**

The validity period of green certificates has been extended from 12 months, until March 31, 2032. This eliminates the risk that producers will not use the green certificates because of their expiration. The measure targets both the green certificates issued from April 1, 2017, and those deferred from trading starting with July 1, 2013, which will be recovered from 2018.

## **4. Trading green certificates**

Significant changes have also been made to the green certificates trading regime, given the complaints of the producer associations concerning certain green certificate trading practices. We recall that, previously, the green certificates could be traded by producers and suppliers either on the centralized green certificates market or on the bilateral counterparts market, both managed by OPCOM.

Starting with September 1, 2017, the green certificates can be traded either on anonymous centralized green certificates markets (of on spot or forward transactions type) or on the centralized electricity market supported by the state aid scheme, the market where electricity is sold in



association with the green certificates associated with the amount of electricity traded. A distinct regime is regulated for small producers.

Following the reform from March 2017 of the Romania's support system for renewable energy based on green certificates (GCs), a new green certificates centralized market became operational on September 1, 2017 managed by OPCOM ("New GC Market").

Late August 2017, the National Regulatory Authority for Energy (ANRE) issued and published in the Romanian Official Gazette, Order 77/2017 approving the Regulation concerning the organization and functioning of the green certificates market ("GCM Regulation").

The New GC Market includes centralized platforms for trading GCs (spot and forward transactions) organized by OPCOM, allowing participants to submit firm sale or purchase offers for GCs with respect to quantity and price, without revealing their identity to the other participants to the trading session.

The **New GC Market** is separate from the trading of the electricity produced from renewable sources, and has the following trading platforms:

1. *forward centralized anonymous market for green certificates;*
2. *spot centralized anonymous market for green certificates.*

In addition to concluding bilateral contracts on the OPCOM platform under (a) above, producers of electricity from renewable resources with installed capacity of less than 1 MW will continue to have the possibility to enter into bilateral agreements for green certificates, directly negotiated with electricity suppliers for end customers, outside the OPCOM platform.

Following the legal reform of the GC scheme, a GC may be subjected only to one transaction between a producer as seller and a supplier as buyer, except for the case when a producer is bound by a GCs sale and the purchase contract is not in a position to fulfill its sale obligations under such contract and has to purchase additional GCs to cover the difference. This prohibition to re-sell GCs will affect current buyers of GCs under outstanding long term; GCs sale and purchase contracts which do not need the entire quantity of GCs bought to fulfill the mandatory quota obligation – this may result in transfers of the bilateral contracts concluded by such GC traders, provided ANRE allows them.

According to the GCM Regulation, the participants to the New GC Market are:

1. producers of electricity from renewable resources;
2. electricity suppliers that purchase electricity both for their end consumption and in view of re-selling to end customers;
3. electricity producers that use the electricity produced for their own consumption, other than own technological consumption;
4. electricity producers that use the electricity produced to supply it to customers directly connected to the power plant.

## **5. The moment of recording the green certificates in the accounting system**

Unlike the previous regulation, under OUG 24/2017, green certificates are recorded in the manufacturers' accounting system only when they are traded on the markets, and not when they are issued. Changing the moment when they are recorded has a direct impact on the way they pay the tax on their respective profits.

The measure targets exclusively the green certificates issued after the date of entry into force of the emergency ordinance, the ones previously issued keeping the accounting value from the time of issuance.

## **6. Trading with green certificates**

Green certificates can only be transacted once between the manufacturer and the supplier. There is, however, a derogation that occurs when the producer is in a deficit concerning the number of green certificates promised for sale to a supplier. In this case, the manufacturer in question can buy the green certificates difference from the centralized markets.

The Emergency Ordinance continues the series of measures for deferring the green certificates from trading. In the case of photovoltaic producers, it is deferred the trading of two green certificates until December 31, 2024.

Therefore, in the near future, they will be entitled to 4 green certificates per MWh (as opposed to the previous deferral, based on which they only received 3 green certificates per MWh).

The green certificate re-entry period is modified by this regulation for all categories of producers, as follows:

- Hydro and wind: January 1, 2018 - December 31, 2025, instead of January 1, 2018 - December 30, 2020, in equal monthly installments;
- Photovoltaic: January 1, 2025 - December 31, 2030, instead of January 1, 2018 - December 30, 2020, in equal monthly installments.

The result of the prolongation of the postponement period gives the possibility to producers, whose accreditation / license expires before 31.03.2031, to obtain green certificates postponed from trading including after the expiry of the validity period of the accreditation decision and to trade the green certificates received for the production during the 15 years period covered by the accreditation decision, even after the accreditation expires, until March 31, 2032.

## 7. Consumer Protection: Financial Impact

In order to protect consumers (industrial and domestic), the amending ordinance introduces several provisions which limit the financial impact of the contribution for the green certificates included in the invoices issued to them:

- The supplier invoices the final consumer the green certificates at a value equal to the weighted average transaction price in the anonymous centralized market spot, and, subsequently, at the time of regularization, at the weighted average price of the green certificate used by the supplier in order to meet the mandatory green certificate acquisition quota for the previous year, which cannot be higher than the weighted average price of the transactions from the centralized anonymous spot market in the previous year;
- The maximum trading value of the price per green certificate was reduced from €55 to €35 / certificate;
- The financial effort reflected in the consumer's bill will not exceed 11.1 Euro / MWh.

## 8. Accounting treatment for green certificates

Until the Emergency Ordinance (OUG) 24/2017 appeared, in line with OMFP 1802/2012, the green certificates accounting treatment provided for the producers of energy from renewable sources that benefited from green certificates issued by the transport and system operator the following records:

- Monthly highlighting of the right to receive green certificates  
4458 „Other amounts received as subsidies” = 7411 „Subsidies related to the turnover”
- When receiving the green certificates, their value was reflected in the account 507 "Received green certificates"  
507 „Received green certificates” = 4458 „Other amounts received as subsidies”
- The difference between the value of the green certificates registered in the account 4458 "Other amounts received as subsidies" is distinct when establishing the right to receive green certificates and their value at the date of receipt, determined on the basis of the trading price from the date of receipt, represents financial income (account 768 "Other financial revenues" or the financial expense (account 668 "Other financial expenses"), as appropriate.
- When selling green certificates, the earnings must be recognized (account 7642 "Gains on disposal of short-term financial investments"), respectively record the loss (account 6642 "Losses on disposal of short-term financial investments") from their sale.

In order for the green certificates to be reflected in the accounting system after the EGO 24/2017 came into force, the Ministry of Public Finance modified through the OMFP 895/2017, the Accounts Plan introducing the 804 "Green certificates" account. With this account, evidence is being kept of the green certificates received, according to the law, and which have no value until the moment of trading. In debit of the account 804 "Green certificates", the green certificates received and which have not been traded are highlighted, and in the credit, those traded. The balance of the account is represented by the number of green certificates that the entity benefits from.

Thus, the green certificates received, including those deferred from trading, after April 1, 2017, are highlighted numerical extra accounting in the account 804 "Green certificates".

The green certificates highlighted in the account 804 "Green certificates" are recognized as revenues in the account 768 "Other financial revenues", only at the time of their trading;

The green certificates deferred from trading and existent on April 1, 2017 in the account balance 266 "Deferred green certificates", respectively 472 "Deferred income", are evidenced numerically in the debit of the account 804 "Green certificates" and at the same time the operation of reversing their counter value takes place.

$$472 \text{ „Deferred income”} = 266 \text{ „Deferred green certificates”}$$

## 9. Conclusions

These new measures could revitalize a sector that had initially drawn substantial foreign investment and made Romania one of the most attractive countries in the world for renewable energy projects. The scope of the measures is, primarily, to strike a balance between two diverging interests, those of the producers, and those of the consumers, to encourage, ultimately, an increase in demand for green certificates.

Making the support scheme functional again is also paramount to attaining the objectives set by the Romanian Energy Strategy for the 2016–2030 period published in December 2016, where the 2030 target for the share of electricity generated from renewable energy sources in the final consumption of electricity is 27%.

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- *Ministry of Finance – OMFP nr. 1802/2014* Accounting Regulations on the individual financial statements and consolidated annual statement as amended;
- *Ministry of Finance - Order no. 4160/2015* amending and supplementing certain accounting regulations.

## The Perception of the Internal Managerial Control System – the Case of the Romanian Public Entities

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### Abstract

*In order to control the management of activities for achieve the objectives, the managers at all levels of the hierarchy must have relevant information on the organization's events and activities, in an appropriate form and detail. Thus, they can assume their responsibilities. In this context, we considered that important of organizing and implementing in the public entities of the system of internal managerial control. This system provides reasonable assurance that the organization's objectives will be achieved in terms of efficiency, efficacy, economically. For this purpose, we have carried out a documentary research of both specialized papers and the applicable regulations in force in Romania in the field of managerial internal control within the public entities, as well as empirical research. Thus, in a conjunct survey, we conducted a survey on the implementation of the managerial internal control system in different public institutions in Romania with the central objective to highlight the perception of the staff involved in this tool at the disposal of the management.*

**Key words:** internal control, objective, responsibility, difficulty, result

**J.E.L. classification:** M42, M48

### 1. Introduction

One of the main objectives of any organization is to have a management that implements the policies, programs and projects adopted to achieve the mission of the organization through the rational use of resources (mostly limited) and the same time to meet the requirements of stakeholders.

Achieving the mission of public entities depends on the objectives set as a final result of the developed strategies and planned activities and, at the same time, the climate created within the organization that must be favourable to ensuring the performance and quality of the services provided. Objectives define both what needs to be done and when their assessment and quantification becomes possible.

In order to achieve the objectives, it is necessary for its management to implement appropriate operational devices, in compliance with applicable laws and regulations. Such a device is managerial internal control which, through specific procedures, ensures the measurement, management and supervision of resources in order to create premises favourable to the achievement of the organization's objectives.

### 2. The concept of internal managerial control

The etymology of the word control derives from the Latin expression "contra rolus" which means checking a duplicate act made after an original one. Control is a "permanent or regular

analysis of an activity, a situation, to follow its course and to take improvement measures" [Romanian Court of Accounts, 2011].

It follows from the practice that the control operation "is an attribute of management, a means of analysing reality and correcting errors, the most common sense associated with control is verification, which is often associated with the knowledge activity that will allow management to coordinate the activities of the organization as economically and efficiently as possible "[Ghiță E., 2007].

By the implementation of a managerial internal control system, managers ensure that resources are obtained and used with economy, efficiency and effectiveness to achieve the objectives. The overall objective of internal control is to "ensure the continuity of the entity in achieving its objectives" [Voinea C.M., 2016].

The applicable legislation in Romania in the field of managerial internal control for the management of public funds in an economically, efficiently and effectively manner specifies that public entities must act in such a way as to ensure:

- "minimizing the cost of resources allocated to achieve the expected results of an activity, while maintaining the appropriate quality of these results -
- the degree of achievement of the scheduled objectives for each activity and the relationship between the projected effect and the actual outcome of the activity concerned -
- maximizing the results of an activity in relation to the resources used - efficiency. "[O.S.G.G. no. 200, 2016).

Identifying and setting goals is one of the determinants of the design and implementation of a managerial internal control system within a public entity so that it provides management with reasonable assurance that the objectives will be achieved to actually confirm the manager's expectations by using specific procedures, techniques and tools. The objectives of the public entity can be grouped into three categories, according to the Code of managerial internal control approved by O.S.G.G no. 400/2015 modified and completed by O.S.G.G no. 200/2016:

1. Effectiveness and efficiency of f (objectives related to the public entity's goals and efficient use of resources as well as the protection of inadequate public use or loss of public resource resources).

2. Reliability of internal and external information (objectives related to maintaining appropriate accounting, the reliability of information used in the public entity or disseminated to third parties, and the protection of documents from the avoidance of fraud and distortion of results).

3. Compliance with internal laws, regulations and policies (objectives to ensure that public entity activities are carried out in accordance with statutory and regulatory obligations, with due regard for internal policies).

In order to achieve the objectives, a balance must be struck between tasks, competence (delegated decision-making authority) and responsibilities (the obligation to achieve the objectives) and procedures defined. General objectives are the targets to which each person will focus, from the tip to the hierarchical pyramid, for whose touch "it is important for the staff to know them and to understand the role they have to fulfil in achieving these global goals" [M.F.P. -UCAAPI, 2005].

### **3. The empirical study on the perception of the system of internal managerial control within the Romanian public entities**

#### **3.1 Methodological elements regarding the realization of empirical research**

The issue of control and supervision of the economy and, in particular, the way in which public funds are used is topical, as internal controls are an essential element in all managerial, financial or operational processes. In order to promote efficient public sector management, public internal financial control has been implemented, including: internal management control system, internal audit, coordination and harmonization of all components. Internal public control has always existed and has lately been developed as a recognized and widely used concept using elements of the modern management system, with initiatives related to the introduction and promotion of the public internal control system.

The issue of research is represented by the need to implement within the public institutions the system of internal managerial control, a component of the public internal financial control, in order to provide the relevant information regarding the extent to which the established objectives have been achieved and the expected results have been achieved. The purpose of our empirical research is to show that the internal managerial control system has a decisive impact on achieving the objectives of public entities, viewed from the perspective of those who need to apply it.

The starting point of our scientific approach is the question: Is internal control recognized / perceived in public entities as a process designed to increase the performance of entities?

Taking into account the research issue and looking to answer the research question we have formulated the following assumptions:

Hypothesis no. 1. The internal managerial control system is an essential component of management by objectives, namely a planning and control system that includes, on the one hand, action-setting and planning to achieve them, and which process self-monitoring and a periodic review system, followed by an evaluation of the results.

Hypothesis no. 2. Developing an internal control system is perceived as a process that involves improving performance and governance, rather than introducing a new, additional system.

The empirical research was realized in a conjuncture survey conducted at public institutions through a questionnaire comprising 13 questions, grouped into two categories:

1. General questions designed to highlight the characteristics of the sample of respondents;
2. Specific questions designed in accordance with the issues addressed and the hypotheses formulated to draw conclusions about the perception of the system of internal managerial control implemented within the public entities concerned.

### 3.2 Results of empirical research

The questionnaire was applied to a sample of 56 respondents, employees of public institutions in the field of: public administration, namely territorial administrative units - 58,92%, education - 25%, health - 7,14%, culture - 7,14 %, research - 1.80%, which operates on the territory of two districts, Prahova and Dâmbovița.

Respondents, employees of the above-mentioned entities, account for 66.10% of the execution staff category, the remaining 33.90% being management personnel. Only one respondent has secondary education, the remaining 55 have higher education, namely 40 university studies (71.42%), 10 postgraduate studies (17.85%) and 5 doctoral studies (8.95%). Most of them are trained in the economic field, as shown in the table below:

*Table no. 1 Sample structure by field of training*

Field	Economic	Juridical	Technical	Socio-human	Total
Number of persons	35	9	6	6	56
Weight	62,51%	16,07%	10,71%	10,71%	100%

Source: author's processing

From the point of view of the experience in the field in which they operate, the structure of the sample is as follows:

*Table no. 2 Sample structure according to field experience*

Experience	1-5 years	5-10 years	10-15 years	15-25 years	Over 25 years	Total
Number of persons	17	8	13	14	4	56
Weight	30,36%	14,29%	23,21%	25,00%	7,14%	100%

Source: author's processing

Higher professional training, corroborated with the professional experience of respondents in the field of activity within the public entity are elements that show their ability to provide pertinent answers and to formulate relevant views on the subject of the study, with 55,35% of them having an experience of more than 10 years.

To the question "Is the internal managerial control system in your institution implemented?", only 51 of the respondents answered yes, others saying they did not know the situation. A total of 38 respondents out of 51 declared that they had or have responsibilities / responsibilities / tasks regarding the organization and implementation of the managerial internal control system.

Considering the first hypothesis that the management internal control system is an essential component of objective management, the respondents were asked for an opinion on the role of the managerial internal control system for achieving the objectives of the public entity in which they operate. They were also asked to highlight the importance of achieving the specific objectives of the managerial internal control system, which is appreciated in relation to the contribution made to achieving the objectives of the public entity.

*Table no. 3 Assessing the role of managerial internal control to achieve the objectives of the public entity*

Mark	Insignificant	Significant	Determinant	Does not influence	Total
Number of answers	1	19	16	2	38
Weight	2,63%	50,00%	42,10%	5,27%	100

Source: author's processing

Appreciating over 90% as a significant and determinant role of the internal managerial control system to achieve the objectives of the public entity highlights the fact that respondents are aware that the objectives, once established, are not achieved by themselves. Several actions are needed to reach a goal, and action needs to be set for each action. Objectives and actions to achieve them should be monitored so that when deviations from the program occur they can analyse the cause and initiate corrective actions so that they can be done at the set time and resources.

All these requirements are ensured by a coherent, efficient internal management system, adapted to the particularities of each public entity, with realistic objectives, clearly formulated and brought to the attention of those involved in their achievement.

*Table no. 4 Ratings given to the importance of achieving the objectives of the internal managerial control system*

Objectives category	Not at all important	Slow important	Important	Very important	Strong important	Total
Objectives related to the utilization in conditions of economy, efficiency and effectiveness of resources	0	1	7	7	23	38
Objectives regarding the protection of the entity's resources against inappropriate use	0	1	7	13	17	38
Objectives on keeping appropriate accounting	0	1	2	14	21	38
Objectives related to the reliability of internal and external information used by the entity	0	1	6	16	15	38
Objectives on the protection of information and documents	0	0	5	12	21	38
Objectives related to ensuring that the entity's activities are conducted in accordance with applicable law	0	0	4	9	25	38

Source: author's processing

As can be seen in the table above, all 6 categories of objectives are considered to be very and especially important by an average of over 80% of respondents. This is because the manager of the public entity through the internal management control system has the possibility to:

- ensure that performance is monitored for each objective and activity through relevant quantitative and qualitative indicators, including in terms of economy, efficiency and effectiveness;
- assess performance, identify deviations from objectives and take corrective action;
- draw up plans to align the activities necessary to achieve the objectives with the maximum possible resources to allocate, so that the risks likely to affect the achievement of the objectives of the entity are minimal;
- ensure the good running of processes and the exercise of adequate internal control forms that guaranties that data and related information used for the preparation of annual accounts and financial statements are accurate, complete and timely;
- develop an effective internal and external communication system so that management and employees can effectively and efficiently perform their tasks and complete information in a timely manner to users.

In order to express their opinion on the characteristics of the internal control system implemented in the public entity in which it operates, most of the responses indicated that it is adapted to the size, complexity and environment of the entity, targeting all levels of management and activities, thus creating the premises of a reasonable assurance that the entity's objectives will be attained.

*Table no. 5 Appreciation on the characteristics of the system of internal managerial control*

<b>Characteristic</b>	<b>Number of appreciations</b>	<b>%</b>
It is adapted to the size, complexity and environment of the entity	26	32,91
Targets all levels of leadership and activities	23	29,11
The costs of applying internal managerial control are inferior to the benefits obtained	8	10,13
Provides reasonable assurance that the entity's objectives will be achieved	21	26,58
Others: ensure staff accountability, increased attention to roles and responsibilities of employees, ensure traceability of actions, activities, deviations	1	1,27
Total	79	100

*Source:* author's processing

It is to remark that only 8 of the 38 respondents considered that applying the internal management control system requires lower costs than the benefits achieved. Indeed, the implementation of such a system involves the consumption of human, material and financial resources which, depending on the size of the entity's complexity and environment, can reach high levels. The challenge for each public entity leader is to find the best way to allocate these resources, to improve the current systems. In this process, a series of inherent difficulties arise, in our opinion, from the internal and external environment, whose impact can be considerable, regardless of the level at which it manifests itself.

As can be seen in the table below, the difficulties identified by respondents as having a high impact on the process of effective implementation of the managerial internal control system are related both to the entity's internal environment and to the external environment. Thus, the absence of training programs in the field of managerial internal control (the costs of such programs are quite high), in the context of the complexity of the applicable legislation and its frequent changes, corroborated with an inadequate leadership style, incapable of accountability and motivate staff, constitute real impediments in designing a system of internal managerial control to support the management of the public entity in managing the operations performed to achieve the objectives and manage its activities.

Note that in order to assess the impact of each difficulty, the respondents were asked to give notes from 1- low impact to 10 - high impact, in the table below we present the result obtained by centralizing the answers received.



Table no. 6 Hierarchy of difficulties in implementing the internal control system

Difficulty	Scores
No training / training programs in the field of managerial internal control	255
The way in which the management of the entity is assured (management style)	243
Complexity and frequency of legislative changes	239
Accountability of staff	225
Degree of staff motivation	224
Deficient communication, from the point of view of the form and timing, of the relevant information	203
The degree of transparency in determining the duties / tasks / responsibilities	186
Non-correlation between the requirements of the implementation of the internal managerial control system with the concrete possibilities at the level of the entity (from the point of view of the available personnel)	185
Degree of acceptance and appreciation of managerial internal control	180
Absence of formalized procedures	164

Source: author's processing

Each manager on his hierarchical level is the owner of a set of specific responsibilities and competencies through which the internal managerial control is carried out, but internal control is a process carried out by the staff at all levels, being carried out both by top management, but also by line management, meaning department managers, and all other employees, each being responsible for its internal control.

#### 4. Conclusions

The two formulated hypotheses were validated by the answers of the subjects of the study and the answer to the research question Internal control is recognized / perceived in public entities as a process designed to increase the performances of the entities? is definitely YES. In support of these conclusions, we bring the following arguments:

- Undoubtedly, internal control is an undeniable attribute of management, a function of leadership, a means of knowing and mastering reality, and of correcting dysfunctions, errors;
- this permanent and complex process is followed by corrective measures to remove the deviations, which implies not only to follow the way the tasks are done, but also the possibilities for improving the results;
- like any project has restrictions on coverage, time and costs, and therefore the allocation of resources requires decisions on the best way of allocation, given their limited nature.

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## Effective Tax Rate of Corporate Income Tax in the Post-Crisis Period: The Case of Non-Financial Companies Listed on the Bucharest Stock Exchange

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### Abstract

*The intention of the paper is to analyse the evolution of the effective tax rate of corporate income tax for the 2011-2016 period, calculated for the non-financial companies listed on the Bucharest Stock Exchange (Romanian: Bursa de Valori București - BVB).*

*The first part of the paper presents the main causes for the divergence between the statutory and effective rate of the corporate income tax, based on the provisions of the Romanian Fiscal Code. The differences between the gross income and the taxable profit, which form the basis for calculating the income tax, are highlighted. The second part is devoted to the methodology for calculating the effective income tax rate and its analysis, based on data from the financial statements published in the post-crisis period by Romanian companies listed on BVB.*

**Key words:** taxable profit, profit tax, statutory tax rate, effective tax rate

**J.E.L. classification:** G39, H25, K34

### 1. Introduction

In general, the corporate tax burden can be approximated by utilizing the effective tax rate. This tax rate is more relevant than the statutory tax rate because the latter does not highlight tax incentives and does not provide a truthful reflection of the tax burden borne by companies. Companies have lately become increasingly preoccupied with maximizing their tax benefits and reducing their tax liabilities by legal means. The corporate tax policy has a significant impact on their development and social responsibility. From this perspective, the corporate income tax policy affects Corporate Social Responsibility actions (Vintilă *et al.*, 2012). Barely legal tax-avoidance strategies and financial aggression can be considered as socially irresponsible, due to the costs of non-payment of tax obligations. However, the size of the corporate income tax rate influences the profitability of the companies, expressed by their net income.

In the present paper, the authors aim to determine the effective tax rate for Romanian companies listed on the stock exchange. The chosen method to determine the effective tax rate is based on data extracted from the financial statements published by these companies. The methodology used is referred to in the literature as micro backward-looking and has been presented in various studies and papers (Nicodème, 2001; Lazăr, 2010; Vintilă *et al.*, 2010).

One advantage of the chosen methodology is that it utilises data from the real economy. Another advantage is that it makes it possible to study effective taxation both at sectoral level and for individual businesses of different sizes. Taking into account the important elements of the taxation base such as: depreciation rules different from accounting ones, treatment of losses, reserves and provisions, various tax incentives, etc. represents a third advantage of the micro backward-looking method.

## 2. Main Causes for the Divergence between the Statutory and Effective Rate of the Corporate Profit Tax

Effective Tax Rates are principally the product of the nominal tax rate and the rules governing the calculation of the tax base (COM (2001) 582 final, p. 31). In Romania, the difference between the statutory or standard tax rate (STR) and effective tax rate (ETR) of corporate profit tax, calculated as the ratio between profit tax payable and earnings before taxes, is determined by the differences between the accounting and fiscal treatment of some revenues and expenses, by taking into account, in the calculation of the taxable profit, of certain elements that, from the accounting point of view, have no influence on the gross accounting result, as well as the tax reductions and exemptions stipulated by the tax legislation.

Since this study pertains to non-financial companies listed on the Bucharest Stock Exchange, the regulations applicable to them will be briefly analysed, for the 2011-2016 period. Under accounting regulations, companies whose securities are admitted to trading on a regulated market draw up their accounts in accordance with international accounting standards.

According to the Fiscal Code of Romania, the corporate profit tax is calculated by applying the statutory tax rate of 16% to the positive fiscal result, called taxable profit. Thus, earnings from the sale or disposal of fixed assets are treated in the same way as the income from the current business activity of the company. For certain revenues, such as those originating from casinos and night clubs and bars, a minimum tax rate is set, at 5% of operating income.

The taxable profit is determined on the basis of accounting profit, adjusted, according to tax rules, with non-taxable income, non-deductible expenses, other elements assimilated with income or expenses, as well as tax deductions. Fiscal loss can be rolled over for seven consecutive years. The accounting methods for valuation and taking out of the stocks from the inventory are recognized in the calculation of the taxable profit, with the provision that they cannot be modified during the fiscal year.

Among the non-taxable income stipulated in the Fiscal Code, we mention:

- Dividends received from a Romanian legal person. During the 2014-2015 period, an additional condition has been applied, namely that the beneficiary company was to hold, for an uninterrupted period of one year, a minimum of 10% of the share capital of the company distributing the dividends;

- Dividends received from a subsidiary located in an EU Member State, subject to certain conditions, including that of the Romanian legal person to hold, for an uninterrupted period of one year, a minimum of 10% of the share capital of the company distributing the dividends. Starting with 2014, a similar treatment applies to dividends received from a subsidiary located in a third-party country with which Romania has a double taxation convention;

- Income from the cancellation or recovery of some expenses for which a deduction was not granted in the calculation of the taxable profit;

- Non-taxable income that is expressly provided in agreements and memoranda approved by law.

In the calculation of the taxable profit, the expenses incurred for the purpose of carrying out the economic activity, as well as those regulated by the applicable normative acts, are deductible.

The Fiscal Code provides for non-deductible expenses when calculating the taxable profit. This category includes: interest/increases in tax for late payment, fines, seizures and penalties for late payment that are owed to Romanian/foreign authorities, according to the law; with some exceptions, expenses incurred with the goods representing stocks or tangible assets identified as missing or damaged, which are non-imputable and for which insurance contracts were not concluded; with certain exceptions, losses incurred with the removal from the records of debt claims; expenses incurred for shareholders or partners, other than those incurred with payments made for goods delivered or services rendered to the taxpayer, at the market price of such goods or services; expenses incurred with non-taxable income; expenses incurred with sponsorship/patronage and expenses incurred with private scholarships, granted according to the law. However, expenses incurred with sponsorship/patronage and private scholarships are deductible from the tax payable up to the lowest value between: the amount calculated by applying 0.5% to turnover (0.3% until December 31<sup>st</sup>, 2015) and the amount representing 20% of the income tax payable.

The Fiscal Code also regulates expenses with limited deductibility in the calculation of taxable profit, such as: protocol expenses (to be deducted up to a 2% quota applied to the profit to which profit tax and protocol expenses are added); social expenses (to be deducted up to a 5% quota applied to the value of the expenses incurred with the wages; by December 31<sup>st</sup>, 2015, a 2% quota has been applied); expenses incurred with the operation, maintenance and repair, excluding those on fuel, for cars used by top management and administrative employees of the legal person, etc.

Expenses with provisions/adjustments for depreciation on assets are expenses with limited deductibility in the calculation of taxable profit, their tax regime being very restrictive. Subject to certain conditions, the following expenses are deductible: provisions for performance guarantees offered to clients; adjustments for depreciation on debt claims, constituted for up to 30% of their value, if they are not collected for a period of more than 270 days from the time of due payment; adjustments for depreciation on debt claims are fully deductible when they are held by a legal person against whom the bankruptcy proceedings are declared or by a natural person on which the insolvency proceedings are opened; from 2016 onwards, adjustments for depreciation of depreciable fixed assets created for situations in which they are destroyed as a result of natural disasters or other force majeure causes and for situations where insurance contracts have been concluded. Within certain limits, the provisions constituted by the mining companies for the decommissioning of installations and environmental rehabilitation, as well as some provisions specific to other sectors of activity are also deductible.

When calculating the taxable profit, the fiscal depreciation, calculated according to the provisions of the Fiscal Code, is deducted, the accounting depreciation being treated as a non-deductible expense. Fiscal depreciation is calculated on the basis of the fiscal value of depreciable assets, equal to the historical cost of acquisition or production of those assets. Land and other fixed assets, expressly provided for in the Fiscal Code, are not subject to depreciation. The fiscal value of fixed assets is recovered, from a fiscal point of view, in a number of years equal to their normal operating period, which is regulated, depending on the nature of the fixed assets concerned. As depreciation is also used as a fiscal incentive for investment, three depreciation methods are provided in the Fiscal Code: straight-line, decreasing or accelerated depreciation. In the case of buildings, only the straight-line depreciation method applies; in the case of technological equipment, computers and their peripherals, the taxpayer may opt for straight-line, decreasing or accelerated depreciation method; in the case of fixed assets that do not fall into these categories, the taxpayer can opt for the straight-line or decreasing depreciation method.

For straight-line depreciation, the annual depreciation is determined by applying the straight-line depreciation rate to the value for tax purposes at the time the depreciable fixed asset enters the taxpayer's patrimony. The annual straight-line depreciation rate is determined in accordance with the normal duration of use of the assets, provided by Decision of the Government of Romania.

The decreasing depreciation rate is determined by multiplying the straight-line depreciation rate with a coefficient that varies between 1.5 and 2.5, depending on the normal duration of use of fixed assets. The annual depreciation is calculated by applying the decreasing depreciation rate to the value for tax purposes at the time the depreciable fixed asset enters the taxpayer's patrimony for the first year, and for the following years to the remaining depreciation value of the fixed asset, until the depreciation thus calculated is less than or equal to the fiscal value that remains to be depreciated divided by the remaining normal duration of use. From that year on, the straight-line depreciation of the remaining fiscal value for the remaining duration of use is employed.

For the accelerated depreciation method, for the first year of operation, the depreciation shall not exceed 50% of the value for tax purposes of the fixed asset, while for the next years of operation, the depreciation shall be determined by dividing the remaining depreciation value of the fixed asset to its remaining normal duration of use.

Since fiscal depreciation is determined on the basis of the historical cost of fixed assets, the expenses incurred from revaluing the depreciable assets, if, as a result of a revaluation carried out under the applicable accounting regulations, there is a decrease in the value of such assets, represent non-deductible expenses in the calculation of the taxable profit. Also, income representing value gains resulting from the revaluation of fixed assets is non-taxable income.

In order to avoid sub-capitalization, the deduction of expenses from interest and exchange rate differences on loans contracted from entities other than banks and from other authorized financial

institutions is limited in the calculation of the taxable profit. In this case, the maximum interest rate that can be deducted is 4% (6% until December 31<sup>st</sup>, 2015) for foreign currency loans, and for those in national currency, the monetary policy rate of the National Bank of Romania. In addition, the right to deduct such limited interest expenses and the net loss from exchange rate differences may be exercised provided that the degree of indebtedness is less than or equal to 3. If the degree of indebtedness is greater than 3, the deduction is carried forward to full deductibility in periods when the ratio between the borrowed capital with a repayment term of over one year and the equity returns to a value of less than 3.

The following tax incentives are granted for research and development activities:

a) The additional deduction of 50% (20% by February 1<sup>st</sup>, 2013) of eligible expenses for these activities, in the calculation of taxable profit;

b) The application of the accelerated depreciation method for the tools and equipment used for this activity.

In order to stimulate investments, exemption for reinvested profit in technological equipment, i.e. in work machinery, equipment and installations is provided (in this case, the right to apply the accelerated depreciation method is lost). From January 1<sup>st</sup>, 2016, the tax exemption for reinvested profits has been expanded, being also granted for investments in computers and peripheral equipment, as well as computer software.

The calculation of the taxable profit according to the mentioned rules makes it higher, less than or equal to the accounting result. By applying the statutory tax rate to the taxable profit, the income tax is determined, but from it, thusly calculated, the sponsorship expenses, the external fiscal credit, as well as the fiscal incentives granted for investments can also be further deducted.

It can also be observed that the provisions of the Fiscal Code on the calculation of corporate profit tax were amended, during the 2011-2016 period, to extend the fiscal incentives granted to stimulate investment, innovation, international economic cooperation and sponsorship and patronage. At the same time, the limits of deduction of general expenses, in the calculation of the taxable profit, have also been modified (in the sense of increasing or decreasing). All these changes can influence the dynamics of the effective tax rate.

### 3. Calculation and Analysis of Effective Corporate Income Tax Rate

The survey is based on a sample of Romanian companies, namely non-financial companies whose shares are listed on the Bucharest Stock Exchange (BVB), on the Regulated Market. In order to ensure the comparability of the results, for the entire period being analysed, i.e. 2011-2016, the companies for which a negative effective tax rate was determined, even for a single year, were eliminated from the sample, the final analysis being conducted on 31 companies in seven sectors of activity.

The quantitative analysis is based on data from the individual accounts published by the companies included in the sample, and as a methodology used to calculate the effective tax rate, we opted for two work methods:

a) Calculating the effective tax rate based on turnover:

$$ETT = \frac{\text{Current profit tax}}{\text{Net turnover}} \times 100$$

b) Calculating the effective tax rate based on earnings before tax:

$$ETR = \frac{\text{Current profit tax}}{\text{Earnings before tax}} \times 100$$

The limits of the first option stem from the fact that the resulting effective tax rate has very low values, making it difficult to compare between different situations. At the same time, by using the turnover, important information on costs (production costs, wages, etc.) is lost, which can lead to erroneous interpretation. With the second option, limitation arise when comparing different countries, as a result of different accounting rules to calculate earnings before tax (Nicodème, 2001, p. 20).

Table no. 1. Effective corporate profit tax rate based on turnover – weighted average

Activity Sector	Number of Companies	ETT (weighted average) – in %					
		2011	2012	2013	2014	2015	2016
B. Mining industry	1	6.86	7.41	10.69	8.76	8.47	8.17
C. Manufacturing industry	18	1.26	1.27	1.22	1.41	1.38	1.46
D. Electric power and thermal energy production and distribution	2	1.30	1.55	3.43	2.43	2.49	2.19
F. Construction	1	0.95	2.23	2.67	1.90	2.34	3.91
G. Wholesale and retail trade	3	0.66	0.57	0.34	0.45	0.35	0.29
H. Transportation and warehousing	4	5.12	6.79	5.64	6.09	6.52	6.09
I. Hotels and restaurants	2	2.68	2.89	1.60	1.69	1.76	1.74
Total	31	3.37	3.72	5.06	4.43	4.26	3.98

Source: Authors calculations based on data published by 31 non-financial companies listed on BVB

ETT calculated as weighted average for the 31 companies surveyed, rises in the period 2011-2013 from 3.37% to 5.06%, then registers a decreasing trend, reaching 3.98% in 2016. The highest values of this indicator are recorded in the mining industry: in the first three years, it increased from 6.86% to 10.69%, and in the period 2013-2016 it decreased to 8.17%. A similar dynamic of ETT is also observed for companies in the energy production and distribution sector. Since the companies from the mining and energy industries are large enterprises, their turnover representing more than 50% of the aggregate turnover of the companies analysed, ETT calculated as a weighted average for the whole sample is strongly influenced by the rates of these two activity sectors.

For the manufacturing industry, the dominant sector by the number of companies, ETT fluctuates between 1.22% and 1.46%, registering an ascending trend during the 2013-2016 period.

ETT is influenced by a margin rate, equal to the percentage ratio between earnings before tax and turnover, and by the effective tax rate based on earnings before tax (ETR).

Table no. 2. Effective corporate profit tax rate based on earnings before tax – weighted average

Activity Sector	Number of Companies	ETR (weighted average) – in %					
		2011	2012	2013	2014	2015	2016
B. Mining industry	1	21.88	18.63	32.02	22.01	23.37	21.75
C. Manufacturing industry	18	15.66	16.26	18.03	15.66	18.07	16.06
D. Electric power and thermal energy production and distribution	2	23.09	51.18	19.72	18.93	19.19	20.44
F. Construction	1	15.81	30.27	22.94	26.94	16.91	14.84
G. Wholesale and retail trade	3	21.02	21.00	18.82	20.57	19.29	14.13
H. Transportation and warehousing	4	18.59	28.42	23.78	19.21	20.01	17.30
I. Hotels and restaurants	2	16.07	28.16	15.30	17.66	17.90	16.60
Total	31	20.64	22.05	26.05	20.31	21.26	19.57

Source: Authors calculations based on data published by 31 non-financial companies listed on BVB

ETR calculated as a weighted average for the 31 companies is higher than the statutory tax rate of 16%; during the 2011-2013 period, it rises from 20.64% to 26.05%, and in the period 2014-2016 it registers a descending trend, reaching 19.57%. Among the elements that influence the ETR level are: the differences from the revaluation of fixed assets and their fiscal depreciation, the tax regime of provisions and adjustments for the depreciation of stocks and receivables, the sponsorship expenses, the tax exemption of reinvested profits.

Table no. 2 shows that in 2011, 2012 and 2014, the lowest values of the weighted average of ETR, of 15.66% and 16.26%, were recorded in the manufacturing industry. In 2015, the weighted average of ETR exceeds the statutory tax rate across all sectors of activity, and in 2016, in 6 of the 7 activity sectors, it decreases compared to 2015. In 2016, in construction and trade, ETR (weighted average) is lower than the statutory corporate profit tax rate.

Throughout the analysed period, in the case of companies in the mining and electric power production and distribution sectors, ETR values exceed the statutory corporate profit tax rate. During the 2011-2015 period, for the 4 transportation and warehousing sector companies, ETR is

superior to STR; in 2016, for 2 companies, the ETR is lower than STR, with about one percentage point, but the weighted average of the sector exceeds 16%.

Since the earnings before tax (EBT) of the 6 companies belonging to those three sectors of activity (codified B, D, H) represents more than 80% of the total EBT of the 31 companies, the ETR calculated as a weighted average at the sample level is significantly influenced by high ETR values for companies in those three sectors. In order to eliminate the influence of dominant enterprises and that of extreme values, the median values of the ETR are calculated. The median ETR, calculated over 2011-2016 for the 31 companies, shows a descending trend of around 2 percentage points, from 18.87% to 17.02%, but remains above STR. The median value of ETR, calculated for the 18 manufacturing enterprises, is 18.7% in 2011 and drops to 16.98% in 2016.

From the analysis of data for the 31 non-financial companies listed on BVB included in the sample, in 2016, for 19 companies, the ETR is higher than the STR, for 10 companies ETR is between 15.69% and 12.05%, and in the case of 2 companies ETR is below 5%. It should be noted that 5 companies with ETR less than 16% did not distribute dividends.

#### 4. Conclusions

In Romania, in the case of corporate profit tax, the taxation base is determined starting from the accounting result adjusted according to the regulations of the Fiscal Code. As a result of the fact that the fiscal result is different from the accounting result, as well as due to fiscal incentives granted to taxpayers in the form of the reduction of payable tax, the effective profit tax rate (calculated as a percentage ratio between current profit tax and earnings before tax) is different from the statutory rate.

Although during the 2011-2016 period, the statutory corporate profit tax rate remained constant at 16%, the ETR had a slightly descending trend, being mainly influenced by the tax treatment of the differences in the revaluation of fixed assets, provisions and depreciation adjustments, as well as tax incentives for investments. As a rule, ETR values are not lower than STR, and very low ETR values were registered by companies that have not distributed dividends from the net profit, but have reinvested their profits, benefitting from the associated tax exemption.

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## Vulnerabilities and Risks in Romanian Public Financial Accounting

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### Abstract

*Internal audit plays an important contributive role in the economic credibility of an economy. By improving, the quality of internal audit and control in public institutions we can increase the efficiency of public spending and the whole economy in general. The aim of our paper is to identify the main vulnerabilities and risks in Romanian public sector after based upon the analysis performed by the Romanian Court of Accounts. Based upon the annual reports of the Romanian Court of Accounts from 2009 to 2016, we identify several issues and risks in the Romanian public sector, and especially in the local government financial accounting. In order to prevent more deviations and errors and to improve the quality of internal auditing and internal control systems, in the Romanian public sector, this paper proposes a series of measures in this matter.*

**Key words:** audit, public sector, financial audit, court of accounts

**J.E.L. classification:** M42, M48, H83

### 1. Introduction

The efficiency of public sector spending in modern economies has been the key focus of policy makers, academics and government officials since the inception of the modern state. The amount of revenues collected and the efficiency of public spending in a country is dependent on many factors like economic development, economic cycle, population, political party orientation, type of tax system etc. Achieving an efficient tax system together with an adequate public spending mechanism involves not only an adequate budget planning and execution process, but also an efficient control mechanism. Thus, improving the efficiency in the public sectors needs to take into account not only internal and external factors, but also the quality of the external control mechanism.

One of the main drivers in reforming public spending in the European Union in general and in Romania in particular involves around improving the efficiency of internal and external control mechanisms in the public sector. By improving, the quality of control in public institutions we can increase the efficiency of public spending and the whole economy in general. An efficient public control mechanism can reduce the amount of fraud, corruption or any other illegal activities in the public sector, improving the quality of public services offered by local and central governments.

The quality and effectiveness of internal public audit (in the case of local public administration), the emerging risks encountered and the shortcomings of the public sector in Romania were examined by (Cioban et.al 2015) from annual reports of 2011 and 2012. They concluded with the idea that identifying the risks and removing them quickly and accurately represents an important factor for the efficiency of internal audit and good administration of the public incomes. Moreover they found that the shortcomings regarding “the internal public audit are due, to a large extent, to the faulty management of human resources”. They consider that an analysis with the staff can improve the audit quality and can strengthen the public organizational structure.

An analysis of the relationship, from various perspectives, between internal audit and management was made by (Munteanu, et al. 2010) in which they found some factors that may affect the efficiency of this relationship such as: "the managerial culture, deficient communication, legislative incoherency and also in some areas lack of regulations, the degree of adapting the audit system to the stage of the economic development, and they also motioned the insufficient academic debate for this topic".

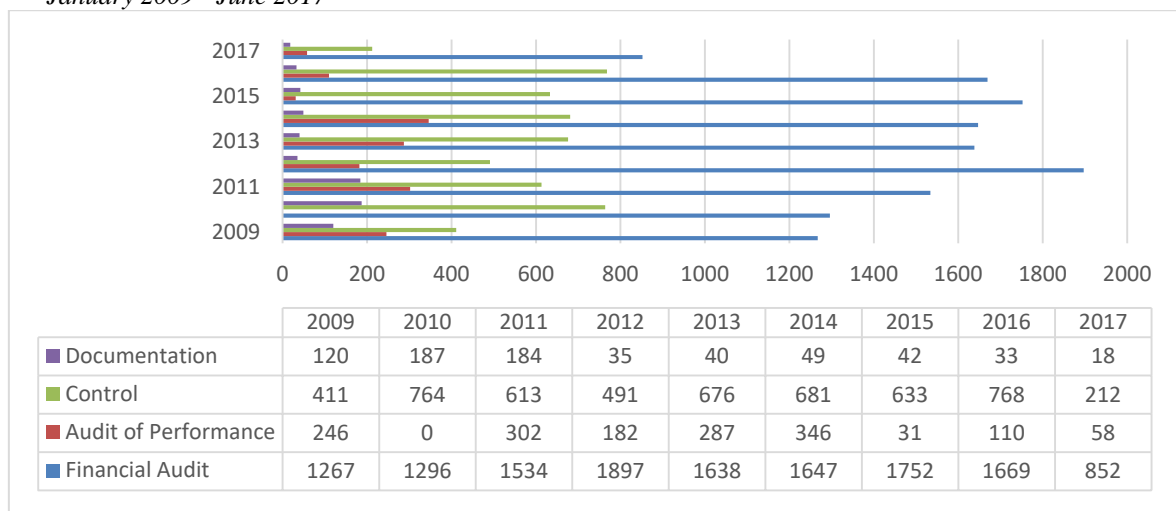
In Romania, the public sector has undergone numerous reforms and changes in the past 27 years due to transition process from the planned economy to market economy and ascension in the European Union. This process involved changes in the regulatory framework which improved the methods and mechanisms used in the Romanian public financial accounting. From the early stages of internal and external audit in the beginning of the 1990, to modern managerial control mechanism from 2010 that help to prevent and stop common types of fraud and other illegal activities. Thus, the aim of this paper is to identify, what are the main vulnerabilities and risks associated with the public financial accounting in Romania.

This paper analyses what are the major vulnerabilities in the Romanian public financial accounting according to data provided by the Romanian Court of Accounts. The rest of this paper is organized as follows: section 2 presents flaws in the financial accounting in the Romanian public sector while section 3 concludes.

## 2. Flaws in the financial accounting systems in the Romanian public sector

The Romanian Court of Accounts is an important factor in the search to improve the efficiency of public spending in the Romanian public sector. Each year, the external audit performed by the Romanian Court of Accounts indicates numerous issues involving the financial administration of public institutions in Romania. With the help of financial audit and performance audit missions, the efficiency of revenue collecting and public spending is thoroughly analyzed improving the efficiency of the entire Romanian public sector.

Figure no. 1. The evolution of types of control/audit performed by the Romanian Court of Accounts January 2009 - June 2017



Source: Own computations by the authors on data provided by the Romanian Court of Accounts

Data from figure no. 1 reveals that the most common type of control performed by the Romanian Court of Accounts is financial Audit in all the analyzed period. The prevalence of the financial audit missions derives from the need of certifying the annual financial statements in accordance with the legislation and procedures that are in place. Meanwhile, the lower prevalence of the performance audit missions derives from the lower focus on quantifying and determining the efficiency of public spending. The other types of control missions documentation and control are in conjuncture with performance and financial audit, thus they are less common.

Table no. 1 Types of errors found by the Romanian Court of Accounts

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Drafting the budget and modifying the initial budget during the execution of the budget	1438	1123	589	443	905	841	807	690	256
The accuracy and the reality of the data reflected in the financial statements	2309	1972	4358	4147	5364	4899	4672	4249	2248
Organizing, implementing and maintaining internal / managerial control systems	256	1920	3798	3181	2691	2310	1925	1654	725
How to set, highlight and track the revenues of the consolidated general government budget	750	2543	4661	4625	5454	5559	5478	4492	2133
Quality of economic and financial management	863	11253	8700	8461	11270	11920	12342	10085	4922
Public procurement	16	477	156	1696	1567	1678	1876	2243	1254
Other violations	65	1639	389	98	78	95	97	101	56

Source: Own computations by the authors on data provided by the Romanian Court of Accounts

The most common type of error found by the Romanian Court of Accounts from 2010 onwards relates to the poor quality of economic and financial management in the public sector, which relates to: illegal payments from the budget, payments of goods or services without a proper documentation or invoices, illegal salary rights, failures in establishing the required annual provisions etc. Other important types of errors found by the Romanian Court of Accounts relates to errors in setting and calculating the consolidated general government budget and the accuracy and reality of the annual financial statements. We also note that since the adoption of the SCM, there was an increase in the number of errors found in the managerial control systems in 2010-2012, while later the number declined indicating a higher degree of compliance to the new system.

Table no. 2. Types of Deviations from legality found following audit/control actions Romanian Court of Accounts (thou RON)

No.	Year	Number of Cases	Additional Income	Illegal payments	Infringements in financial accounting	TOTAL
1	2009	12257	717609	718267	41638787	43074663
2	2010	20927	1748390	727202	41874335	44349927
3	2011	19632	2411804	756020	38488447	41656271
4	2012	23809	2448003	1412257	54862984	58723244
5	2013	25836	2302850	1620600	27682400	31605850
6	2014	25529	2719658	2372439	33293276	38385373
7	2015	25224	3617614	1761119	22747297	28126030
8	2016	23514	1522276	1843222	29065418	32430916
9	2017 (sem. I)	9406	608910	737289	11626166	12972365
<b>TOTAL</b>		<b>186134</b>	<b>18097114</b>	<b>11948415</b>	<b>301279109</b>	<b>331324639</b>

Source: White Paper of Romanian Court of Accounts (Romanian Court of Accounts, 2017, p.501)

The high number of errors in the quality of economic and financial statements in the Romanian public sector mirrors in the total amount infringements found in financial accounting, which is the most important type of error found by the Romanian Court of Accounts. During 2009-2017 infringements in financial accounting, represent more than 80-90% of the total value of the errors found by the Romanian Court of Accounts. While these types of infringements do not mean actual losses from the local budget as they relate often relate to mismanagement of patrimony or

deviations regarding the application of the provisions, but they can also involve illegal payments from the state and local budget. The main, driver of these types of errors relates mostly to inadequate personal management procedures or the lack of a true internal control mechanisms in some public institutions. Meanwhile, errors in relation to addition income and illegal payments are actual losses from the local and state budgets. The main factors, than contribute to these types of errors are: erroneous setting of the amount of taxes and fees; lack of a true forecasting for the collected revenues; unlawful granting of tax incentives to pay taxes and duties; lack in personnel training and internal procedures in relation to public spending; flaws in procedures that relate to public procurement process; the frequent changes in legislation; misinterpretation of the legal provisions concerning the salaries of staff etc.

While the total value of the errors found by the Romanian Court of Accounts indicates major flaws in the internal management and control mechanism in the public sector appendices 1, 2 and 3 reveals what is the main cause of the issues. In all the analyzed period, the local and the state budgets are the main drivers of the total value of deviations from legality in the Romanian public sector. Therefore, the central government budget is the main driver for errors found in relation to lower revenues collected; the local budgets are responsible for illegal spending, while for infringements in financial accounting the two budgets are similar.

#### **4. Conclusions**

We argue that local public administration the internal control and audit systems do not work at the desired audit parameters, the deviations and errors found by the audit activity in the period analysed is at very high levels. The activities of the internal audit in some public institution are formal and inefficient or insufficiently rigorous as there is a lack of significant coverage in certain areas. Thus, the external audit performed by the Court of Accounts reveals several medium and high risks. Moreover in the local public administration, the leaders don't manifest an interest in improving the internal audit quality at this level. There is a lack of training staff and there are malfunctioning processes in the organization of the internal audit in public institutions. This exerts a negative impact on the efficiency of the internal audit and control systems, as they cannot function to a level that ensures an efficient management of the public funds and budgets revenues in conditions of legality, regularity and efficiency.

If this deviations and errors are not corrected they can have a negative impact on the effectiveness, correct use and founding the public financial resources and can also lead to loss of patrimony, the lack in some public budgets of some important income and even acts of corruption.

In order to prevent more deviations and errors we consider that there is a need in the Romanian public sector of implementing a training courses, professional training for the staff regarding the internal audit and internal control activity. The public institution must pay more attention regarding the internal control systems and internal auditing in order to arrange the necessary measures to ensure the internal audit function is more independent and objective in the process of evaluation of the management system in a public entity.

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*Appendices 1: Additional income calculated between January 2009-June 2017,  
for budgets 2008-2016 (thou RON)*

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
State budget	263865	1140076	1861130	716609	1740450	2047060	2846188	1046837	418735
State social security budget	11254	23461	25035	65646	19600	33842	17424	2456	98
Local budgets	317299	156315	269041	212716	430400	374936	312661	285139	114056
The unemployment insurance budget	138	175641	13575	10359	0	3618	544	742	297
Budget of the national health insurance found	24278	85679	172142	637413	48700	88997	11243	2086	834
Budget of the state treasury	0	0	0	0	0	84	0	832	333
Budget of public institutions financed entirely from own revenues	9202	3685	10977	7337	5700	23439	37224	24542	9817
Own revenues of public institutions	3643	57281	35094	160394	24300	91249	181242	35373	14149
Revenues and expenses of economic agents	87929	106252	23751	637413	33700	56432	207405	124269	49.708

*Source:* Own computations by the authors on data provided by the Romanian Court of Accounts

*Appendices 2: Illegal payments calculated between January 2009-June 2017,  
for budgets 2008-2016 (thou RON)*

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
State budget	203939	509847	360062	1462305	203100	370621	219892	109373	136682
State social security budget	982	4138	27341	10798	7000	5944	14627	8602	419
Local budgets	346796	866990	699824	590706	625200	513192	356117	400229	185474
The unemployment insurance budget	1570	3925	8815	9726	5700	1946	1038	1341	345
Budget of the national health insurance found	43240	108101	16472	21578	39800	184351	21202	4757	1437
Budget of the state treasury	2635	6587	41193	11193	222500	38483	21	1714	111842
Budget of public institutions financed entirely from own revenues	5104	12760	2161	26946	12500	99456	4542	6386	2324
Own revenues of public institutions	14149	29933	90607	14028	28700	13904	20634	18713	12427
Revenues and expenses of economic agents	120375	300937	504700	225159	475300	184351	116828	176086	267317

*Source:* Own computations by the authors on data provided by the Romanian Court of Accounts

*Appendices 2: Infringements in financial accounting calculated between January 2009-June 2017,  
for budgets 2008-2016 (thou RON)*

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
State budget	20283042	12543958	12094262	30299727	15707000	21581301	9572548	15049401	6019760
State social security budget	129471	68374	389533	176431	358700	49867	275676	243230	97344
Local budgets	10546200	12137331	20982504	17152107	8287900	6591893	4507077	5028027	2011211
The unemployment insurance budget	4866	219133	152931	326698	443900	59539	176137	77662	31065
Budget of the national health insurance found	758576	118798	1227327	1943891	773500	2073704	94886	42427	16971
Budget of the state treasury		61405	157721	270746	28000	146898	2148	15.066	6026
Budget of public institutions financed entirely from own revenues	1345915	280609	340434	893003	97800	298633	67918	37628	15051
Own revenues of public institutions	176297	367585	563136	1756481	736500	851064	1022234	650714	260286
Revenues and expenses of economic agents	8392998	16077142	2580115	184351	475300	1640282	7020807	7920618	3168247

*Source:* Own computations by the authors on data provided by the Romanian Court of Accounts

## Impact of Costing and Cost Analysis Methods on the Result of the Period: Methods Based on Full Cost Theory

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### Abstract

*Analysis of an enterprise's performance through the net result of the year is not significant because it takes into account financial elements and profit tax. Also, the result of the exercise is directly influenced by:*

- *Accounting Policies for Recording Consumption, either as an expense in the income statement or as an asset on the balance sheet;*
- *The ratio between the charges attributable to the products and those considered for the period;*
- *The costing method used by the enterprise.*

*Assessing the real effort of the enterprise, its results and its difficulties requires analytical investigation of the outcome of the period, the conditions of training and the determining factors of action.*

*In light of the above, in the present paper we have proposed that objectives, to approach the methods of calculating full costs (economic or traditional), and comparing them to determine the effect they have on the outcome of the period.*

**Key words:** full cost, traditional cost, economic cost

**J.E.L. classification:** M41

### 1. Introduction: theory of calculation methods and cost analysis based on full cost theory

The company's accounting costing, inventory valuation, asset depreciation method and miscellaneous accounting manipulation have a significant impact on the result of the period and indirectly on all other interim management balances (Toma, 2013, p.121). Therefore, the result of the period is determined by:

- the intrinsic factors of exploitation;
- accounting choice in terms of: depreciation systems, inventory valuation, costing methods, etc.

For the same conditions and efficiency of operation, enterprises can record different results due to factors independent of their own effort or market conditions. The analyst needs to identify the two categories of causes to make reliable recommendations for optimizing resource consumption.

The costing method applied to the enterprise has a direct, measurable, but indirect impact on the outcome. Directly, the calculation method affects the revenue by the value of the stored output and the fixed production (expressed in production cost). Indirectly, the influence is reflected in the sale price, when it was based on the cost. The cost "errors" affect the performance of the enterprise in both variants: when higher, the price will be higher than the competitors, which will affect the competitive advantage, respectively the competitiveness of the enterprise; when lower, there is a risk that the sales price will not generate the margin required for normal operation and the company will work at a loss.

The *full cost* of a product is the cost that encompasses all resource consumptions due to its supply, production and disposal. The full cost includes the cost of production plus the general administrative expenses for the products sold and the selling expenses.

In the literature, the concept of full cost can be viewed and computed in two aspects:  
 - *completely traditional cost* is the cost obtained by incorporating without modification all the general accounting expenses;  
 - *completely economic cost*, is the cost obtained by incorporating the same expenses after adjusting some of them to bring them closer to the economic reality (Ionescu, 2016,p.111).  
 In other words, the full economic cost is the completely traditional cost corrected with the incidence of activity level variation (Niculescu, 2003, p.252).

## 2. Case study on costing and cost analysis methods based on full cost theory

To illustrate the impact of the method of calculating the full cost (traditional or economic) on the result of the period, we accept the simple case of an enterprise producing and marketing two P1 and P2 products for which the following consumption:

Table no.1 Consumption recorded for the production and sale of P1 and P2 products

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Quantity produced (pcs)	3.000	2.600	
2.	Quantity sold (pcs)	2.000	2.000	
3.	Unit selling price (ron / pcs)	17.500	16.750	
4.	Variable production costs (ron)	24.000.000	26.000.000	50.000.000
5.	Fixed direct production costs (ron)	4.500.000	2.600.000	7.100.000
6.	Fixed indirect production costs (ron)	-	-	12.320.000
7.	Variable selling expenses (ron)	900.000	1.300.000	2.200.000
8.	Direct fixed selling expenses (ron)	7.500.000	5.400.000	12.900.000

Source: Adaptation and processing after Niculescu, 2005, 150

The enterprise did not register stocks at the beginning of the period. Fixed indirect manufacturing costs will be allocated based on the quantity produced.

### 2.1. Determination of the unit cost and the period's result based on the fully traditional cost method

Table no. 2 Determination of the total traditional unitary cost

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Production costs (ron):			
	~ variables	24.000.000	26.000.000	50.000.000
	~ fixed direct	4.500.000	2.600.000	7.100.000
	~ fixed indirect	6.600.000	5.720.000	12.320.000
2.	Total production costs (ron)	35.100.000	34.320.000	69.420.000
3.	Unitary Production Cost (ron / pcs.)	11.700	13.200	-
4.	Selling costs (lei)			
	~ variable	900.000	1.300.000	2.200.000
	~ fixed direct	7.500.000	5.400.000	12.900.000
5.	Total selling costs (ron)	8.400.000	6.700.000	15.100.000
6.	Cost of unit sales (ron / pcs)	4.200	3.350	-
7.	Total traditional unitary cost (ron / pcs)	15.900	16.550	-

Source: Adaptation and processing after Niculescu, 2005, 150

$$\text{Fixed indirect unit costs} = \frac{12.320.000}{2.600 \oplus 3.000} = 2.200\text{ron}$$

for P 1 :  $2.200 \times 3.000 = 6.600.000$  ron; for P 2 :  $2.200 \times 2.600 = 5.720.000$  ron

Unit production cost = Total production / Production quantity

Unit expense cost = Total selling expenses / Quantity sold

Full traditional unitary cost = Unit production cost + Unit selling cost

Table no.3 Determining the result of the period

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Turnover (ron)	35.000.000	33.500.000	68.500.000
2.	Income from stored production (ron)	11.700.000	7.920.000	19.620.000
3.	Total Income (ron)	46.700.000	41.420.000	88.120.000
4.	Total expenses (ron): out of which	43.500.000	41.020.000	84.520.000
	~ sales	31.800.000	33.100.000	64.900.000
	~ related to stored production	11.700.000	7.920.000	19.620.000
5.	The result of the period (ron)	+3.200.000	+400.000	+3.600.000

Source: Adaptation and processing after Niculescu, 2005, 151

Turnover = Quantity sold x Unit sales price

Stored production = Unsold quantity (stored) x Unit production cost

Total sales related sales = Quantity sold x Traditional full unit cost

Total Stored Production Output = Unsold Quantity (Stored) x Unit Production Cost

## 2.2. Determination of the unit cost and the result of the period based on the full economic cost method

For the application of this method we admit a normal production capacity of 3.000 pieces for product P1 and 3.250 pieces for product P2. Consequently, the ratio of the rational imputation of fixed expenses will be 1 for product P1 and 0,8 for product P2.

Table no.4 Determining of the total economic unitary cost

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Production costs (ron)			
	~ variables	24.000.000	26.000.000	50.000.000
	~ fixed direct			
	imputed product cost under activity	4.500.000	2.080.000	6.580.000
	~ indirect fixed	-	-	520.000
	imputed product cost under activity	5.913.600	5.125.120	11.038.720
				1.281.280
2.	Total production costs (ron)	34.413.600	33.205.120	-
3.	Unitary Production Cost (ron / pcs.)	11.471,2	12.771,2	-
4.	Selling costs (ron)			
	~ variable	900.000	1.300.000	2.200.000
	~ fixed direct	7.500.000	5.400.000	12.900.000
5.	Total selling costs (ron)	8.400.000	6.700.000	15.100.000
6.	Cost of unit sales (ron / pcs.)	4.200	3.350	-
7.	Total economic unitary cost (ron / pcs)	15.671,2	16.121,2	-

Source: Adaptation and processing after Niculescu, 2005, 152



Cost under activity = Fixed Expenses (1 - Achieved Level / Normal Level) = 2.600.000 (1 - 2.600/3.250) = 520.000 ron

Indirect Fixed Production Expenses:  $12.320.000 \cdot (3.000 + 2.600) / (3.000 + 3.250) = 11.038.720$  ron;  
 $k = 11.038.720 / (3.000 + 2.600) = 1971,2$  ron/pcs

For P1: 3.000 buc. \* 1971,2 ron/buc. = 5.913.600 ron;

For P2: 2.600 buc. \* 1971,2 ron/buc. = 5.125.120 ron

Related to sub-activity: 1.281.280 ron

Unit production cost = Total production costs / Quantity produced

Total economic unitary cost = Unit production cost + Unit sales cost

Table no. 5 Determining the result of the period

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Turnover (ron)	35.000.000	33.500.000	68.500.000
2.	Total expenditures (ron)			65.386.080
	~ sales	31.342.400	32.242.400	63.584.800
	~ cost under activity	-	-	1.801.280
3.	The result of the period (ron)			+3.113.920

Source: Adaptation and processing after Niculescu, 2005, 153

Cost under total activity: 520.000+1.281.280=1.801.280 ron

Total sales related costs = Total unit cost x Sale sold

### 3. Conclusions and proposals

We present the synthesis of the results obtained by the two variants of the full cost calculation method:

Table no.6 Synthesis of the results obtained by the two methods

Method	Period's result (ron)	Value of stored production (ron)	Fixed costs attributed to stored production (ron)
Full traditional cost	+3.600.000	19.620.000	5.620.000
Full economic cost	+3.113.920	19.133.920	5.133.920

Source: Adaptation and processing after Niculescu, 2005, 156

We note that by the two methods presented, the result of the period depends on: the sales achieved, and the level of stored output, the closure of a part of the fixed costs.

The calculation and analysis of the fully traditional cost helps to assess the efficiency and effectiveness of managing resource consumption, respectively, to predict these resources. And, the calculation and analysis of the full economic cost is of interest because it allows establishing a cost unaffected by the level of activity. This cost is more relevant in developing the estimates and in setting the sales price. Also, the cost determination under the activity is aware of the effects of the non-use of production capacities.

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## Impact of Costing and Cost Analysis Methods on the Result of the Period: Methods Based on Partial Cost Theory

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### Abstract

*Cost diagnosis is a tool for controlling, regulating, and piloting an enterprise's performance in a competitive economy. Understanding the complete and complex analysis and perceived investigation of resource consumption in an enterprise requires: a good knowledge of subordinate concepts, cost typology, cost analysis methods, calculation methods and unit cost analysis, implicit the cost and strategic decision of the enterprise.*

*Looking from this perspective, in the present paper we have proposed that objectives, to approach the full cost calculation methods based on partial costs (direct-costing on the product or direct-costing evolved), and comparing them to determine the effect they have on the outcome of the period.*

**Key words:** partial cost, variable cost, fixed cost

**J.E.L. classification:** M41

### 1. Introduction: theory of calculation and cost analysis methods based on partial cost theory

In economic theory and practice, highlighting resource consumption at the enterprise level or at its various specific structures is done through a system of indicators based on the "expense" and "cost" categories. *Expenses* are the amounts or amounts paid or payable for: the consumptions, works or services provided by the patrimonial entity; staff costs; the performance of legal or contractual obligations by the patrimonial entity, etc. *Cost* is the expression of all resources consumed by a particular asset or service of a patrimonial entity.

Unlike price, which is a << reality >> for a transaction, cost is << a choice >>, with the company being free to decide on the method of calculating costs. This choice is fundamental because it directly affects the outcome of the exercise.

Cost accounting information is provided by financial accounting. This allows the identification and measurement of resources consumed by the enterprise over a given period. Financial accounting only provides for a total expenditure tracking by nature, without providing any indication of the destination of these expenditures, is their distribution over products, services, units, types of activities. This identification of expenditure by destination requires an analysis of the internal value-creation process, which is the objective of analytical accounting (Toma, 2003, p.110-111).

The economic theory and practice is operational, depending on the purpose of the analysis and the specificity of the field, and the criterion of structuring the expenses according to their behavior versus the volume of activity in:

- *Variable costs*, is dependent of the volume of activity, are the consequence of the operating decision, the use of the existing production capacities;
- *Fixed costs*, is independent of the volume of activity, indispensable to the existence and operation of the enterprise, and are the consequences of the investment decision.

The importance of this grouping criterion in costing and cost analysis lies in the fact that it is the basis of the "direct-costing" method of cost forecasting and provides information necessary to substantiate price decisions and optimize the company's various strategies. Knowing the variable

and fixed costs and their evolution is essential for the strategic direction of the firm. The Fixed Expense Structure Ratio determines the firm's profitability and flexibility threshold and puts it in a more or less sensitive position as regards the variation in the volume of activity under internal and external factors.

The different methods based on partial cost theory are based on the same principle: the inclusion in the cost of a product or service of only part of the resource consumption considered pertinent to the management process.

The most common methods based on partial cost theory are:

- Variable cost method (« direct-costing »);
- Direct cost method (Niculescu, 2003, p.255)

**1.1. Variable cost ("Direct-costing") method** is based on the grouping of fixed and variable costs and the inclusion in the actual cost of the product of only the variable ones. Fixed expense is considered to be the period that affects the size of the margins. « Direct costing » method has undergone in the meantime modifications and adaptations to the needs of economic practice, presenting itself in the following forms:

- simplified direct-costing (product or global)
- direct-costing evolved.

In the case of the direct-costing method on the product, fixed costs are considered as an indissociable one that is not distributed over products but over a period of time. Therefore, they directly affect the result of the period without intervening in the calculation of costs on products, services, activities, etc. For each product, service, activity, etc. the turnover is diminished by the amount of the related variable expenses, resulting in the variable expenses margin. This margin must cover the firm's fixed costs and allow for a certain result.

Global direct-costing method is based on the same principles outlined above, with the exception that the investigation is made globally at the enterprise level, and variable costs are tracked in exploitation phases.

Increasing the share of fixed costs has made the notion of variable margin to lose its relevance. This has led to the development of the evolved direct-costing method, the peculiarity of which consists in identifying fixed costs of that specific part of the various products and determining the contribution margin. The hierarchy of products according to the contribution to the expenses can eliminate the unprofitable ones. But this removal is not self-sufficient, as long as the abandonment of a product does not suppress some of the structural expenditure, the margin of other items may become insufficient to offset all fixed costs.

So, direct-costing method allows for the determination of more relevant performance indicators, such as: contribution margin, variable margin, analytical result of the period. By determining the contribution of each product to the margin and by comparing the revenue with the product costs, it is the basis of the commercial and pricing policy.

**1.2. Direct cost method** is another limiting method whose approach is similar to the direct-costing method, it does not aim to determine the cost of each product but to calculate and analyze the total result at the level of the enterprise.

The indicators to be calculated and on which the conclusions of the analysis are based are those presented in the direct-costing method (gross profit margin, equilibrium threshold, safety margin, etc.), but in their calculation, the separation of expenditures in direct and indirect.

The direct cost approach has the following advantages: it avoids the difficulty of accurately separating fixed and variable expenses and avoids the difficulty of allocating indirect costs. The use of this method aims at calculating the unit cost of production based on direct costs only, its analysis contributing to the direction of the production process decisions (Ionescu, 2016, p.125-126).

## 2. Case study on methods of costing and cost analysis based on partial cost theory

To exemplify the impact of the partial cost method (simplified or evolved) on the result of the period, we accept the simple case of an enterprise that manufactures and markets two P<sub>1</sub> and P<sub>2</sub> products for which the following consumption was recorded:

### 2.1. Calculation of cost and result using the simplified direct - costing method

Table no. 1 Determination of unit production cost

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Production costs variabil (ron)	24.000.000	26.000.000	50.000.000
2.	Unitary production cost (ron/pcs)	8.000	10.000	-

Source: Adaptation and processing after Niculescu, 2005, 153

Unitary production cost = Production cost / Quantity produced

Stored production = 1000 pcs \* 8.000 ron/pcs + 600pcs\*10.000 ron/pcs =14.000.000 ron

Table no. 2 Determining the result of the period

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Turnover (ron)	35.000.000	33.500.000	68.500.000
2.	Variable costs (ron)	16.900.000	21.300.000	38.200.000
	~ of production	16.000.000	20.000.000	36.000.000
	~ of sales	900.000	1.300.000	2.200.000
3.	Variable expenses margin (ron)	18.100.000	12.200.000	30.300.000
4.	Fixed costs (ron)			32.320.000
	~ of production	-	-	19.420.000
	~ of sales	-	-	12.900.000
5.	Result of the period (ron)			-2.020.000

Source: Adaptation and processing after Niculescu, 2005, 154

Variable expenses margin = Turnover – Variable costs

Fixed production costs = Direct production costs + Indirect Production Expenses =  
= (4.500.000+2.600.000)+12.320.000=19.420.000 ron

Fixed out selling expenses = 7.500.000+5.400.000 = 12.900.000 ron

Period result = Variable expense margin - Fixed expenses

## 2.2. Calculation of cost and result using the direct - costing method evolved

Table no. 3 Determination of unit production cost

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Production cost (ron)	28.500.000	28.600.000	57.100.000
	~ variables	24.000.000	26.000.000	50.000.000
	~ fixed direct	4.500.000	2.600.000	7.100.000
2.	Unit cost of production (ron/pcs)	9.500	11.000	-

Source: Adaptation and processing after Niculescu, 2005, 155

Unit production cost = Production costs / Quantity produced

Stored production = 1000 buc \* 9.500 ron/pcs + 600 pcs\*11.000 ron/pcs=16.100.000 ron

Tabel no. 4 Determining the result of the period

Nr. Crt.	Indicators	P 1	P 2	Total
1.	Turnover (ron)	35.000.000	33.500.000	68.500.000
2.	Variable costs (ron)	16.900.000	21.300.000	38.200.000
	~ of production	16.000.000	20.000.000	36.000.000
	~ of sales	900.000	1.300.000	2.200.000
3.	Variable expenses margin (ron)	18.100.000	12.200.000	30.300.000
4.	Fixed direct expenses (ron)	10.500.000	7.400.000	17.900.000
	~ of production	3.000.000	2.000.000	5.000.000
	~ of sales	7.500.000	5.400.000	12.900.000
5.	Contribution margin (specific margin) (ron)	7.600.000	4.800.000	12.400.000
6.	Common Fixed Costs (Indirect) (ron)			12.320.000
7.	Result of the period (ron)			+ 80.000

Source: Adaptation and processing after Niculescu, 2005, 155

Fixed direct production costs = 4.500.000/3.000\*1000 și 2.600.000/2.600\*1000

Contribution margin = Variable expense margin - Fixed direct expenditure

### 3. Conclusions and Proposals

We present the synthesis of the results obtained by the two variants of the partial cost calculation method:

Table no. 5 Synthesis of the results obtained by the two methods

Method	Result of the period (ron)	Value of stored production (ron)	Fixed costs attributed to stored production (ron)
Direct-costing simplified	-2.020.000	14.000.000	0
Direct-costing evolved	+ 80.000	16.100.000	2.100.000

Source: Adaptation and processing after Niculescu, 2005, 156

The method of calculating costs directly affects the result of the period. Stored production does not affect the result of the period because it is at the same cost (production cost) on both revenue and expenses. Recent developments in development strategies highlight the general concern to optimize resource consumption under the conditions imposed by competition.

Competitive struggle wins the one that ensures the best ratio between the cost of the product and the value perceived by the consumer for which he is willing to pay.

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## Affecting the Sustainability of Public Finances by the Social Measures Adopted in Romania between 2006 and 2017

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### Abstract

*Sustainability has become one of the most used terms in public finance assessment. This article treats the issue of sustainability of public finance in terms of social measures adopted in Romania during 2006-2017. In other words, indicators for public finance sustainability will not be calculated in this article, but will be measured the impact of population aging, expenditures with all social and health protection measures on total public debt and government debt. This study has started from the idea that public finance sustainability is, essentially, the ability of a government to sustain the long-term expenditures without increasing public debt. According to the results obtained from the econometric calculations, the increase of the public debt in Romania in the last 12 years is explained in the ratio of 9% by the increase in pension expenditures and 16.8% by the increase of the social security expenditures. In this case, more coherent fiscal, social and economic policy measures are needed in Romania.*

**Key words:** Sustainability, Public Finance, Fiscal Policy, Public Pensions, Social Security

**J.E.L. classification:** H51, H53, H55

### 1. Introduction

First of all, it is necessary to clarify the concept of sustainability of public finance or sustainable public finance. In the literature, we come across several definitions of the concept of sustainability of public finance, but all refer to the same thing: the ability of a government to sustain long-term current expenditure, fiscal policy and other policies without endangering the government's solvency or without paying government or forecasted expenditures (European Commission, 2017).

Sustainability of public finance or the issue of debt or fiscal sustainability is multilateral and there is no agreed definition of what is a sustainable debt position. Blanchard et al. (1990) considers that, in essence, it refers to the direction towards which the government's actions are directed, in other words, whether the current policies adopted by the government will lead to an excessive accumulation of debts.

The time horizon in which debt sustainability is analyzed depends on its purpose. In some cases, it could be a relatively short horizon and the aim is to assess in the short and medium term the debt dynamics (for example, in the European Commission's assessments of the update of stability and convergence programs for the purpose of budgetary surveillance) or analysis of the debt service dynamics, including in many cases external debt service (e.g. IMF default risk assessment). Short and medium term, sustainability assessment depends on factors such as the debt structure by maturity, currency denomination and average terms of new commitments. In the case of assessing the long-term sustainability of public finance, the time horizon should be considerably longer to assess the budgetary impact of governmental commitments, notably in terms of pensions. Against such a significant budgetary challenge of population aging, the latter has been a concern for the EU in recent years and is the focus of several research and reports (European Commission, 2006, 2009, 2017).

Fiscal sustainability is crucial and has become more evident in the context of the recent global downturn. However, the sustainability of public finance is not a circumstantial concern; it essentially affects intergenerational fairness and sets useful principles at all times and to all governments, regardless of their current levers. Maintaining public debt under control and maintain the capacity to issue debt when necessary, is essential for the proper functioning of the economy.

Moreover, Obstfeld M. (2013) and Eyraud L. and Wu T. (2015) have shown that the limited capacity to obtain tax revenues in the economy, the motives of the political economy that complicates consolidation, and the evidence that structural reforms are implemented more successfully in countries with healthy initial fiscal positions are reasons for adopting cautiousness policies.

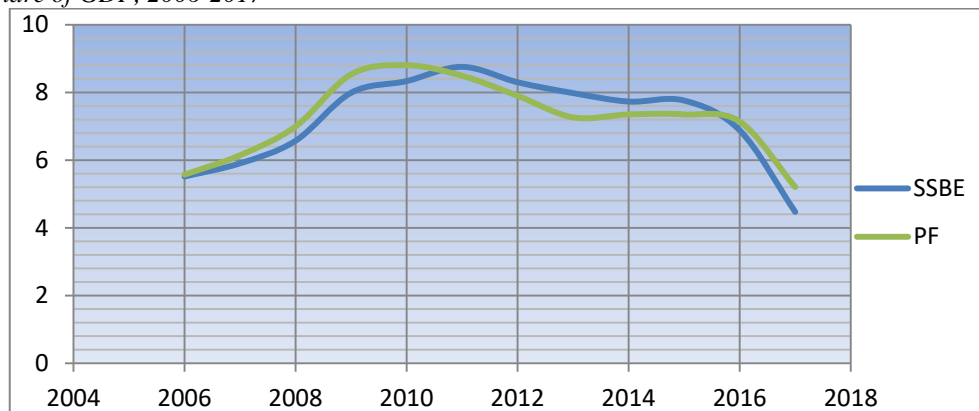
## 2. Sustainability of public finance in terms of aging population in Romania

It is obvious that imminent demographic changes - driven by the aging of the population - will be a major challenge for the development of public finance and social security systems. Population aging in Romania and other EU Member States will have a significant impact on economic growth and will generate significant pressures for increasing public expenditures. In order to assess the extent of this challenge, the evaluation of the long-term sustainability of public finance is part of the EU's ordinary budgetary surveillance, based on projections of long-term public spending and budgetary strategies presented in the Stability and Convergence Programs. In this context, the correctness of short- and medium-term budgetary objectives and long-term sustainability are at the heart of the European Commission's analysis.

Romania's population will age in the coming decades, and life expectancy will grow happily compared to previous generations; however, at the same time, the labor force will shrink. Public finance need to be prepared for this development.

To highlight the impact of the aging population on the sustainability of public finance, I will present in this section the evolution of the pension fund as a share of GDP in Romania during 2006-2017 (September 2017), compared to the evolution of expenditures registered in the social security budget in the same period, with a view to highlighting the periods during which the pension fund exceeded the social security budget expenditure and how much (as a share of GDP).

Figure no. 1. Evolution of social security budget expenditures (SSBE) and pension fund (PF) in Romania as share of GDP, 2006-2017\*



Source: Own processing of data available on <https://www.cnpp.ro/statistici> and <http://www.mfinante.ro>  
\*) Data available until September 30, 2017

As shown in figure no. 1, between 2006 and 2017 (September), spending on state pensions exceeded social security budget expenditures in 2006 (by 187 million lei, representing 0.05% of GDP), 2007 (by 935 million lei, representing 0, 24% of GDP), 2008 (by 2164 million lei, representing 0.42% of GDP), 2009 (by 2744 million lei, representing 0.54% of GDP), 2010 (by 2391 million lei, of GDP), 2016 (by 1959 million lei, representing 0.26% of GDP), and the largest increase was recorded in 2017, with 6042 million lei (0.72% of GDP).



All of these extra amounts were covered by the state budget, affecting other public activities and policies. Only in 2011-2015 there were no additional amounts compared to those registered in the public social security budget.

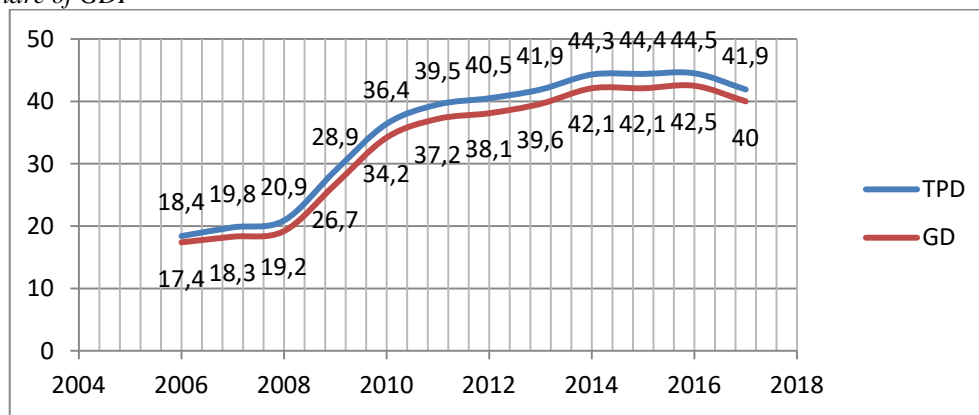
In order to highlight the impact of population aging coupled with the decrease of the labor force employed in the economy and the reduction of the young population on the sustainability of public finance, we used an econometric study with a linear regression equation of the form:

$$Y = \alpha + \beta * X$$

Where: Y - is the dependent variable; X - is an independent variable;  $\alpha$ ,  $\beta$  – are the regression equation parameters.

In this case, we considered the total public debt and government debt as dependent variables reflecting the sustainability of public finance, and as an independent variable, the state pension expenditures in Romania during 2006-2017. These two equations have to show the influence of pension expenditure on public debt in Romania.

Figure no. 2. Evolution of total public debt (TPD) and government debt (GD) in Romania (2006-2017\*) as share of GDP



Source: Own processing of data available on <http://www.bnr.ro>

\*) Data available until September 30, 2017

Romania's public debt, both total and government, as it can be seen in the figure above, has exceeded 40% of GDP since 2012. The maximum was reached in 2014 (44.3%), 2015 (44.4%) and 2016 (44.5%). For 2017, data are partial and public debt is 41.9% of GDP in September, and government debt is 40%.

The two equations considered are:

$$TPD = \alpha + \beta * PF$$

$$GD = \alpha + \beta * PF$$

Where:

TPD – is total public debt } are the dependent variables

GD – is government debt }

PF – is pension fund, independent variable

$\alpha, \beta$  – are the regression equation parameters

Table no. 1. Correlation Matrix

	TPD	GD	PF
TPD	1.000000	0.999673	0.300248
GD	0.999673	1.000000	0.279879
PF	0.300248	0.279879	1.000000

Source: Own processing of data with EViews

As it can be seen from the correlation matrix (in Table no. 1) there is a positive relationship between the independent variable – State Pension Expenditure (PF) and the dependent variables – Government Debt (GD) and total public debt (TPD).

Following econometric calculations, were obtained the results:

Table no. 2 The regression equation between government debt (GD) and state pensions (PF)

Dependent Variable: GD Method: Least Squares		Sample: 2006 2017 GD=C(1)+C(2)*PF		
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	15.53289	19.29023	0.805221	0.4394
C(2)	2.432460	2.638530	0.921900	0.3783
R-squared	0.078332	Mean dependent var		33.11667
Adjusted R-squared	-0.013834	S.D. dependent var		9.922136
S.E. of regression	9.990533	Akaike info criterion		7.592165
Sum squared resid	998.1076	Schwarz criterion		7.672983
Log likelihood	-43.55299	Durbin-Watson stat		0.102570

Source: Own processing of data available on <http://www.bnr.ro> and <https://www.cnpp.ro/statistici>

Using the least squares method in EViews, the following regression equation was obtained:

$$GD = 15,53 + 2,43 * PF$$

According to this equation to a change in state pension spending by 1% of GDP, government debt will change in the same direction as 2.43 percent as a share of GDP. The coefficient of determination for regression (R-squared) signifies the fact that 7.8% of the variation in the government debt is explained by the modification of the pension fund.

Table no. 3 The regression equation between total public debt (TPD) and State Pension (PF)

Dependent Variable: TPD Method: Least Squares		Sample: 2006 2017 TPD=C(1)+C(2)*PF		
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	15.63368	19.79563	0.789754	0.4480
C(2)	2.695188	2.707659	0.995394	0.3430
R-squared	0.090149	Mean dependent var		35.11667
Adjusted R-squared	-0.000836	S.D. dependent var		10.24800
S.E. of regression	10.25228	Akaike info criterion		7.643890
Sum squared resid	1051.093	Schwarz criterion		7.724708
Log likelihood	-43.86334	Durbin-Watson stat		0.100932

Source: Own processing of data available on <http://www.bnr.ro> and <https://www.cnpp.ro/statistici>

Using the least squares method in the EViews program, the following regression equation was obtained:

$$TPD = 15,63 + 2,7 * PF$$

According to this equation, at a change in state pension spending by 1% of GDP, total public debt will change in the same direction with 2.7 percent as a share of GDP. The coefficient of determination for regression (R-squared) shows us that 9% of the variation in the total public debt is explained by the modification of the pension fund.

### 3. Sustainability of public finance in terms of social measures adopted in Romania between 2006 and 2017

The sustainability of public finance or of tax system can also be addressed in the light of all the social protection measures adopted. From this point of view, the study continues to measure the influence of all social protection costs, not just those with retirement pensions, on government debt and total public debt.

In this respect, using the regression technique and a multiple linear equation, the impact of social security and health expenditures, as independent variables, on government debt and total public debt was calculated. The equations used take the following form:

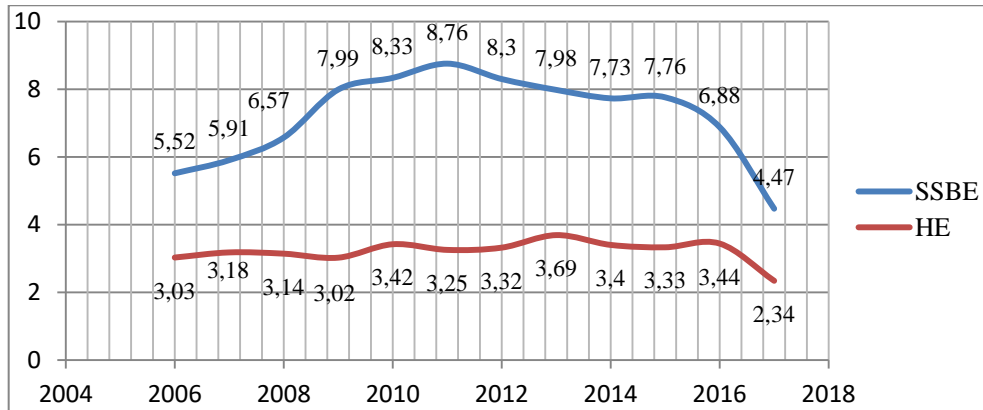
$$TPD = \alpha + \beta * SSBE + \gamma * HE$$

$$GD = \alpha + \beta * SSBE + \gamma * HE$$

Where:

TPD – is total public debt } are dependent variables  
 GD – is government debt }  
 SSBE – is social security budget expenditures } are independent variables  
 HE – represents health expenditures }  
 $\alpha, \beta, \gamma$  – parametrii ecuației de regresie

Figure no. 3. Evolution of social security budget expenditures (SSBE) and health expenditures (HE) in Romania (2006-2017\*) as share of GDP



Source: Own processing of data available on <http://www.mfinante.ro>

\*) Data available until September 30, 2017

The evolution of social security budget expenditures experienced an upward trend between 2006 and 2011 (see figure 3) from 5.52% to 8.76% as a share of GDP. After 2011, the trend was downward, reaching 4.47% of GDP in 2017, but this year's data is partial.

Regarding the health expenditures, they exceeded by around 3% of GDP over the whole period, except in 2013 when they reached 3.69% of GDP. The smallest value is still in 2017 and is due to partial data - until September 2017.

Following econometric calculations, were obtained the results:

Table no. 4 The regression equation between government debt (GD) and Social Security Budget Expenditures (SSBE) and Health Expenditures (HE)

Dependent Variable: GD		Sample: 2006 2017		
Method: Least Squares		GD=C(1)+C(2)*SSBE+C(3)*HE		
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	17.80400	30.29614	0.587666	0.5712
C(2)	3.409952	3.348029	1.018495	0.3350
C(3)	-2.856534	13.27042	-0.215256	0.8344
R-squared	0.152193	Mean dependent var		33.11667
Adjusted R-squared	-0.036209	S.D. dependent var		9.922136
S.E. of regression	10.10017	Akaike info criterion		7.675300
Sum squared resid	918.1215	Schwarz criterion		7.796527
Log likelihood	-43.05180	Durbin-Watson stat		0.121549

Source: Own processing of data available on <http://www.mfinante.ro> and [www.bnr.ro](http://www.bnr.ro)

Using the least squares method in the EViews program, the following regression equation was obtained:

$$GD = 17.80 + 3.41 * SSBE - 2.86 * HE$$

According to this equation, a change of state social insurance budget expenditure to 1% of GDP, government debt will change in the same direction by 3.41 percent to GDP. With the same 1% change in health spending, as a share of GDP, government debt will change in the opposite direction to 2.86% of GDP.

The coefficient of determination for regression (R-squared) shows us that 15.21% of the variation in the government debt is explained by the modification of the social security budget expenditures (SSBE) and health expenditures (HE).

Table no. 5 The regression equation between total public debt (TPD) and Social Security Budget Expenditures (SSBE) and Health Expenditures (HE)

Dependent Variable: TPD Method: Least Squares		Sample: 2006 2017 TPD=C(1)+C(2)*SSBE+C(3)*HE		
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	18.92324	30.99926	0.610442	0.5567
C(2)	3.729741	3.425731	1.088743	0.3046
C(3)	-3.297203	13.57841	-0.242827	0.8136
R-squared	0.167935	Mean dependent var		35.11667
Adjusted R-squared	-0.016968	S.D. dependent var		10.24800
S.E. of regression	10.33458	Akaike info criterion		7.721186
Sum squared resid	961.2321	Schwarz criterion		7.842413
Log likelihood	-43.32712	Durbin-Watson stat		0.120499

Source: Own processing of data available on <http://www.mfinante.ro> and [www.bnr.ro](http://www.bnr.ro)

Using the least squares method in the EViews program, the following regression equation was obtained:

$$TPD = 18.92 + 3.73 * SSBE - 3.3 * HE$$

According to this equation, at a change in the state social security budget expenditure by 1% of GDP, the total public debt will change in the same direction as 3.73 percent as a share of GDP. With the same 1% change in health spending, as a share of GDP, total public debt will reverse by 3.3% of GDP.

The coefficient of determination for regression (R-squared) shows us that 16.8% of the variation in the total public debt is explained by the modification of the social security budget expenditures (SSBE) and health expenditures (HE).

#### 4. Conclusions and limitations

It is clear from the econometric analysis that an increase in pension expenditure leads to an increase of both government debt (by 2.43% of GDP) and total government debt (by 2.7% of GDP). From this point of view, we can say that the sustainability of public finance in Romania is affected by the aging of the population, but a healthier fiscal policy capable of bringing more revenues to budget from the economy and adopting measures to reduce the unemployment rate, otherwise said the increase in the number of taxpayers, would be viable measures, which would no longer affect the public finance.

It also follows from the analysis that an increase in the social security budget would also lead to an increase of both government debt (by 3.41% of GDP) and total public debt (by 3.73% of GDP). Because all social protection measures in Romania were considered in this analysis, the discussion could be more complicated. On the one hand, this includes both pension expenditure and other expenditure to support disadvantaged social categories. From this point of view, I believe that it is necessary to adopt more firm measures for the integration of these categories into the social and economic life of the country.

Health expenditures do not affect the sustainability of public finance, but on the contrary, they are inversely proportional in size due to the fact that the health system in Romania is underfunded, and yet there are still no coherent measures in this direction.

For a better clarification of the situation, it is necessary to carry out this study on all the chapters of the social security budget expenditures. Also, in order to see the sustainability of public finance in Romania, it is necessary to calculate its indicators - the S1 indicator, which measures the change in the primary structural balance for the next year, which is necessary to achieve a debt level in 2050 of 60% of GDP and the S2 indicator, which measures the size of a permanent budget adjustment that meets government's inter-temporal budget constraints on an infinite horizon.

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## Taxation of Undeclared Assets

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### Abstract

*For the present paper we can use as motto the famous quotation of Henry Ford: "I am ready to account for any day in my life, but don't ask me how I made my first million".*

*After at least two decades of fiscal chaos, a period which allowed the accumulation of "grey fortunes" whose origins and extent are uncertain, the rule of law must enter an age of normality and thus the question of the complete taxation of assets arises in the area of fiscal law.*

*The problem of the taxation of undeclared assets finds its remedy in the present Fiscal Procedural Code in the institution of the checking of personal financial status. The checking of personal financial status allows fiscal inspectors to compare the expenditures of a tax payer (displayed assets) to the declared income and to issue a decision of fiscal taxation for the difference in case of discrepancies.*

*De lege ferenda, we suggest to amend the present regulation with an initial statement of patrimony.*

**Key words:** taxation, fiscal control, checking of personal financial status

**J.E.L. classification:** K34

### 1. Introduction

The ambiguous reality of the apparition of great fortunes in Romania after the Revolution of 1989 in the context of the slough, even social chaos which followed is of notoriety, yet difficult to prove. The natural laws of capitalism say that production means must be accumulated in private property by entrepreneurs. This is exactly what happened. But beyond this unclear period the rule of law must enter a stage of normality and this entails correct business practices, rigorous law enforcement, legal liability, etc. In accordance to this movement of turning Romanian society towards normality, the question of the complete taxation of assets arises in the area of fiscal law.

The problem of the taxation of undeclared assets finds its remedy in the present Fiscal Procedural Code (Law no. 207/2015 with subsequent modifications) in the regulations comprised by Title VI (Fiscal control), Chapter IV (Checking of personal financial status by the central fiscal organ). Also relevant to the issue is the NAFA (National Agency for Fiscal Administration) Order no. 3733 to approve indirect methods to establish income and the procedure to apply them (published in the Official Gazette, Part I, no. 981 on 30 December 2015).

### 2. Fiscal inspection and checking personal financial status

According to applicable legal norms, the **fiscal inspection** is the activity which has as object checking the legal nature and conformity of fiscal declarations, the correctness and exactness of the performance of fiscal obligations as established by the tax payer, the observance of the stipulations of the fiscal and accounting legislation, the checking or assessment, if the case may be, of taxation bases and corresponding situations, the assessment of the differences of main fiscal obligations (art 113 Fiscal Procedural Code).

Fiscal inspection can be exercised on persons and entities, regardless of their organisation form, which have the obligation to establish, retain or pay the fiscal obligations stipulated by the law.

The forms of fiscal inspection are: a) general fiscal inspection and partial fiscal inspection (Şaguna, D.D.; Radu, D. I., 2016, p. 225).

**Checking personal fiscal status** is a special form of fiscal control, totally separated from fiscal inspection. The fiscal organ has the right to perform a fiscal checking of the personal fiscal status of natural persons in relation to income taxation. This checking has as object the examination of the totality of patrimonial rights and obligations, of treasury flows and any other relevant elements to establish the real fiscal status of the natural person being checked. (Popescu, E., 2016, internet).

### 3. Procedure for checking personal fiscal status

**Competence** Present provisions establish that the fiscal inspection for natural persons subject to income taxation is done throughout the entire territory of Romania by the Direction for Fiscal Inspection, competent structure with NAFA.

**Checking financial status** cannot be performed for each taxpayer separately, that is why there must be identified those persons who (statistically) risk having undeclared assets.

To check personal financial status of the natural person, the fiscal organ performs **preliminary activities**:

- a) risk analysis to establish probable risk for a group of natural persons or punctual cases.
- b) selecting the group of persons to be subjected to documentary preliminary fiscal checking.

To this purpose, fiscal inspectors proceed with the analysis of all information, documents and other evidentiary means related to the fiscal status of the natural person being checked, obtained inclusively by asking third parties, authorities or public institutions both in the country and abroad for information based on international conventions for information exchange or, where they do not exist, based on mutuality.

Verification consists of comparing the income declared by taxpayers or income payers, on the one hand, and on the other hand, the personal fiscal status of the taxpayer. This checking is performed taking into account the documents and information issued/ obtained from the central fiscal organ, which are relevant to determine the fiscal status, with the notification of the natural person.

**The indirect methods** to establish adjusted band rate are provided in a norm mentioned above, i.e. *The Order of the NAFA Chairperson no 3733/2015*. These methods are:

- the method of sourcing and using the fund – it consists in comparing expenses to declared assets during the checked period;
- the method of treasury flows – it consists in the analysis of bank accounts and cash flows to establish the movements of monetary availability, its association to income sources and its use;
- the method of the net patrimony – it consists in determining taxation income based on the increase of the value of the net patrimony of a taxpayer during one fiscal year. The increase or decrease of the value of the net patrimony is determined by comparing the value of the net patrimony at the beginning of the period to that at the end of the period.
- If the fiscal organ notices a significant difference between the income declared by the taxpayers, on the one hand, and the personal fiscal status on the other hand, it will continue the checking by communicating the checking notification and it will establish the adjusted band rate by using indirect methods.
- The difference is significant if between the estimated income calculated based on the personal financial status and the income declared by the taxpayers the difference is greater than 10%, but no less than 50.000 lei, as the Code of Fiscal Procedure establishes with art. 136 par. (6).

In case the fiscal organ notices significant differences, it will ask the taxpayer to present justifying documents or other clarifications relevant for their financial status within 60 days from the communication of the checking notification, under the sanction of incapacity. The deadline can be extended 30 days, only once, at the justified request of the taxpayer and with the consent of the fiscal organ.



The taxpayers subjected to preliminary fiscal checking must present, at the request of the fiscal organs, **a statement of patrimony and income**. The patrimony elements which must be declared by the natural person subjected to the checking of personal fiscal status are the following:

- Immovable assets: land, buildings, other immovable assets;
- Movable assets: a) means of transport (land/ naval/ air); b) assets in the form of precious metals, jewellery, art and religious objects, art and coin collections, antiquities, objects that are part of the natural or universal cultural patrimony whose acquisition value exceeds 15000 lei; c) animals, included breed animals or animals taking part in competitions/ races, whose value exceeds 15000 lei; d) financial assets: bank accounts and deposits, investment funds, equivalent saving and investment forms, investments, direct investments and loans; e) other assets, titles and/ or certificates whose individual value exceeds 10000 lei; f) insurance bills, except for car insurance bills; g) expenses: personal expenses; expenses with persons in the care of the taxpayer.

Not filing the statement of patrimony within the deadline stipulated by the Code of Fiscal Procedure (15 days, if the request for statement occurs during checking or 60 days if the request of the document by the authorities occurs together with the communication of the checking notification) is considered contravention and it is sanctioned with a fine between 10000 lei and 50000 lei.

**Suspension of the checking** can be decided in certain expressly determined cases: a) to perform an expert appraisal in accordance with the present code; b) to perform research in order to identify some persons or to establish the realities of some transactions; c) at the written request of the natural person as a result of the occurrence of objective situations, confirmed by the central fiscal organ assigned to performed the checking, which result in the impossibility of verification. During one check, the natural person can request the suspension of the check only once; d) to request additional information from third parties or from similar fiscal authorities from other countries; e) at the suggestion of the structure coordinating the natural persons fiscal checking activity in order to valorise information resulting from other checks, received from public authorities or institutions or from third parties. The date the checking activity is suspended is communicated to the natural person by a suspension decision. After the conditions generating suspension no longer apply, the personal financial status checking is resumed and the date is communicated in writing to the natural person undergoing the investigation.

**Checking report** The result of the personal financial status check is noted down in a written report which presents the facts noticed. The documents used to compile the report, the documents of the meetings and any other documents related to the report are annexed to the report regarding the results of the check. The documents presented by the natural person undergoing fiscal checking are presented to the central fiscal organ and turned in under signature. Upon finalising the personal financial status check, the central fiscal organ presents the report and its fiscal consequences to the natural person and allows the possibility to express personal points of view. The natural person has the right to present in writing, within 5 working days from the date the conclusions were presented, their point of view regarding the report of the personal financial status check, a point of view which is annexed to the checking report and in relation to which the fiscal organ pronounces during the report.

**Tax decision** The checking report is used to issue the tax decision or, if the case may be, a decision to terminate the checking procedure, if the band rate is not adjusted. The decision to taxa or to terminate the checking procedure is communicated to the natural person being checked.

#### **4. Short presentation of the results obtained as a result of income verification of natural persons**

In a press declaration (9 May 2017), the chairperson of the Direction for the Control of Natural Persons Income with the National Agency for Fiscal Administration made public the results obtained as a result of the verification of natural persons income.

Fiscal inspectors have discovered undeclared income of over 119.5 million lei with the controls undertaken between 2016 and April 2017 with natural persons with high assets and fiscal risk, while the declared income of the persons being checked amounted only to 3.9 million lei. In this



context, NAFA has calculated additional payment obligations to the state budget of approximately 27 million lei. During the control or immediately after it, a total of 4,292,306 lei has been cashed in, while foreclosure procedures were ordered to cover the difference.

The NAFA representative added that, as far as the income differences noticed with the checking of personal financial status are concerned, these are normally the result of loans to companies and building acquisitions. (Pavel A.I., 2017, InfoTVA.ro).

## 5. Conclusions

Checking personal financial status is a special form of fiscal control and it implies the application of indirect control methods. These methods allow fiscal inspectors to compare the expenses of a taxpayer (displayed wealth) to the declared income and to issue a tax decision for the difference if there are discrepancies between the two.

The main criticism to be brought to the present regulation is the lack of “a zero moment” – the initial statement of patrimony. By this, one must understand a limited period of time during which persons knowing they have assets of any type whose origin cannot be justified, could declare these assets, while the applied tax should be small enough so as to not to make the elusion of the law worthwhile (Biriş, G, 2012, p. 202-204). The initial statement of patrimony presents numerous practical advantages. After decades of fiscal chaos it could represent “a zero moment”, a fiscal amnesty which would really allow the severe and rigorous application of fiscal law to follow. Without such a zero moment, the verification of personal financial status could be used in political or personal vendettas, and such a witch-hunt with the corresponding array of abuse would not be useful to society as a whole. If persons owning assets were not given the possibility to declare them in favourable conditions, there could also be the danger of the emigration of local capital to fiscal paradises, which is not desirable.

*De lege ferenda*, we suggest to amend the present regulation with an initial statement of patrimony.

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# The Analysis of the IFRS Adoption Effects on the Accounting Quality in the European Context

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## Abstract

*The purpose of this paper is to analyze the scientific literature dedicated to IFRS implementation process in order to recognize and understand the impact of the norms related to the quality of the information presented in financial statements. The research methodology used for this purpose is based on an analysis of 24 academic papers published between 2000 and 2015, available on international scientific databases such as: Emerald, ScienceDirect, ProQuest and SSRN. The review presents the economic consequences of the quality accounting improvement as a result of the adoption of IFRS norms. In the same time, the disclosure of the information represents a significant role in lowering the cost of equity regarding the company's economic level.*

**Key words:** IFRS, Quality of Information, Cost of Capital, Disclosure of Information.

**J.E.L. classification:** M41

## 1. Introduction

The evolution of multinational companies influenced by the globalization factor determined the need for an uniform economic language that generates an improvement in communication between all the users of financial statements. In this context, the International Accounting Standards Board (IASB) tends to harmonize financial information, triggering the appearance of International Financial Reporting Standards. This process of IFRS implementation was based on Commission Regulation No 1606/2002. The appearance of the Commission Regulation determine that each listed entity, bank or insurance company is required to prepare its consolidated financial statements in accordance with IFRS for each financial year beginning with 1 of January 2005.

The literature review offers a lot of articles regarding the international accounting harmonization process and the evolution of accounting standards. Among the reviews that address these topics are those of Ball (2006), Jermakowicz (2004), Hail & Leuz (2006), Barth et al, (2008) and Daske et al (2008). The results obtained by the researchers show the benefits of adopting IFRS standards and illustrate the limits of the process, thus highlighting the effects of IFRS transition on result and cost of capital.

This paper presents a review of the impact that IFRS adoption has had on the quality of the information presented in the financial statements at European level. Regarding the research methodology, the attention has been focused on several academic articles available on international scientific databases. The outcome of this fundamental research involves clarifying the notion of quality on financial information and identifying the main ways of measuring the quality of information. In the same time the article provide proofs related to the IFRS adoption impact on the cost of capital.

## 2. The quality of financial information

The objective of the financial statements is to provide information on the financial position, performance and financial adaptability of an enterprise that is useful to a wide range of users for making economic decisions.

In order to define and understand the quality of financial information, we intend to present the definition given by the IASB Conceptual Framework for Financial Reporting in 2010. According to the definition, the quality of financial information is analyzed in relation to the types of information and it may be useful for different categories of investors, both - existing and potential, lenders and other creditors in their decisions on the reporting entity. (QC1, Conceptual Framework, 2010). The financial information must be useful, relevant and should represent exactly what the definition intend to represent. The usefulness of financial information is amplified if the documents are comparable, verifiable and understandable. " [Conceptual Framework, CQ4, 2010].

The quality of the financial information is given by their utility in the decision making process and by the way that this document illustrates the economic reality. Regarding the importance of the value of consolidated information in the context of IFRS transition, there is a series of empirical studies that have shown an increase of value added following the adoption of IFRS (Bartovt et al., 2005; Jermakowicz et al, 2007, Barth et al, 2008, Paananen and Lin, 2009). However, there are also studies that show that IFRS did not lead to an increase of value added related to the financial statements consolidation (Callao et al., 2007, Hung and Subramanyam, 2007, Gjerde et al., 2008, Paananen , 2008).

According to specialized literature, the quality of the accounting is determined by analyzing the value of the information available for different users of financial statements. Thus, Pascani (2015) illustrates a typology of values that researchers use to measure the quality of information in financial statements:

- The value relevance approach;
- The credit relevance approach;
- The extent of earnings management practices;
- Timeliness of loss recognition;
- Accounting conservatism.

The scientific papers present proofs of economic consequences related to the accounting quality improvement following the adoption of IFRS standards:

- Increasing the liquidity of Capital Markets (Bruggeman et al, 2013; Ahmen et al, 2013);
- Diminishing the Cost of Capital, (Bruggeman et al,2013; Ahmen et all, 2013);
- Increasing the efficiency of Capital Investment at the company's level (Bruggeman et al, 2013);
- Positive Consequences on the Cost of Corporate Dept, Moscariello et al. (2014).

The scope of increasing the quality of accounting information is to facilitate transparency by reducing accounting asymmetry. Martinez-Ferrero (2014) sustains that in the companies where exist a better quality of accounting information, a higher future performance will be achieved because these companies are positively assessed on the market due to the quality information they have make available to users.

### **3. The information disclosure and the cost of capital**

The Capital Cost is an important indicator that expresses the state of the financial market at a certain moment and has a particular impact on company's managers. A report from American Professional Body (AICPA) states mentions that by reducing cost of equity it's a creation of increased information.

In one of Ly St Kosal's papers (2010) this phenomenon is explained using three theories:

- The first theory is related to the risk of investor's estimations regarding the returns they expect in relation with the security return, the risk being greater for firms that provide for investors a relatively small number of information compared to firms that reveal a high level of information. With other words, the disclosure of information reduces the cost of capital by reducing risk in investor estimates;

- The second theory presents the ratio between transaction costs and liquidation. Asymmetry of accounting information implies an increase in transaction costs and a decrease in market liquidity, by generating reductions to investors in order to maintain their existing stock portfolio;

- The third theory suggests that information disclosure contributes to increased transaction intermediation, and decrease the cost of capital.

The consequence of capital cost reductions was also tested by several authors. For example, Prather-Kinsey et al,(2008) concludes on the basis of an analysis using a sample of 157 European firms that investors perceived net benefits following the adoption of IFRS, which involved a significant decrease in the cost of equity. Botosan and Plumlee (2000) examine the association between the cost of capital and the various types of disclosures in a financial exercise (annual reports, quarterly reports, and other types of reports that capture the relationship with investors).

From the authors' researches, the annual reports lead to a decrease in capital cost by confirming the theory. Surprisingly, the other types of reporting have a positive relationship with the cost of capital, being the premises of increasing its value due to the increase in stock price volatility.

The type of funding that companies want to achieve has also led to studies. Francis et al (2005) present the level of disclosure, and how these concepts affect or not the cost of capital. On a sample of companies from 34 countries, they found that sectors with high financial needs had a high and voluntary level of disclosure. This effect put in place a decrease of the cost of debt and the cost of equity. Their results also indicated that, although there are transnational differences in legal and financial systems that affect disclosure levels, when they want to access external funding , the country factors operate independently of disclosure levels.

The welfare of investors was analyzed by Gao (2010), which launched the hypothesis that an improvement in disclosure of information also leads to an increase in investor welfare. According to the results of the study, the hypothesis is confirmed only in certain situations (production economy, perfect competition,). This model demonstrates three important elements:

- There are certain situations that may negatively affect investor welfare;
- The increase of capital cost can occur with the quality of disclosure when new investments are not elastic.
- The cost of capital may vary in an opposite direction to investor welfare, when the quality of the disclosure informations changes.

Christensen et al (2010) tracked changes in equity after disclosures. The results of the research have revealed that the reduction in the cost of ex-disclosure is balance by an increase equal to the cost of the capital since the information would be release.

Daske et al. (2008) analyzed the globally economic consequences of IFRS adopting on a sample of firms in 26 countries between pre and post adoption years (2001-2005). Research results show that market liquidity increased during the IFRS adoption and the cost of capital declined, with capital market effects being more evident in voluntary adoption compared to mandatory adoption. Other researchers (Elbakry et al., 2017) analyzed changes in the value of accounting information before and after the mandatory adoption of IFRS in Germany and the UK by using three valuation models (the Ohlson, modified and expanded base model) of equity. The results of these models indicated that although the values of equity information have decreased, growth has been related to income information in both Germany and the UK,

#### **4. Conclusions**

The purpose of this paper has been to present a synthesis of the IFRS effects on the accounting quality. Starting from the definition of the accounting quality, the review is measuring accounting quality along with the presentation of the economic consequences resulting from the IFRS adoption.

The paper has brought to attention important scientific papers which present information about the cost of capital, its role, and also present different ways about his reduction.

An important aspect present in the paper is related to the process disclosure of financial information. In the same time, An important point is represented by the mode of application considered. Most studies show a decrease in the cost of capital, especially for companies that have voluntarily adopted IFRSs, compared to those that have been force to adopt IFRS.

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## Study Concerning Exercising an Adequate Professional Reasoning in Developing the Evaluation and Audit

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### Abstract

*Economical –financial information represent the key to substantiating the economical – financial decisions, made by different categories of users, both for macroeconomic and microeconomic levels. In order to be able to have a well grounded base in decision making, the information must respect the quality requirements, and this thing is only possible if the patrimonial items, to which this information refers to, are subjected to a process of pertinent evaluation.*

*Even though there are regulations which clearly specify the way in which an evaluation process, respectively an adequate audit process must take place, for a good management of encountered situations and difficulties, the evaluator, respectively the auditor must exercise an adequate professional reasoning.*

**Key words:** professional reasoning, evaluation, audit, economical – financial information

**J.E.L. classification:** M40, M41, M42

### 1. Introduction

In the economical domain, for reflecting the entities' trusty image it is resorted to the evaluation of the patrimonial items, thus establishing their actual value.

Broadly, evaluation is an analysis, an opinion or a conclusion referring to the nature, quality, value or utility of certain interests or aspects of a property, expressed by an impartial persona, who is specialized in property analysis and evaluation. In a narrow sense, evaluation is the estimation process of a certain type of value, for a certain property, made at a certain date and materialized in the evaluation report. (Anghel et al., 2010, p.16). Evaluation is a form of quantification through which the accounting method determines the size of wealth elements, in a natural expression and expresses this size with the help of currency. In this way, through evaluation, all the asset items, all liabilities and own capitals are homogenized, are expressed by the same standard and are centralised. (Todea, 2009, p.114).

The information resulted from the evaluation process are presented to the different categories of users through financial reports. In order to increase the users' trust in the information reflected in financial reports and for providing a certification of the fact that these reports have been made in accordance with the regulations in effect, one applies to audit.

Generally, through audit one understands a professional examination of information, made by a competent and independent specialist, for expressing a responsible and independent opinion by retrospection at quality criteria (standard / norm or a regulation). (Toma, 2012, p.24). The audit represents the process developed by a natural or legal person being legally empowered, named auditors, through which information connected to a certain entity are analysed and evaluated, using specific techniques and procedures, for obtaining certain proofs, called audit samples, and specific

procedures for obtaining certain proofs, called audit samples, based on which the auditors issue in a document, named audit report an a responsible and independent opinion by applying to evaluation criteria which result from the legal regulations or from the good practice which is unanimously recognized in the domain in which the audited entity carries out its activity. (Boulescu, Ghiță, Mareș, 2001, p.11).

The main users of the information presented in the audit report are: shareholders, investors, managers, employees, providers, creditors, financial banking institutions, state institutions, stock.

Both in the evaluation process, as well as in the audit one, a major influence is given by the evaluator's, respectively the auditor's capacity to manage the encountered situations and difficulties. But this thing is not possible only when an ethical adequate professional reasoning is exercised.

The reasoning is a logical chaining of reasoning, which leads to a conclusion; a chain of arguments which one uses in judging a thing or for sustaining his own point of view. . <https://dexonline.ro/definitie/ra%C8%9Bionament> (accessed on October 07th, 2017).

Conceived and structured on a complex matter, this scientific approach is considering the presentation of the importance of exercising an adequate professional reasoning in developing the evaluation and the audit.

## **2. Methodology**

The purpose of this scientific research is to present both theoretically and practically certain aspects concerning the importance of exercising an adequate professional reasoning in making the evaluation and audit. The methodology we have used in accomplishing this scientific approach is based on a theoretical research concerning concepts of evaluation, audit, professional reasoning an regulation in this domain, accompanied by an empirical research through which we have pointed out peculiar aspects concerning the approached concepts. We have applied to studying the papers from financial accounting and audit domains, elaborated by specialists and theoreticians in the field, to studying the Valuation Standards, respectively the Audit Standards, to analysing the regulation in this branch, thus being a qualitative exploratory research, and also for establishing the importance of exercising an adequate professional reasoning when developing the evaluation and audit, we have applied to research based on statistical survey through questionnaire.

## **3. Aspects concerning exercising the professional reasoning in the evaluation domain**

The importance of evaluation derives from the importance of the situations which require it: commercial transactions, merger - division operations, juridical actions with patrimonial purpose, share placing on the financial market, calculus of different taxes and fees, making financial reports. Regardless the situation in which the evaluation is made, the evaluator meets different peculiarities which he must take into consideration, different difficulties that he has to manage, to have sufficient information which ensure the necessary competence, to respect the principles, standards, and regulations in effect and to prove objectivism in the developed activity.

In order to deal with all these requirements for establishing the real value of the entities elements, respectively of the entities in their entirety, the evaluator has to prove an adequate professional reasoning.

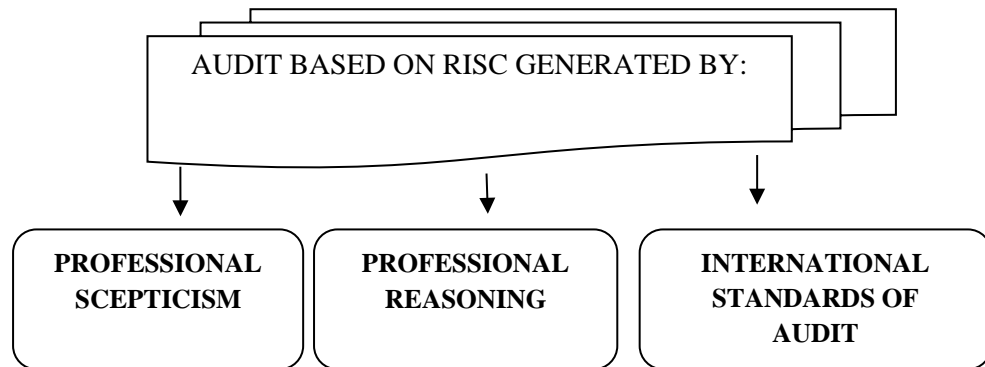
According to the Property Valuation Standards, the evaluator's professional reasoning has to objectively be applied and it shouldn't be used for under valuating or over valuating the resulted value. The evaluation activity entails the evaluator to apply impartial reasoning referring to the credibility which must be attributed to the different factual data or used hypothesis in order to reach a certain conclusion concerning the value. For an evaluation to be credible, it is very important that those reasoning to be seen from their applying optics in an environment which promotes transparency and minimizes the influence of any subjective factors on the process. SEV 100, 2016, p.4)

In order to ensure the necessary degree of objectivity needed in the evaluation process, so that the result is seen as being impartial, there are control systems and adequate procedures. A good example in this regard is The Code of Ethics for the profession of authorised evaluator. (SEV 100, 2016, p.5).

#### 4. Aspects concerning exercising professional reasoning in audit domain

An important element used by the evaluator during the audit mission and with the help of which he is guided for making the best decisions for obtaining the audit samples based on which the professional is able to ground his conclusions, for emitting an opinion, is the auditor's professional reasoning. Therefore, as it is also shown in the below figure, this represents one of the pillars from the basis of the activity developed by the auditor.

Figure no.1. General landmarks for making an audit



Source: Briciu, S., Socol, A., Ivan, R., Tamaş, A., Puţan, A., Topor, D., 2014, Financial Audit. Theoretical Aspects and Practical Applications, Alba Iulia: Didactical Series, p. 34.

Professional reasoning is essential for making an adequate audit. This thing is due to the fact that the interpretation of the relevant ethical requirements and of ISAs and knowingly making necessary decisions during the audit are not achievable without applying relevant acknowledgments and experience concerning facts and circumstances. Professional reasoning is necessary especially in connection with decisions connected to (ISA200, A23, 2016, pp.96-97):

- Significance threshold and audit risk.
- Nature, time placement and the extent of audit procedures used for fulfilling the ISAs' requirements and for collecting audit samples.
- Evaluating the extent to which sufficient and adequate audit samples have been collected, and the extent to which more has to be done in order to reach the ISAs' objectives and through this, the auditor's general objectives.
- Management reasoning evaluation in applying the applicable frame of financial reporting.
- Making conclusions based on the audit samples, for instance evaluation of the reasonable character of the estimations made by management in making the financial reports.

The auditor's professional reasoning, through the most adequate reasoning gained by his acknowledgement and professional experience, has a decisive role in each undertaken action, during the entire audit mission. Through the final result of the auditor's activity, respectively the report of the independent auditor, a reasonable insurance is given to the final users, concerning the information provided by the audited entity's financial reports, thus being able to make the best decisions in the activities which were established by them, in order to being used in the near future.



## 5. Quantitative study concerning the importance of exercising an adequate professional reasoning in developing the audit and the evaluation

In the period December 2016 – March 2017, at a national level, a questionnaire has been sent to a sample of 240 people represented by valuation experts, accounting experts, managers, respectively staff from the economical – financial department, which aimed the validation or non validation of 8 work hypotheses. Among these hypotheses, we have aimed on one hand the influence of evaluation results on the decisions made by different categories of users, and on the other hand, the importance of exercising an adequate professional reasoning in making the evaluation of patrimonial items, but also in the audit process, having the purpose of certifying the reality of the information given to the users.

The questionnaire is consisted of closed comprehensible questions, and for the defaulted answers, we have used the Likert Scale, through which it is established to what extent the respondents agree or not with the affirmations within the questionnaire. As a result, we have used 5 answer values, where number one is "Very important", number 2 represents "Important", number 3 represents "Less important", number 4 "The least important" and number 5 "Not important at all".

From analysing the first part of the questionnaire which includes questions referring to the respondents' identification, it is shown the fact that 42%, respectively 35% of the respondents are accounting experts and evaluators, and 55% of the respondents' total sum, have a work experience of over 10 years. Also, 42% of the respondents carry their activity within a big entity. This is an essential aspect because within the big entities all types of assets and liabilities elements are encountered, the users of financial reports may be fit for all categories, the decisional level is an increased one, and through its size, the entity has a big importance for society.

The response rate was of 54,65%, namely 153 respondent people.

The second part of the questionnaire is consisted of a number of 19 questions. Among these questions, the one referring to the importance of exercising an adequate professional reasoning in developing the evaluation and respectively audit processes may be found.

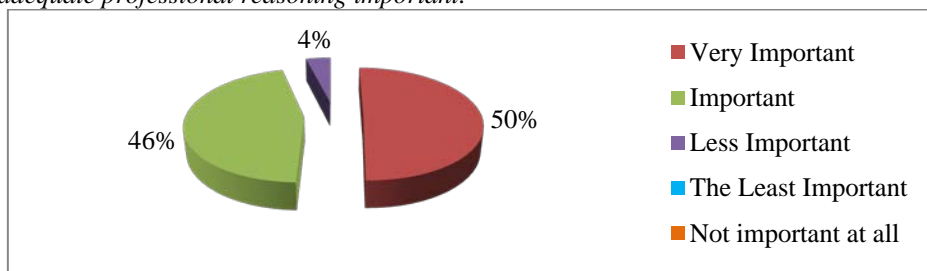
**Question:** *How important the exercising of an adequate accounting professional reasoning is in developing the evaluation?*

The respondents of this questionnaire have stated that 50% from them consider that applying an adequate professional reasoning is very important, 46% from the respondents consider this thing as being important.

We state that the situations encountered in the valuation practice are different from an entity to another, from a certain moment to another, form an element subjected to evaluation to another; consequently, evaluation has always imposed difficulties to the evaluators. These difficulties refer to the access of getting the necessary information, insufficient personnel, impossibility of cooperation, as well as the legal regulations in effect. The evaluator must take into account the peculiarities when he is evaluating different elements, the fact that a pertinent evaluation imposes a great amount of information both from inside the entity, but especially from outside of it, and these information have to be gathered and processed by specialised personnel, in a certain amount of time, and also, certain beneficiaries of the evaluation results have themselves certain interests in obtaining either bigger or smaller results from evaluation. The ambiguous, sometimes confusing legislative frame also has to be mentioned, as well as the existence of some discrepancies between the national and international stipulations.

As a result, even though there are regulations and standards which impose certain rules and principles in developing the evaluation process, the evaluator has to know how to manage different difficulties and changes which appear, in order to be able to make a pertinent evaluation. This thing is only possible when an ethical adequate and professional reasoning is exercised.

Chart no. 1 Respondents' repartition according to the extent to which they consider the exercising of an adequate professional reasoning important.



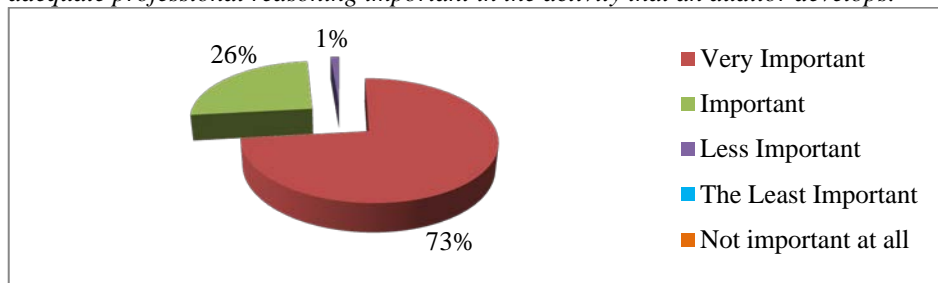
Source: Own processing

**Question:** How important is the exercising of an adequate professional reasoning in the activity developed by the auditor?

Among the respondents of this questionnaire, 73% consider applying professional reasoning by an auditor in emitting an opinion, as being very important, 26% of them consider this thing important, and 1% of the respondents consider this thing as being less important.

As it can be observed, these gathered results reiterate the importance of using a professional reasoning in the activity developed by the auditor. In order to provide the best audit services, professional reasoning is the main instrument of an auditor, serving as console in making the best decisions during the development of the audit mission. The foundation at the base of the modality of exercising professional reasoning is the equilibrium between the experience, expertise, the auditor's professional training and his skills of communication and bounding with the audited entity and with the member of the audit team, but also his experience with the ways of managing different pressures to which the auditor is subjected to, both internally and externally. Registering any disequilibrium in exercising the professional reasoning, may have consequences on the quality of the audit mission.

Chart no. 2. Respondents' repartition according to the extent to which they consider the exercising of an adequate professional reasoning important in the activity that an auditor develops.



Source: own processing

## 6. Conclusions

Different categories of users of the accounting information benefit from real information as a result of evaluation of the patrimonial elements owned by entities in the evaluation of the entities in their entirety, and a certification on the reality of this information is confirmed by the opinion given by the auditor within the audit report.

Professional reasoning has a great importance both in developing the evaluation activity, and especially in the audit one, in correctly interpreting the norms of professional ethic, of accounting standards, audit standards, and national and international valuation standards, in properly managing the encountered difficulties and in taking the best decisions during the developed activity. The usage of professional reasoning in evaluation supposes taking certain decisions referring to the avoidance of over evaluation and under evaluation, enduring the transparency and objectivism in the developed activity. In the audit's case, the most important decisions taken based on the professional reasoning aim: audit planning, establishing the audit risk, establishing the significance threshold,

extending and spreading the audit procedures based on which the audit samples are identified with the help of which the auditor's opinion is emitted.

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## Accounting for Activity Units which Perform Agricultural Sector

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### Abstract

*Agriculture is a domain of nationally and internationally interest, because it has to ensure through the obtained production, the necessary of safe provisions, which are to satisfy the population's needs. Agricultural products are obtained within the agricultural holdings, which may be constituted by individual persons, agricultural associations, self – employed persons, individual enterprises, family partnership, agricultural associations, or companies which activate in the vegetal, livestock or mixed section. In order to obtain high quality agricultural products, the owners of agricultural holdings have to make investments from own financing sources, or as a result of accessing European funds, which are dedicated to developing the agricultural sector. The sum of all economical operations made for performing agricultural activities have to be registered in accounting, having the purpose of establishing the value of owned patrimonial elements and of the results obtained by the entity at a certain point.*

**Key words:** accounting, agriculture, entities, economical operations

**J.E.L. classification:** M41

### 1. Introduction

Romanian agriculture is a domain which currently is in constant development, as a result of capital infusion under the form of grants, came from the Government and from the European Union under the of European funds made available for Romanian as a Member State from January 2007 till now. All grants are destined to developing the agricultural activities, through investments in fixed assets purchasing/manufacturing, through enlarging the size of agricultural holdings or by covering the expenses made by activity development. Agricultural holding are most often organized under the form of self – employed persons and of trading company, which according to Law 31/1990 may be: Limited Companies, join stock company, limited partnership, limited joint stock company, general partnership. (Law 31/1990. Trading companies have the obligation to register all operations based on justifying documents into accounting, according to OMFP 1802/2014 "Accounting regulations concerning individual annual financial reports, and consolidated annual reports", and self – employed persons have an either double – entry bookkeeping in compliance with Law 82/1991 "Bookkeeping Law" or single – entry bookkeeping in compliance with OMFP 170/2015 "Accounting regulations concerning single – entry bookkeeping"

### 2. Methodology

Our research has as objectives both presenting theoretical aspects an presenting practical aspects concerning the accounting of agricultural activities.

As methods and research techniques, in our study we have appealed to theoretical documentation, comparison, synthesis and practical documentation. The theoretical research consisted in studying the specialty literature. We have used comparison in the moment in when we presented the bookkeeping modalities for trading companies respectively self – employed persons.

The synthesis was used in presenting the theoretical aspects, because accounting is a vast study field and we used practical documentation in picking information concerning the activities developed by the entities which perform in the agricultural sector.

### 3. Types of Agricultural Units

Agricultural activity is developed within agricultural units, which are classified according to a series of criteria, as follows (Băviță,2008, p.10-11):

- a) According to property form:
  - Individual / private agricultural units
  - Agricultural units of the state's private domain / public domain
- b) According to juridical form:
  - Self – employed person
  - Family partnership
  - Trading company: Ltd, SLE, LP, GP, Limited joint – stock company.
  - Agribusiness
  - Cooperative agribusiness
  - Producer group
- c) According to dimension:
  - Small agricultural units
  - Medium sized agricultural units
  - Large agricultural units
- d) According activity nature
  - Plant production agricultural units
  - Animal breeding agricultural units
  - Mixed agricultural units
- e) According to the destination of obtained production
  - Agricultural units which produce for self – consumption
  - Agricultural units which produce for self – consumption and marketing
  - Agricultural units which produce for marketing
- f) According to workforce characteristics
  - Family workforce
  - Employed workforce
  - Full time / part time workforce in agriculture
  - a combination between the formulas presented above

### 4. European Funds' Beneficiaries Specific to Agricultural Sector

European funds' beneficiaries specific to agricultural sector, presented in guides of existing measures on the Agency's for Rural Investment Financing website ([www.apdrp.ro](http://www.apdrp.ro)) are next:

- Companies set up based on Law no. 31/1990 – “Trade companies' law” republished, with subsequent modifications and completions. Trading companies have the obligation of keeping accounts in conformity with Law no.82/1991 – “Bookkeeping law” and O.M.F.P. no 1802/2014 – “Accounting regulations concerning individual annual financial reports and consolidated annual reports”.
- Agricultural companies set up based in Law no. 36/1991 – “Law concerning agricultural companies and other forms of association in agriculture” with the subsequent modifications and completions. Law no.36/1991 at the 5<sup>th</sup> article defines “the agricultural company” as being a “private company having variable capital and an unlimited and variable number of partners, having as goal the agricultural exploitation of land, tools, animals and other means brought in the company, as well as making investments for agricultural interest” (Law 36/1991). Agricultural companies perform bookkeeping in accordance with O.M.F.P.'s articles no. 1969/2007 – “Accounting regulations for legal persons without patrimonial purpose”
- Self – employed persons, individual businesses, family partnerships set up based on O.U.G. 44/2008 – “ Emergency Ordinance concerning performing economical activities by self-

employed persons, individual businesses and family partnerships". These types of entities have the possibility of choosing between keeping a single-entry accounting in accordance to O.M.F.P.'s stipulations no 170/2015 – "Accounting stipulations concerning single-entry bookkeeping", or a double- entry bookkeeping in accordance with the stipulations of Law no. 82/1991 – "Accounting law".

## 5. Fiscal Facilities Specific to Trading Companies and Self – Employed Persons which Perform in the Agricultural Sector

Trading companies which perform in the agricultural sector benefit of a series of fiscal facilities, as follows:

- Pay a 9% value added tax to the suppliers of drinking water and irrigation water from the Danube, inner rivers, streams, accumulation lakes or other sources of water which supply the irrigation systems. (Law no.227/2015)
- Pay a reduced 9% VAT for the delivery of fertilizers and pesticides used in the agriculture, seeds and other agricultural products destined to seeding and planting, as well as service provision of the type used in agricultural sector (Law 227/2015)

Agriculturalists that are not registered for VAT purposes and that perform agricultural activities, produce agricultural products, or provide agricultural services, benefit from a special treatment which supposes that agriculturalists do not deduce VAT for purchases and do not collect VAT for selling, but they receive a compensation from customers by billing, of 1% flat rate (for 2017) for covering the tax afferent to purchasing. The Fiscal Code presents the agriculturalist as being the "legal person, self-employed person, individual enterprise, or family partnership, having the headquarter of economic activity in Romania, which effects activities of agricultural production or agricultural services and which does not make any other economic activities whose annual turnover is inferior to the exemption limit of 65.000 Euros, equivalent to 220.000 Ron for 2017". (Law 227/2015).

## 6. Study Case Concerning Registering The Economical – Financial Operations in Accounting Specific to Agricultural Sector

### 6.1. Registering the Operation Specific to Agricultural Sector into Accounting

1. The company AGRO SRL purchased a 80.000 Ron field, having the purpose of making a tomato culture:

- Registering the field's purchasing
 

2111	=	404	80000
Fields		Assets suppliers	
- Paying the assets suppliers from bank account
 

404	=	5121	80.000
Assets suppliers		Bank accounts in Ron	

2. For making the tomato culture, the entity makes solariums in own production, for which it purchases raw materials of 7000 Ron and consumables of 3000 Ron, 19% VAT

- Purchasing raw materials and consumables from suppliers
 

%	=	401	<u>11.900</u>
301		Suppliers	7.000
Raw materials			
3028			3.000
Other consumables			
4426			1.900
- Paying the supplier from bank account
 

401	=	5121	11.900
Suppliers		Bank accounts in Ron	
- Giving raw materials and the materials for making the solariums for consumption

601	=	301	7.000
Expenses with raw materials		Raw Materials	
6028	=	3028	3.000
Expenses with other consumables		Other consumables	

3. Making the solariums generates other expenses of 2000 Ron, 19% VAT

- Registering other expenses			
%	=	401	<u>2.380</u>
628		Suppliers	2.000
Other expenses with services made by third parties			
4426			380
Deductible VAT			

4. Registering tangible fixed assets under construction, respectively solariums based on reception report

- Registering tangible assets in progress			
231	=	722	12.000
Tangible fixed assets under construction		Incomes from fixed assets production	
- Solariums' reception based on reception record			
212	=	231	12.000
Constructions		Tangible fixed assets under construction	

## 6.2 Registering the Grants Received from the Government and European Union in Accounting

1. AGRO S.R.L. company registers the to be received grant from the Agency of Payments and Intervention in Agriculture in 2017, for the agricultural area owned in the property, worth 2000 Euros, exchange rate 4.60Ron/Eur

- Registering the to be received grant in 2017			
4451	=	472	9.200
Governmental Grants		Deferred Incomes	
- Registering the grant for the area, in October 2017			
5121	=	4451	9.200
Bank accounts in Ron		Governmental grants	
- Registering the grant as income, in October 2017			
472	=	7417	9.200
Deferred incomes		Incomes from operating grants	

2. AGRO S.R.L. Company receives from the Agency of Payments and Intervention in Agriculture a grant for gasoline worth 1.1 Ron/litre. A consumption of 2500 litres is estimated for accomplishing the agricultural activity within the company.

- Registering the to be received grant from APIA			
4451	=	472	2.750
Governmental grants		Deferred incomes	
- Registering the gasoline consumption for accomplishing ploughing			
6022	=	3022	13.125 (2500 l x 5.25Ron/l)
Expenses concerning fuels		Fuels	

- Registering the grant concomitant to consumption as income	472	=	7412	2.750
Deferred incomes			Incomes from operating grants for raw materials / materials	
- Cashing the gasoline grant	5121	=	4451	2.750
Bank accounts in Ron			Governmental grants	

3. AGRO S.R.L. Company receives from the Agency of Rural Investment Financing a grant for purchasing a combine worth 100.000 Euros, currency rate 4.60 Ron/Eur.

- Registering the to be received grant, when the financing is approved.

	445	=	4752	460.000
Grants			Irredeemable loans with characteristics of investment grants	
- Purchasing the combine	2131	=	404	460.000
Technological equipments			Assets suppliers	
- Cashing the grant in bank account	5121	=	445	460.000
Bank account in Ron			Grants	
- Paying the supplier from the grant cashed from ARIF	404	=	5121	460.000
Fixed assets Supplier			Bank account in Ron	
- Annual registration of combine's amortization on a 10 years period	6811	=	2813	46.000/ year
Exploitation expenses concerning the fixed assets amortization			Amortization of installations and other means of transport	
- Resuming the received grant to incomes	4752	=	7584	46.000/ year
Irredeemable loans having grant characteristics for investments			Incomes from grants for investments	

## 7. Conclusions

Agriculture represents a domain of national interest, because the entities which perform agricultural activities have to insure the necessary products for satisfying the population's needs for food. The entities which activate in the agricultural area are diverse as form of organisation, and they may be classified according to a series of criteria such as form of property, juridical form, dimension, the nature of activity, the destination of obtained production and the characteristics of workforce. The entities which perform agricultural activities benefit from a series of advantages seen in the Fiscal Code among which we can mention: they pay a 9% reduced rate for supplying drinking water, irrigation water, respectively for purchasing fertilizers, pesticides and seeds used in agriculture. The form of organization for the entities which may benefit from European funds projects is diversified, starting from the simplest form of Self – Employed Persons, to the most complex one of the trading companies.

The grants received from the Government and/or European Union are registered in accounting in the category of grants afferent to assets or in the category of grants afferent to incomes depending of the purpose of their offering.



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# The Concept of Efficient Capital Market

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## Abstract

*The efficient market capital was defined in 1939 by the American economist Eugene Fama which started from the fact that the information, which is essential for determining the price of a financial asset, has an asymmetric distribution in the market, and therefore there are different decisions sale / purchase of one and the same security title. The asymmetric information distorts the value by later incorporating it in the price. A price that does not reflect accurately the characteristics of the issuer has the effect of reducing the expected real return of the seller or buyer. The only factor that should affect future expectations is the investor's attitude towards risk.*

**Key words:** efficient market, the symmetry of information, the independence of exchange rates, lack of transaction costs, atomization of the.

**J.E.L. classification:** F30, G01

## 1. Introduction

The concept of efficient market theory is formulated under the following main assumptions: the symmetry of information, the independence of exchange rates, lack of transaction costs, atomization of the etc. Thus, a model is created to highlight the potential of the market to which can relate the real returns. Even these assumptions may not be realistic, in practice, has been created a coherent set of evaluation models developed on the price-value arbitrage processes (Stancu, 2010).

The concept of arbitration is based on the net actuarial value (VAN) invalid as a main rule for determining the present value of financial securities.

$$VAN = -I_0 + \frac{\sum CF}{(1+r)^n} = 0$$

For which:  $I_0$  - is the expenditure purchasing securities;

$\sum CF$  - Capital gains and remuneration (dividends) during holding period;

$r$  - market interest rate plus risk class as an updating factor;

$n$  - holding period.

The requirement for VAN to be zero is that the discount rate is equal to the internal rate of return of the investment. The difference between the purchase price and the current value of future income obtained from holding a financial deed initiates the arbitration process for these differences.

The consequence is the tendency to equalize the marginal return of securities with the interest rate charged on the market at a particular moment.

## 2. The relationship between expected return and informational efficiency

Financially, the information is the decisive factor in determining the value by incorporating it in the market price for establishing the expected return and for assessing the risk the investors have to face. Setting the right price means the investors have at their disposal three types of information: information about the past, private and public activity of the issuer (Vlad, 2015).

*The information about the past* is available for all market players being already included in the price. Source for this type of information is the periodic reports that are made public by the issuer. The way of receiving past information is largely influenced by the opinions of market analysts.

*Public information* may be considered as present, its dissipation in the market having effects on the price. Before being made public this type of information has a privileged character and is known only to those who initiate it, this allowing its manipulation in the market for the benefit of those who have it, even in well-regulated markets.

*Private information* is held by managers, shareholders and by those who conceive the development plans for the issuer of securities and they can use in their own interest, even under clear legal regulations.

*Including the information into price depends on the market reaction and on the type of economic environment.* If necessary, the latter allows, projections in time with a greater or lesser degree of certainty regarding the development of the events and of the effects the new information may have on future return. Market reaction depends on the maturity level.

One of the information features is its asymmetrical distribution in the market, driven primarily by the aforementioned fact that in creation stage the information is first privileged then public. Technical factors can intervene on the access to sources, processing time, cost, etc.

Another important aspect to be pursued is the accuracy of the information. The information appearing in the market may be intentional information, concrete information or rumours. Advertisements on negotiations concerning acquisitions, investments in some countries, mergers, divisions, large orders, etc., induce some market reaction reflected by a modest upward trend in the price. News on the completion of the operations is reflected in a rapidly increasing volume of purchase, which place the price on an upward trend. This scenario can be considered specific for a mature market, but not for an evolving one where the investors may have hastened reactions.

*On November the 15<sup>th</sup>, 2006, the company Citigroup announced its intention to acquire a major Chinese bank. Investments in China and India are favourably rated on the US market, both countries being listed with the highest potential growth in the future. The information resulted in only a 2.7% increase in the price of the day and a slight increase in turnover. The reason for moderation of the investments was that in the competition were three other big companies. Announcing that the winner was Citigroup led, on medium term, to rapid growth of the volume of transactions and of the price.*

*A Canadian company has announced its intention to buy Antibiotice Iasi (ATB). Bucharest Stock Exchange opening next day registered a +0.0150 lei increase of the price for an extremely low volume of 15,000. Due to the news on the transaction, in two hours, the trading volume increased to 170,000, and the price increase with 0.0300 lei. The next day, there was other news that another big company planned to buy ATB. The market reaction was a volume growth due to refraining from the previous maximum levels of the price. The two purchasing intentions have not materialized even after a year, their effect being that they had propelled ATB on the top list of the Stock Exchange.*

Regarding the "rumour" information (Stancu, 2010), it can have adverse effects on the emerging markets as the economic environment may know sudden changes which psychologically prepare the investors for extreme situations and the possibilities for verifying the information are limited.

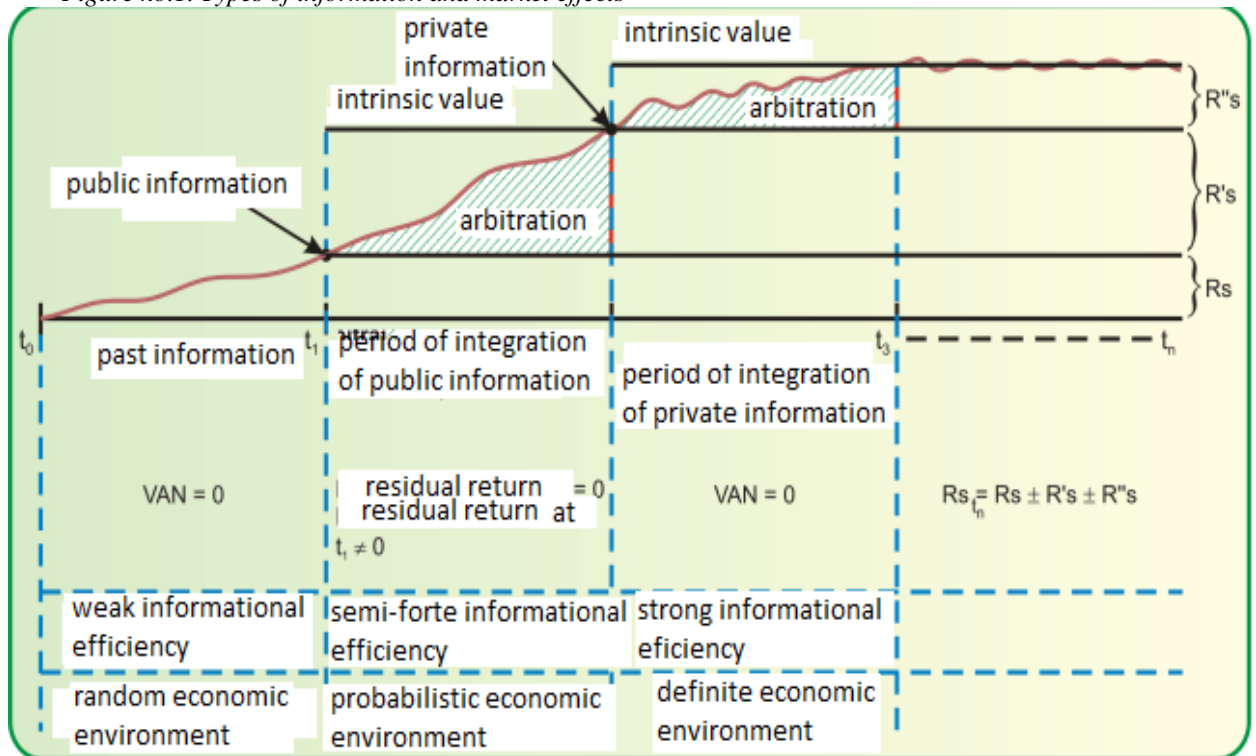
Another very important aspect is the way of *presenting the information*. Even if have been developed international standards of presenting the information, they are disclosed on one's account. Managers of companies that have financial problems or other problems have the tendency to "makeover" the information or to introduce some "innovations" in the accounting rules.

*The trend of presentation in a favourable light manifests at companies of all sizes. General Motors case is well known, which in 1988 reported record earnings, atypical for the car industry. This drew the attention of the market analysts which have noted that 40% of the reported profits (790 billion USD) have been caused by the increase of the amortization period, from 35 to 45 years, and not the main activity itself (Halpem et. all, 1998).*

Almost constant financial scandals, determined a representative of the Securities and Exchange Commission (SEC), the US market surveillance authority, to declare that such situations may be limited but not completely removed (Vlad, 2015). For this reason, financial reporting, both at national and at company level are looked on sceptically.

To emphasize *the dynamic relationship* between information and expected return, a defining scenario has been analysed for the implementation of the transactions on the market: an investor has acquired securities at a certain point in time  $t_0$ , for the financial time horizon  $t_0 - t_n$  based on an analysis of return and risk of the securities, and a comparison with other investment opportunities offered by the market.

Figure no.1. Types of information and market effects



Source: Vlad C., *Finances in the Globalization Era*, Lambert Academic Publishing, Germany, 2015

Depending on the available information and on the possibility to design the future, an investor establishes an expected return for a certain assumed risk (Stancu, 2010).

✓ *Only past information available*

The price willing to be paid at  $t_0$  is determined by the price previously recorded and by the expected return for a given time period ( $t_n$ ). At its turn, the expected return is determined to by the estimated potential of the security bond weighted by a risk factor which usually has large values for an uncertain economic environment, for which the forecasting possibilities are reduced.

✓ *Available public information*

On top of the last information overlaps new information that changes the intrinsic value of the security bond. The financial market reaction means initiating an arbitration process and its new trend aims to its intrinsic value ( $t_1 \div t_2$ ). Basically, the integration of public information should be immediate and accurate but this process is dependent on a number of factors such as: market maturity, the time for information processing, market regulations. Depending on its purpose (favourable or unfavourable) the integration of the information changes the expectations for  $t_n$  counting on a new level of return.

$$Rs_{t_n} = Rs \pm R's \quad [13]$$

Where:

R - the expected return obtained by integrating past information

R's - the deviation from  $R_s$  determined by integrating the new information

✓ *Available privileged information*

Such a situation is characteristic only for the theoretical economic environment in which the participants have equal positions, securities bonds are easy to be negotiated and the market liquidity is sure. In fact, holding this type of information is possible only for limited periods of time. Integration of privileged information also requires reformulation of return expectations:

$$R_{s,t_n} = R_s \pm R's \pm R''s \text{ (Stancu, 2010)}$$

Where:

$R''s$  - the impact on return determines the integration of inside information

In conclusion, the influence of the three categories of information on the value of financial securities bonds is complementary in the sense that new information overlaps the past one and, where necessary, amend one way or another the previously expected expectations about the value of a financial bond.

Depending on the type of the integrated information financial markets can be classified as (Stancu, 2010):

✓ *Markets with low efficiency.* Poor efficiency is characteristic of most markets representative for less developed economies where the quantification of future development can be done with a low probability.

The information used is the one prior to the decision which complies with "past repeats itself" principle.

The risk factors are unpredictable in the context of the magnitude of the event, the only landmark which can be considered being the analysis of the chronological series of historical prices of a financial asset.

Depending on the values of the autocorrelation coefficient between the covariance and the successive price dispersion, there can be given the following interpretations:

- If the values are *close to zero* than the variations of the past exchange rates are random and the future developments are not determined by them;
- If values are *positive* it means that an increase of a prior exchange rate compared with the average rate triggers an increase of the next rate, and vice versa;
- If the values are *negative* than a previous growth of an exchange rate determined the decrease of the next rate, and vice versa.

✓ *Markets with semi-forte efficiency.* This type of efficiency is characteristic for the countries with the most economically developed markets. The semi-forte efficiency is assessed pursuant to the null return residues.

$$\text{Residual return} = \text{actual return} - \text{expected return} = 0.$$

The residual return is not zero, within the interval  $t_1 \div t_2$  so the timing of the occurrence of the new information until its complete on-going integration as a result of the arbitration processes.

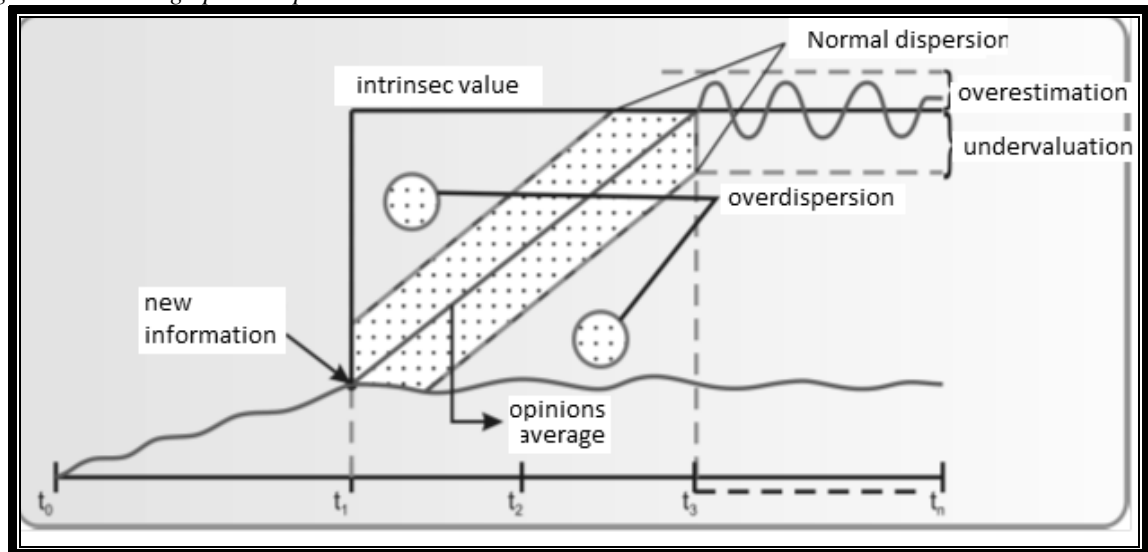
✓ *Markets with forte efficiency.* It is a theoretical market that actually occurs only on limited periods of time. It provides the symmetry of information that does not leave room for speculation.

Both the strong and weak efficiency is assessed on the basis of void net actuarial value (VAN).

### 3. Allocational efficiency

Pursuant to fundamental analysis, the emergence of the new information leads to the discovery of new intrinsic values, different from current market prices. Logically, the intrinsic value becomes the target of the market pursuant to which the price trend is established. After reaching the intrinsic value, the rate registers variations around this value, on a consolidation trend, until new information. Such a development is possible if we consider that the security bond is independent from the overall market.

Figure no.2. Setting up the Capital Market



Source: Vlad C., *Finances in the Globalization Era*, Lambert Academic Publishing, Germany, 2015

Investment decision is taken according to a number of factors, such as:

- return and risk, determined based on the new information;
- the period of time considered;
- individual attitude towards risk;
- anticipation of the behaviour of the majority in the market.

Within the time period  $t_1 \div t_2$  the uptrend (descending trend) creates a concentration of opinions around the average that forms the market and far beyond the average assessments, the so-called speculative "bubbles" or "balloons" which are to be used by those who belong to the average range.

A very important aspect to be considered is the correlation between the intrinsic value and the average opinions of the market. A limited number of investors can correctly evaluate the value of the new information, but it will be outside the average range and they will be target of the speculation. On the contrary, those who are close to the average range, as the opinion of the majority, even if they have assessed the information with a certain degree of error, will be the winners. In this context a question is asked, namely whether the discrepancy between the fundamental value of information and appreciation which is given to it by the price does not distort the economic reality of the market and of the issuers of security bonds.

Generally, the subsequent developments may lead to a change of the opinions reflected in the price corrections, but also to their preservation if the interests of those who have the power to decisively influence the market require this.

Since 1992, when Great Britain was forced to withdraw from the European Exchange Rate Mechanism, the large investment funds are constantly accused of market manipulation. F.M.I. has undertaken an extensive research after the Asian crisis of 1997 and has concluded that investment funds have played a minor role. However, the market has maintained the same perception.

#### 4. Conclusions

The real cause of market distortion seems to be *psychological*. The optimism of the investors of the developed markets has been maintained by the conviction that the world economy has entered the era of sustainable growth which means an endless growth, which is also self-supporting. Therefore, it is considered it is better to buy because the price of the financial assets will constantly grow. The financial crisis has refuted this way of thinking and the investors have balanced in the pessimist area.

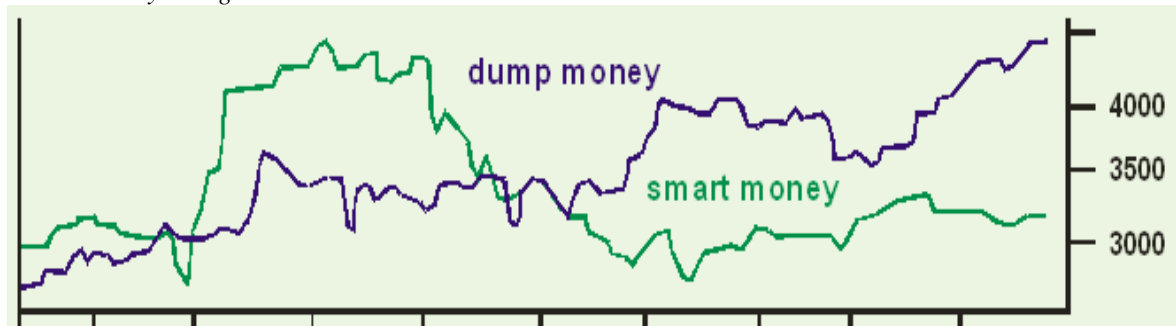
For the period  $t_2 \div t_n$ , after the *full integration of the current information and in the absence of other information*, the price of the financial security bond should be equal to the intrinsic value, namely to have a linear evolution on a horizontal trend. This is not possible because of other considerations under the impulse given by the investors and under the impulse of the logical belief that there will be new information that maintain dynamic of the capital markets. This way appear deviations of the price from the intrinsic value which represents the average range and correspond to under or overvaluations.

To capture the investors behaviour in the capital market there has been created a psychological indicator that operates with the terms such as: "dump money" - money evil and "smart money" - good money.

The experienced investors do not panic at the occurrence of negative market signals, but on the contrary they analyses them to see if they have current or long-term effects.

On the contrary, the inexperienced investors act hastily to such signals, their reaction most of the times being disproportionate. We have selected an example from the local stock market referring to ATB security bonds.

Chart no.1. Psychological indicator



Source: [www.educofin.com](http://www.educofin.com)

The technical analysis highlights a divergence between price evolution and the relative strength indicator (RSI), which is a sign of the decrease of ATB share price in the near future. The fact that at the time of the analysis the pharmaceutical industry was growing and that there were no negative information about ATB, had led to the idea that the price decrease was on short-term and most likely there has been made a correction.

However the attitude of the two groups of investors was in opposition. By evading the fundamental data, the group with the highest percentage had determined the price in the future.

Such behaviour is dangerous for issuer of the securities because the market could reflect a false public image instead to properly reflect the economic and financial performance and the development prospects.

Therefore, neither the investors who sell the shares of a company with a market distorted image cannot charge the right price.

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